

To evaluate prevalence of anemia in hypothyroid patients

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Abstract

Aims and objectives: The main objective of the current study is to delineate prevalence, type of anemia in patients enduring with hypothyroidism and to correlate its severity with deficient levels in thyroid profile.

Material and Methods: The prospective study spanning for a year (December 2017 to November 2018) consisting of 1500 patients was done in collaboration with Department of Biochemistry at tertiary care Centre. A detailed history was taken and investigations were done in all patients conferred with Anemia and hypothyroidism. Peripheral smear examination, RBC indices, Complete Blood Count were the essential investigations for anemia.

Results: The prevalence of anemia was found to be 41.8%. In anemic patients, the predominance of normocytic normochromic anemia was 98.56% (most common), microcytic hypochromic anemia was 0.95% and macrocytic anemia was 0.49%. 59.34% had mild anemia, 39.71% had moderate anemia and 0.95% had severe anemia.

Conclusion: The study showed the association of anemia and hypothyroidism and it further highlighted the relation between the two with respect to severity. Normocytic normochromic anemia and mild anemia were observed to be the most widely recognized types of anemia in hypothyroid patients. This will help in implementing appropriate therapeutic decisions for both the conditions and contribute to the wellbeing of the patients.

Keywords: Anemia, Hypothyroidism.

Introduction

The thyroid hormones play an important role in the regulation of red blood cell production, that is, erythropoiesis. Therefore, in hypothyroidism, a condition in which the production of thyroid hormones is reduced, a disturbance might be observed in the hematological parameters, despite the fact that, the accurate component of the impact of thyroid hormones on erythropoiesis has not yet been uncovered.¹ According to a study, pervasiveness of anemia in subclinical and overt hypothyroid groups was 26.6% and 73.2% individually. Thus, the recurrence of anemia in subclinical hypothyroidism is higher than in general population.² In this way, hypothyroidism could be a hazard factor for anemia. Normocytic and normochromic type of anemia in hypothyroidism is due to reduced stimulation for erythropoiesis. Iron deficiency anemia could be due to menorrhagia in women or due to malabsorption caused by the deficiency of the hormone.³ Vitamin B12 deficiency can cause megaloblastic anemia.^{4,5} In some cases, even Iron deficiency anemia could be one of the reasons for hypothyroidism because iron is required to catalyze the initial two steps involving the thyroid peroxidase and deiodinase, though the mechanisms are not clearly known.^{6,7} So, it is essential to pay attention to the relationship between anemia and hypothyroidism in diagnosis for choosing the course of the treatment as one might be the basic cause for the other.^{8,9} Therefore, this study aims at concentrating on the prevalence of anemia in hypothyroidism and the kinds of anemia in hypothyroid patients.

Material and Methods

The present study was conducted at tertiary care centre for a period of one year from December 2017 to November 2018

on 1500 patients in the age >18yrs in collaboration with Department of Biochemistry. Laboratory confirmation of overt hypothyroid patients was based on low T3, T4 and high TSH values and subclinical hypothyroid patients was based on normal T3, T4 and High TSH values. Patients with Secondary hypothyroidism, on thyroid medications (carbimazole, amiodarone, radio-iodine, propylthiouracil and others), other comorbidities (connective tissue disorders, haemoglobinopathies) causing anemia were avoided in the examination by obtaining the history. A definite history was taken and examinations were accomplished for assessment of anemia. The essential examinations for anemia were Complete Blood Count (CBC), RBC Indices, peripheral smear examination. Based on the RBC morphology they were partitioned into the following groups and specific investigations were done to decide the type of anemia. Normocytic normochromic anemia; Microcytic hypochromic anemia; Macrocytic anemia; Anemia was classified based on hemoglobin levels as Mild - Hb 10 to 12 gm%; Moderate - Hb 8 to 10 gm%; Severe - Hb < 8 gm%.

Estimation of the thyroid function (T3, T4, and TSH) test was carried out.

Overt Hypothyroid – Low T3, T4 and High TSH;
Subclinical Hypothyroid – Normal T3, T4 and High TSH.

The collected data was analyzed by applying appropriate statistical tests.

Results

The aim of this study is to depict the predominance, type of anemia in patients with hypothyroidism and correspond its seriousness with inadequate dimensions in thyroid profile. 1500 hypothyroid patients were considered. The

Original Research Article

Ultrasonid guided management of ankle sprain

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ABSTRACT

Background: Ankle sprain accounts for 15-20% of sports injuries. They are complex injuries and studies that better delineate the etiology are needed. The accuracy of ultrasound as a diagnostic modality of ankle sprain is comparable to MRI. In this study we evaluated the use of ultrasound in delineating the grade of sprain, with special emphasis of grade 2 sprains.

Methods: We prospectively studied 80 ankle sprains of over two years. All the patients with features of ankle sprain were evaluated with high frequency ultrasound. Grade 1 & 2 sprains were included in the study. All the patients were followed up for 1 year. Grade 2 sprains were treated with cast for 6 weeks and evaluated for any residual symptoms and chronicity.

Results: There were 51 males and 29 females with right ankle injured in 57 patients. Seventy-three patients were injured during their leisure activities and 7 were sports injuries. According to ultrasound grading, there were 58 grade 1 injuries, 22 being grade 2 sprain. All the patients were followed up till 1 year. At the end of one year, 79 patients were recovered well with no residual symptoms.

Conclusions: Ultrasonogram effectively differentiates grade 1 from grade 2 and gives a clue for further management. Therefore, we recommend routine use of ultrasonogram for every ankle sprain. For grade 2 sprains, rigid immobilization for 6 weeks gives excellent results with no residual symptoms.

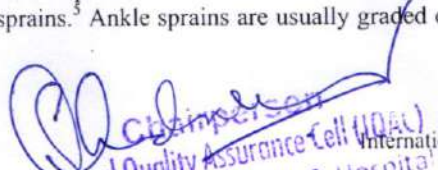
Keywords: Lateral ankle sprain, Sprained ankle syndrome, Ultrasonogram

INTRODUCTION

Ankle sprains are one of the most common musculoskeletal injuries and accounts for 15-20% of sports injuries.¹ The most common mechanism is a combination of adduction and inversion of the foot in plantar flexion which in turn can cause damage to lateral ankle ligaments.¹ More than 40 percent of ankle sprains have potential to cause chronic problems.^{2,3} The frequency of complications and duration of long standing symptoms after ankle sprain has led to the suggestion of "sprained ankle syndrome".⁴ The largest risk factor for ankle sprains has been shown to be history of past sprains.⁵ Ankle sprains are usually graded on the basis of

severity.^{6,7} Grade I mild stretching of the ligaments without macroscopic rupture or joint instability. Grade 2 is a partial rupture of ligaments with slight to moderate instability. Typically, patients present with problems in bearing weight. Grade 3 is complete ligament rupture with marked joint instability.

All the sprains are complex injuries and studies that better delineate the etiology are needed.⁶ The goal of the management is to achieve uniformity of diagnosis, to prevent recurrences and chronicity. Nevertheless, ankle sprains must be diagnosed based on accurate evidence which is more economical and for understanding of grade of sprain.


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Aspartate aminotransferase platelet ratio index (APRI) and fibroscan in predicting early fibrosis in non-alcoholic fatty liver diseases cases

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Abstract

Nonalcoholic fatty liver disease (NAFLD) is emerging as an important cause of chronic liver disease in worldwide. Liver biopsy is a gold standard procedure in the diagnosis and staging of NAFLD, but there are several non-invasive diagnostic procedures have been emerged for the early diagnosis of liver fibrosis. The present study was designed to assess the efficacy of APRI to fibroscan as a marker for early fibrosis in cases with non-alcoholic fatty liver diseases. A total of 120 cases, which are newly diagnosed with non-alcoholic fatty liver disease attending OPD were recruited. Laboratory investigation results were obtained after overnight for evaluation of complete blood count, blood glucose levels, albumin, total bilirubin, platelet count, prothrombin time international normalized ratio, cholesterol, triglyceride (TG), serum urea, creatinine, HBsAg, HCV. Radiological evaluation was conducted by USG abdomen and fibroscan. The value of triglyceride was below 150mg/dl in 34.16% cases, between 150-200mg/dl in 45.83% cases and >200mg/dl in 20% cases. The fasting blood sugar was >100 in 40% cases and <100 in 60% cases. The aspartate aminotransferase levels was <30IU/L in 17.5% cases, 31-40 IU/L in 29.16%, 41-50 IU/L in 33.33%, and >50 IU/L in 20% cases. The platelets count was <100 in 29.16% cases, 101-150 in 53.33% cases, 151-200 in 12.5% cases and >200 in 5% cases. The fibroscan values was <7.0 in 45% cases, 7.1-8.9 in 35% cases and >9.0 in 20% cases. The APRI score was <0.7 in 33.3% cases, 0.7-1.0 in 26.66% cases and >1.0 in 40% cases. There is a significant correlation between fibroscan and APRI in cases with NAFLD. Fibroscan and APRI are uniformly efficient in predicting liver fibrosis. The use of APRI >0.7 would avoid the need for fibroscan.

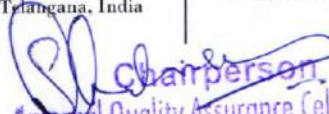
Keywords: nonalcoholic fatty liver disease (NAFLD), aminotransferase platelet ratio index (APRI), liver fibrosis

Introduction

Liver disease represents a rapidly increasing health burden globally. The prevalence of NAFLD is around 9-32% of general population in India. Clinico-pathological studies show that NAFLD is an important cause of unexplained rise in hepatic transaminases, cryptogenic cirrhosis and cryptogenic hepatocellular carcinoma in Indian patients [1]. The invention of new diagnostic noninvasive markers of nonalcoholic fatty liver disease (NAFLD) is a major preference in clinical research. Analyses of liver parameters are now the third most common type of biochemical test [2,3].

The transaminases, alanine aminotransferase (ALT) and aspartate aminotransferase (AST), which indicate the damage of hepatic cells and are most used liver test in clinical practice. Raise in ALT and AST levels has been used as indicators for further liver investigations. The recent guidelines of United Kingdom concluded that there is no evidence for this strategy [4]. Elevated transaminases are a common finding affecting around 10% of the general population, while only a minority of these persons will develop liver-related events [5-7]. Liver biopsy has been considered as gold standard technique in the diagnosis of liver fibrosis. Liver biopsy technique is non-invasive procedure with limitations and 0.05% mortality. With this there is immediate need of non-invasive procedure like aminotransferase platelet ratio index (APRI) and fibroscan in the early diagnosis of liver fibrosis. Fibroscan has good sensitivity, specificity and diagnostic accuracy. The present study was designed to assess the efficacy of APRI to fibroscan as a marker for early fibrosis in cases with non-alcoholic fatty liver diseases.

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Efficacy of Isobaric Levobupivacaine and Hyperbaric Bupivacaine under Spinal Anaesthesia in the Lower Limb Surgeries

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Conflict of interest: Nil

Abstract

Introduction: Spinal anaesthesia is more desirable choice for lower limb orthopedic procedures. Bupivacaine is a drug of choice for spinal anaesthesia and isobaric levobupivacaine is an enantiomer of bupivacaine has low central nervous system and cardiotoxic effect. The present was designed to assess the efficacy of isobaric levobupivacaine and hyperbaric bupivacaine in the elective lower limb surgeries under spinal anaesthesia.

Materials and methods: Forty-eight cases between 21 to 50 years of age undergoing elective lower limb surgery belong to ASA grade I and II were considered. Participants were randomly divided in to group A (3 ml 0.5% intrathecal isobaric levobupivacaine) and group B (3 ml 0.5% intrathecal hyperbaric bupivacaine). Details of sensory and motor blockade, hemodynamic parameters and details of postoperative adverse events were recorded.

Results: The total duration of sensory block was 181.95±2.89 and 209.36±4.58 and the total duration of motor block was 205.34±5.56 and 213.98±6.34 in groups A & B respectively. Hypotension was seen in 29.16% and 8.33%, bradycardia in 16.66% and 4.16% and nausea/vomiting in 20.83% and 8.33% of cases in hyperbaric bupivacaine and isobaric levobupivacaine groups respectively.

Conclusion: The intrathecal isobaric levobupivacaine have shown less duration, slow onset of sensory & motor blockade, stable hemodynamic parameters and incidence of hypotension, bradycardia and nausea/vomiting was less than intrathecal hyperbaric bupivacaine.

Keywords: Hyperbaric Bupivacaine, Isobaric Levobupivacaine, Orthopedic Surgery, Sensory Blockade, Motor Blockade.

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Introduction

Regional anaesthesia is commonly used choice for the lower limb orthopedic surgeries especially spinal anaesthesia [1]. Spinal anaesthesia is rapid in onset, facilitates effective sensory and motor blockade and has less thromboembolic episodes. Bupivacaine

is the common drug of choice for spinal anaesthesia, with unpleasant effects including hypotension, bradycardia, longer duration of motor blockade, cardiotoxicity and central nervous system toxicity [2,3].



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Significance of hyperuricemia on the early diagnosis of disease severity in sepsis

Dr. Mamatha Pulloori and Dr. Kavangal Dhananjay

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Abstract

Serum uric acid levels are an ideal marker in sepsis cases to assess oxidative stress and to predict disease prognosis. Elevated serum uric acid levels are associated with chronic disease conditions such as chronic kidney disease (CKD), cardiovascular disease (CVD). The present study was designed to assess the correlation between Hyperuricemia and mortality and morbidity in cases with clinically diagnosed sepsis. A total of 94 cases with a working diagnosis of sepsis above 18 years of age were recruited. The duration of hospital stay, mechanical ventilation, acute respiratory syndrome and acute kidney injury was noted. Patient discharge or death was considered an outcome of the sepsis. The most prevalent comorbidity was type 2 diabetes (44.68%), followed by type 1 diabetes (8.5%), type 2 diabetes with systemic hypertension (4.25%), chronic kidney disease (3.19%), cerebrovascular accident (3.19%), severe pulmonary disease (2.12%) and malignancy (2.12%). 59% cases had uric acid levels <7mg/dl and 41% had uric acid levels >7mg/dl. The comparison of uric acid levels with comorbidities ($p=0.022$), duration of hospital stay ($p=0.003$) and associated complications ($p=0.003$) was statistically significant. Hyperuricemia on patient arrival to the MICU with sepsis was associated with poor clinical outcome. High mortality rate was associated in cases with elevated uric acid levels.

Keywords: hyperuricemia, sepsis, mortality and morbidity, acute kidney injury (AKI), acute respiratory distress syndrome (ARDS)

Introduction

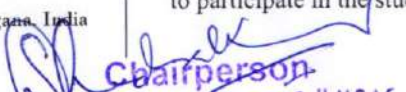
Hyperuricemia is termed as serum uric acid concentration higher than 7mg/dL or accumulation of serum uric acid beyond its solubility point in water due to excess or less secretion or sometimes both^[1]. The prevalence of Hyperuricemia is approximately 8.9% to 24.4% in the general population^[2, 3]. Normal levels of blood uric acid are typically 3.4-7.2mg/dL for men and 2.4-6.1mg/dL for women. Hyperuricemia directly or indirectly associated with various conditions like urolithiasis, gout, hypertension, chronic kidney disease (CKD), Hyperinsulinemia, atherosclerosis^[4, 5]. Sepsis is a condition characterized by an inflammatory state of the body with severe known or unknown infection. Through its crystals, uric acid can influence the acute inflammation of renal epithelial cells and also have an impact on the body with its non-crystal effects. By activating the renin-angiotensin aldosterone system, uric acid may give rise to endothelial dysfunction and renal arteriopathy and tubulointerstitial fibrosis in the kidney^[6].

In critically ill cases in ICU, Hyperuricemia is an early marker of the severity of sepsis, as well as a predictor of acute kidney injury, acute respiratory distress syndrome, need for mechanical ventilation use and mortality^[7]. Hence, the present study was designed to assess the correlation between Hyperuricemia and mortality and morbidity in cases with clinically diagnosed sepsis.

Material and Methods

The present prospective study was conducted in the Department of General Medicine at MNR Medical College and Hospital, Sangareddy from August 2019 to March 2021. A total of 94 cases with working diagnosis of sepsis were recruited. Cases above 18 years of age and cases admitted to MICU with working diagnosis of sepsis and cases willing to participate in the study were included. Pregnant and lactating women, known case of gout, cases from outside facility who have already been in the MICU for more than 24 hours and not willing to participate in the study were excluded.

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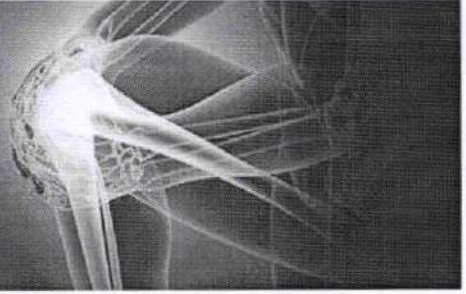
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Minimally invasive plate osteosynthesis of peri-articular fractures of distal tibia: A clinical study

Babulreddy and Mattam Sanjay

Abstract

Objectives: Treatment of distal tibial fractures using minimally invasive plate osteosynthesis (MIPO) technique may minimise damage to soft tissues and the vascular integrity of bony fragments. This is a study to assess the outcome of patients treated with MIPO technique for distal tibial fractures.

Methods: A Prospective study of 30 patients treated for distal tibial fractures using a distal tibial locking plate through the MIPO technique. Clcal and functional outcome was evaluated using Ankle score.

Results: There were 24 males and 6 females of mean age 40 years. The mean follow-up period was 14 months. According to the AO classification system, there were 12 patients with 43A type fractures, 10 patients with 43B, and 8 patients with 43C type fractures. Mean time to union was 18 months. There were 5 cases with superficial infections treated successfully using oral antibiotics and no failures of fixation. There were no cases of non-union/delayed union or rotational malalignment.

Conclusion: MIPO is an effective method of treatment for distal tibial fractures. The use of indirect reduction techniques and small incisions is technically demanding but decreases surgical trauma to soft tissues.

Keywords: Minimally invasive plate osteosynthesis, peri-articular fracture, distal tibia

Introduction

The Fractures of tibia are one of the most common fractures encountered in Orthopaedics of which, 7%-34% occur in the distal tibial region^[1]. The poor soft tissue envelope, decreased vascularity of the region and accompanying soft tissue injury challenged orthopaedic surgeons with problems of infection, delayed union, non-union, and wound dehiscence^[2, 3].

Management of distal tibial metaphyseal fractures is still a great challenge. Considering its anatomy, it is difficult to achieve and maintain reduction in these fractures. Reduction is even more difficult when a fibular fracture is found at the same level as the tibia. This fracture pattern reflects a high-energy mechanism of trauma causing an increased angular and rotational instability, limb shortening and soft tissue injuries.

Intramedullary nailing is generally not considered suitable for peri-articular tibial fractures. Intramedullary nails on metaphyseal fractures are technically hard to perform and must be addressed with care. Failures in controlling distal fragments may lead to deformities and mal union.

Conventional open reduction and internal fixation of such injuries results in extensive soft tissue dissection and periosteal injury, compromising the blood supply, and may be associated with high rates of infection, delayed union, and non-union. Similarly, external fixation of metaphyseal tibial fractures may also be associated with a high incidence of pin site infection and loosening in up to 50% of cases and malunion rates of up to 45%.

Minimally invasive plate osteosynthesis (MIPO) offers biological advantages. Reduced soft tissue dissection and exposition results in low surgical trauma and thus preservation of the blood supply is one of the main advantages of MIPO. Biological fixation is achieved with preservation of osteogenic fracture hematoma. We conducted this study to document the functional outcome of MIPO in distal tibial fractures.

Materials & methods

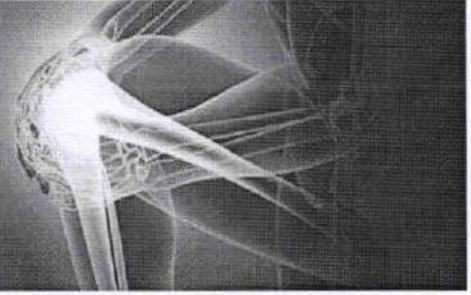
This study was conducted in medical college hospital for the duration of 2 years. Thirty patients, aged more than 18 years with metaphyseal and peri-articular fractures of distal tibia were included. Pathological fractures, compound fractures and neglected fractures were

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Keywords: Minimally invasive plate osteosynthesis, peri-articular fracture, distal tibia

Introduction

The Fractures of tibia are one of the most common fractures encountered in Orthopaedics of which, 7%-34% occur in the distal tibial region^[1]. The poor soft tissue envelope, decreased vascularity of the region and accompanying soft tissue injury challenged orthopaedic surgeons with problems of infection, delayed union, non-union, and wound dehiscence^[2, 3].

Management of distal tibial metaphyseal fractures is still a great challenge. Considering its anatomy, it is difficult to achieve and maintain reduction in these fractures. Reduction is even more difficult when a fibular fracture is found at the same level as the tibia. This fracture pattern reflects a high-energy mechanism of trauma causing an increased angular and rotational instability, limb shortening and soft tissue injuries.

Intramedullary nailing is generally not considered suitable for peri-articular tibial fractures. Intramedullary nails on metaphyseal fractures are technically hard to perform and must be addressed with care. Failures in controlling distal fragments may lead to deformities and mal union.

Conventional open reduction and internal fixation of such injuries results in extensive soft tissue dissection and periosteal injury, compromising the blood supply, and may be associated with high rates of infection, delayed union, and non-union. Similarly, external fixation of metaphyseal tibial fractures may also be associated with a high incidence of pin site infection and loosening in up to 50% of cases and malunion rates of up to 45%.

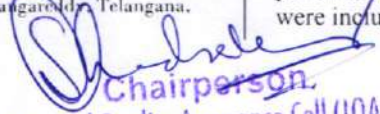
Minimally invasive plate osteosynthesis (MIPO) offers biological advantages. Reduced soft tissue dissection and exposition results in low surgical trauma and thus preservation of the blood supply is one of the main advantages of MIPO. Biological fixation is achieved with preservation of osteogenic fracture hematoma. We conducted this study to document the functional outcome of MIPO in distal tibial fractures.

Materials & methods

This study was conducted in medical college hospital for the duration of 2 years. Thirty patients, aged more than 18 years with metaphyseal and peri-articular fractures of distal tibia were included. Pathological fractures, compound fractures and neglected fractures were

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A hospital based clinico-pathological study of soft tissue tumors

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Abstract

Background: Soft tissue sarcomas can develop from soft tissues like fat, muscle, nerves, fibrous tissues, blood vessels, or deep skin tissues. They can be found in any part of the body, commonly seen in the trunk, head and neck area, internal organs, and the area in back of the abdominal cavity (known as the retroperitoneum). Most of them develop in the arms or legs. **Aim:** The study was conducted to know the incidence, location of soft tissue tumors at different age group individuals and to analyze the various types and subtypes of soft tissue tumors. **Materials & Methods:** Total of 124 cases of soft tissue lesions were analyzed retrospectively and prospectively in a period of 1.5 years. The prospective study was conducted in the department of surgery and Institutional ethical committee approval was obtained. A detailed clinical data was collected by using the standard data sheet and biopsy specimens were sent to pathology department for histopathological evaluation. **Results:** The present clinicopathological study included 124 soft tissue tumor cases in different age groups. The occurrence of age wise soft tissue tumors has been depicted in table 1. Out of 124 soft tissue tumors, 97 were benign type, 27 were malignant variety. **Conclusion:** The present hospital-based study reports data of various types of benign and malignant soft tissue tumors, their relative incidence in male and female and their distribution with respect to the anatomical location of human body. Benign tumors required simple excision, but aggressive benign myxoid tumors and malignant soft tissue tumors require wide surgical excision and close follow up.

Key words: Soft tissue tumors, Benign, Malignant, Histopathological.

Introduction

A sarcoma is a type of cancer that develops from certain tissues, like bone or muscle. Mesenchymal tumors also known as soft tissue tumors arise from embryonic mesoderm and include those of connective tissue, endothelial, hematopoietic, and lymphoid and muscle origin [1]. Soft tissue sarcomas can develop from soft tissues like fat, muscle, nerves, fibrous tissues, blood vessels, or deep skin tissues [2].

They can be found in any part of the body. Most of them develop in the arms or legs. They can also be found in the trunk, head and neck area, internal organs, and the area in back of the abdominal cavity (known as the retroperitoneum). Sarcomas are not common tumors, and most cancers are the type of tumors called carcinomas. The group of soft tissue tumors mainly includes fibromatoses, fibro sarcomas, histiocytomas, neurofibrosarcomas, rhabdomyosarcomas, liposarcomas,

synovial cell sarcomas and meningiomas [3]. Soft tissue sarcomas compared with carcinomas and other neoplasms are relatively rare and constitute less than 1% of all the cancer. It may occur anywhere in the body but most of the tumors arise from large muscle of extremities, the chest wall, the mediastinum and the retroperitoneum [4]. The soft tissue tumors affect at any age and like carcinomas are more common in older patients, about 40% affect persons 55 years or older [3, 4].

The development of unusual malignant soft tissue tumors may be associated with genetic factors, environmental factors, irradiation, viral infections and immune deficiency [5]. Some of the studies reported that the sarcoma arises from surgical procedures or thermal or acid burns, fracture site and vicinity of plastic or metal implant in soft tissues. Environmental factors like asbestos, phenocetic acid, chlorophenols and their contaminants are also been responsible for the origin of sarcomas [6]. Among all, the soft tissue

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Research Article

Magnetic Resonance Spectroscopy : Metabolites and Their Clinical Applications

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ABSTRACT:

The basic principles and procedures of proton magnetic resonance spectroscopy (MRS), with emphasis on clinical and work in humans, are illustrated in this study. MR spectroscopy (MRS) is a modality that is available on most state-of-the-art clinical MR scanners. For the brain in particular, MRS has been a powerful research tool and has also been proven to provide additional clinically relevant information for several disease families such as brain tumors, metabolic disorders, and systemic diseases.

(MRS) could be used for dozens of metabolites . In this study we will focus especially on proton (hydrogen) MRS. In this article, we will try to explain basically how MRS could be used in daily practice of radiologists. With collection of all this data and information in already clinically diagnosed and treated patients , this article can be used as a common guide for radiologists and a useful tool while reporting MRS.

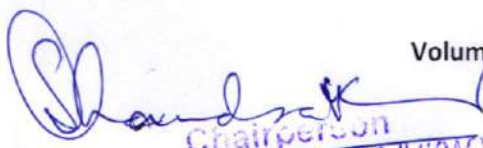
Keywords : MRS, Metabolites , NAA , Choline, Hydrogen.

INTRODUCTION

Magnetic resonance spectroscopy (MRS) provides information about the metabolite profile of the tissue under investigation and has long been under the domain of biochemists and researchers. The technique has evolved into a clinical tool and with its use it is possible to obtain information on a routine clinical scanner in a reasonably short time.

MR spectroscopy provides a measure of brain chemistry. The most common nuclei that are used are ^1H (proton), ^{23}Na (sodium), ^{31}P (phosphorus). Proton spectroscopy is easier to perform and provides much higher signal-to-noise than either sodium or phosphorus. MRS can be performed within 10-15 minutes and can be added on to conventional MR imaging protocols. It can be used to serially monitor biochemical changes in tumors, stroke, epilepsy, metabolic disorders, infections, and

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A Study on Abdominal Surgical Site Infections

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ABSTRACT

Introduction: Surgical site infections remain a significant problem following an operation and the third most frequently reported nosocomial infections. The present study was undertaken to identify incidence of surgical site infections (SSI) and the risk factors associated with it, and the common organism isolated and its antibiotic sensitivity and resistance.

Material and Methods: This study was carried out on 100 surgeries. Infected samples from patients were collected by following all aseptic precautions and were processed without delay by the standard microbiological techniques

Results: The overall infection rate was 12%. The SSI rate was 0% in clean surgeries, 6.06% in clean contaminated ones, 25% in contaminated ones and 46.66% in dirty surgeries. Female patients were affected more (25%) than the male patients (12.5%). The Surgical site infections rate increased with increasing age and it also increased significantly with the increasing duration of pre-operative hospitalization. The Surgical site infections rate was less in patients who received pre-operative antibiotic prophylaxis. The Surgical site infections rate was significantly higher in emergency surgeries as compared to the elective surgeries. The infection rate was significantly higher as the duration of the surgery increased. The commonly isolated organism from surgical site infections was pseudomonas (50%), followed by staphylococci (25%) and other bacteria. Most of the organisms which were isolated were multidrug resistant.

Conclusion: The high rate of resistance to many antibiotics underscored the need for a policy that could promote a more rational use of antibiotics.

Keywords: Abdominal Surgical Site Infections; Surgical Site Infections; Pseudomonas; Risk Factors For SSI.

INTRODUCTION

Surgical infections, particularly surgical site infection have always been a major complication of surgery and trauma. The infection of wound can be defined as the invasion of organism into tissues following a breakdown of local and systemic host defense mechanisms (barriers) and are associated with greater morbidity, significant mortality, and increased cost of care.¹ The treatment of disease has been an integral part of the surgeon's practice since the dawn of time, the body of knowledge that led to the present field of surgical infectious disease was derived from the evolution of germ theory and antisepsis. The application of the latter to clinical practice, concurrent with the development of anesthesia, was pivotal in allowing surgeons to expand their repertoire to encompass complex procedures that previously were associated with extremely high rates of morbidity and mortality due to postoperative infections. However, until recently, the occurrence of disease related to the surgical wound was the rule rather than the exception. In fact, the development of modalities to effectively prevent and treat infection has occurred only within the last several decades.² Surgery's inherent invasiveness creates portals of entry for pathogens

to invade the host through natural epithelial barriers. Surgical illness is immunosuppressive (e.g., trauma, burns, malignant tumors), as is therapeutic immune suppression following solid organ transplantation. Considering that the development of a postoperative infection has a negative impact on surgical outcomes, recognizing and minimizing risk and an aggressive approach to the diagnosis and treatment of these infections are crucial. Although morbid and costly, infection is preventable to some degree, and every physician who has patient contact must do his or her utmost to prevent infection. Advances in disease control practices include improved operating room ventilation, sterilization methods, barriers, surgical technique, and availability of antimicrobial prophylaxis. Despite these activities, surgical site infections remain a substantial cause of morbidity and mortality among hospitalized patients. This may be partially explained by the emergence of antimicrobial resistant pathogens and the increased numbers of surgical. The patients who are elderly and have a wide variety of chronic, debilitating, immune compromising underlying infections. The increased numbers of prosthetic implant and organ transplant operations performed. Thus, to reduce the risk of Surgical site infections,

Original Research Article


The Role of Radiology in Diagnosis and Management of Scaphoid Fracture

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Abstract

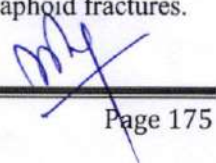
Background: This study focused on introducing MRI into the diagnostic pathway for suspected scaphoid fracture management. In discussion with our musculoskeletal radiologists, we implemented new guidelines to standardize management of our patients with scaphoid fracture and now report our findings.

Materials and methods: A consecutive series of 104 patients referred to the orthopedic department with clinically suspected scaphoid fracture but normal series of plain radiographs were prospectively followed up over a three-year period. We implemented the use of early MRI for these patients and determined its incidence of detected scaphoid injury in addition to other occult injuries. We then prospectively examined results of these findings on patient management.

Results: 25 (24%) MRI examinations were normal with no evidence of a bony or soft-tissue injury. Soft-tissue injury was diagnosed in 45 patients (43.3%). Of those, 32 (30.8%) were triangular fibro cartilage complex (TFCC) tears and 13 (12.5%) were intercarpal ligament injuries. Bone marrow oedema with no distinct fracture was discovered in 35 (33.6%) cases. In 12 (11.5%) cases, this involved only the scaphoid. In the remainder, it also involved the other carpal bones or distal radius. Fracture(s) were diagnosed on 27 examinations (25.9%).

Conclusion: MRI should be regarded as the gold standard investigation for patients in whom a scaphoid fracture is suspected clinically. It allows the diagnosis of occult bony and soft-tissue injuries that can present clinically as a scaphoid fracture; it also helps exclude patients with no fracture. We believe that there is a need to implement national guidelines for managing occult scaphoid fractures.


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Page 175

Original Research Article

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Bacteriological Profile of Chronic Rhino Sinusitis

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ABSTRACT

Aim of the study is to prospectively examine the Bacteriology of Chronic Rhinosinusitis at MNR Medical College & Hospital, Sangareddy, and to evaluate the antibiotic sensitivity pattern, and to discuss an empirical basis for the initial choice of the appropriate antibiotic. 217 suspected patients were included in the study. The relevant clinical details of the patients including the co-morbidities in the medical records were examined. Samples like nasal swabs collected during nasal endoscopy under sterile conditions, sinus washings, allergic mucin, tissue biopsy from polyps and tissue biopsy taken from sinus mucosa during nasal surgery, were processed and examined by Microbiology culture using recommended techniques. The antibiotic susceptibility testing was done. Out of 217 patients studied, 131 patients had positive bacterial isolates. Among the isolates *Staphylococcus aureus* were 32 in number which was the highest followed by Coagulase negative Staphylococci which were 25 in number. Among 131 bacterial isolates, 63 were Gram positive cocci, and were sensitive to most of the common antibiotics like aminoglycosides, amoxicillin, 2nd and 3rd generation cephalosporins. 68 were Gram negative bacilli, and the antibiotic sensitivity was more for amoxicillin, 2nd and 3rd generation cephalosporins and fluoroquinolones. Antibiotic resistance for the common isolates found in CRS ranged from 0-50%. Bacteriological profile of Chronic Rhinosinusitis at MNR Medical College, Sangareddy was thus evaluated. Hence, it is suggested that culture directed therapy is the gold standard for the management of CRS. If empirical antimicrobial therapy is used to treat CRS, it should be directed against

Keywords

Rhino sinusitis,
Bacteriology,
Aminoglycosides,
Fluoroquinolones

Article Info

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Introduction

Chronic rhinosinusitis (CRS), defined as infection of the sinuses lasting for more than 3 months, is one of the most prevalent chronic illnesses in India affecting persons of all age groups. It is generally a mild disease. However, it is important to realize that it afflicts a significant percentage of the population, and causes considerable long term

morbidity. Many patients with chronic rhinosinus disease are subjected to multiple courses of antibiotics and surgeries, with little or no improvement in their condition. Despite the tremendous advances in medicine over the last few decades, there have been relatively few advances in the diagnosis and treatment of chronic sinus disease. Long-term results of medical and surgical therapies have resulted in cure rates that vary between 29 and 80%^{1,2,3}.

Mycological Profile of Chronic Rhinosinusitis

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ABSTRACT

Aim of the to assess the purpose of fungal rhinosinusitis at MNR Medical College & Hospital, Sangareddy, and to correlate histopathological findings with culture results for accurate clinical classification of the disease. 217 suspected patients were included in the study. The relevant clinical details of the patients including the co-morbidities in the medical records were examined. Samples like nasal swabs collected during nasal endoscopy under sterile conditions, Sinus washings, Allergic mucin, tissue biopsy from polyps & tissue biopsy taken from sinus mucosa during nasal surgery, were processed and examined by microbiology culture using recommended techniques. Slide culture was done to observe the microscopic morphology. Histopathological examination was done by H and E stain and PAS stain for classification. Out of 217 cases of rhinosinusitis, 37 samples showed fungal isolates in culture. *Aspergillus flavus* was the most common isolate (8.29%). *Aspergillus fumigatus* was the second most common isolate (5.99%). *Candida albicans* was isolated in one sample and candida species, other than albicans was isolated in one more sample. On the basis of the histopathological findings, the fungal isolates were grouped. Among the 37 patients with fungal rhinosinusitis 26 patients belonged to non-invasive type. They were mostly of allergic etiology. The organisms were mostly *Aspergillus fumigatus* and *Aspergillus flavus*. Isolates that cause fungal ball were not isolated. 11 isolates belonged to invasive group. Most of them were *Aspergillus flavus* causing chronic granulomatous fungal sinusitis Mycological profile of rhinosinusitis at MNR Medical College, Sangareddy was thus evaluated. Histopathological and microbiological findings reported 37cases of fungal rhinosinusitis among 217 suspected

Keywords

Aspergillus flavus,
Chronic rhinosinusitis,
Fungal rhinosinusitis,
H and E stain

Article Info

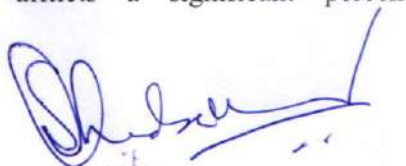
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Introduction

Chronic rhinosinusitis (CRS), defined as infection of the sinuses lasting for more than 3 months, is one of the most prevalent chronic illnesses in India affecting persons of all age groups. It is generally a mild disease. However, it is important to realize that it afflicts a significant percentage of the

population, and causes considerable long term morbidity. Many patients with chronic rhinosinus disease are subjected to multiple courses of antibiotics and surgeries, with little or no improvement in their condition. Despite the tremendous advances in medicine over the last few decades, there have been relatively few advances in the diagnosis and treatment of chronic sinus disease. Long-term results of

2332



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Original Research Article


Radiological findings of pulmonary tuberculosis in adolescents in a teaching hospital, Sangareddy

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Abstract

Background: Tuberculosis (TB) accounts for 1.7 million deaths, according to the recent WHO report. India alone accounts for one fifth (21%) of all the TB cases globally.

Objectives: Radiologic findings of pulmonary tuberculosis (TB) in adolescents.

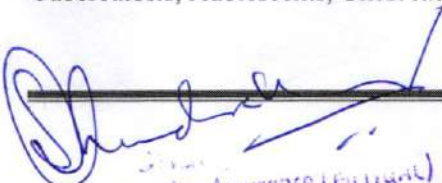
Materials and methods: A cross-sectional, observational study of 170 patients with TB aged 10 to 19 years. Data were collected from the TB notification and medical records during the period of 2014-2017. Data were shown in tables and analyzed using the chi-square test, with a 5% significance level.

Results: Mean age was 15.6 years; 97 (57%) patients were males. The most common radiologic lesion was the upper pulmonary lobe infiltrates (43.33%), and isolated cavitation was found in 20.7% of the patients. Both lungs were affected in 32.2% of the patients. The finding of bilateral radiologic lesions was significantly associated with longer disease duration ($p = 0.0005$).

Conclusion: Pulmonary TB in adolescents has similar characteristics to TB in adults, evidencing the important role played by adolescents to transmit the disease in community.

Key words

Tuberculosis, Adolescents, Chest radiography.


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Page 170

A cross sectional hospital based study of assessment of clinical and biochemical parameters of acute pancreatitis

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Abstract

Background: Pancreatitis defined as the inflammation of the pancreas and is always, associated with acinar cell injury. (Singer *et al*) Acute pancreatitis is clinically characterized by acute onset of abdominal pain and a rise in the activity of pancreatic enzymes in the blood and urine.¹ Most attacks have a benign course but severe attacks may lead to shock, renal failure, respiratory failure and death. **Materials and Methods:** The present study was a cross sectional study hospital based carried out among 60 indoor cases of acute pancreatitis admitted under department of general medicine in a tertiary healthcare teaching institute in Telangana during February 2018 to April 2018. All the cases of suspected acute pancreatitis admitted under department of general medicine in a tertiary healthcare institute, and fulfils the set inclusion criteria, who consented to participate in the study were included in the present study. **Results:** In this study it was observed that 51.66% patients had a history of chronic alcoholism, 23.33% patients had history of smoking. It was found that 61.66% of study participants were having mixed pattern of diet, while 28.33% study participants were having strict vegetarian pattern of diet (Table 3). **Conclusion:** Early assessment of severity and intensive care management of acute pancreatitis is of paramount importance. Lab markers especially high values of lipase and other markers could be important prognostic markers for predicting morbidity and mortality in acute pancreatitis.

Key Words: Pancreatitis, acinar cell injury, morbidity, mortality

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INTRODUCTION

Pancreatitis defined as the inflammation of the pancreas and is always, associated with acinar cell injury. (Singer *et al*) Acute pancreatitis is clinically characterized by acute onset of abdominal pain and a rise in the activity of pancreatic enzymes in the blood and urine.¹ Most attacks have a benign course but severe attacks may lead to

shock, renal failure, respiratory failure and death. Chronic pancreatitis is characterized clinically by recurrent or persistent episodes of abdominal pain.² Although, in some cases, chronic pancreatitis occurs without pain, evidences of functional insufficiency such as steatorrhea or diabetes is often seen. Clinically, the first manifestation of alcoholic chronic pancreatitis can closely resemble acute pancreatitis. (Steer ML *et al*).³ Various aetiological factors have been known to cause pancreatitis which include: gall stones, (Gorelick FS *et al*), structural lesions like Stenosis or spasm of sphincter of oddi, pancreas divisum, traumatic, microlithiasis, toxins, alcohol, drugs, (frusemide tetracycline), infection (mumps, Coxsackie B-virus, viral hepatitis, HIV, salmonella, shigella, ascariasis lumbricoides), Metabolic (hyper-lipidemia, hypercalcemia), vascular (atherosclerosis, vasculitis, SLE, Wegener's disease. Behcet's disease) iatrogenic (ERCP, endoscopic sphincterotomy, coronary artery bypass) cystic fibrosis etc.^{4,5,6} Various studies have been

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Evaluation of antral follicular count (AFC) and total ovarian volume as markers of ovarian reserve in infertile and healthy women (fertility proven)

Dr. Jyothi Gunda and Dr. Sumathi Gollapalli

DOI: <https://doi.org/10.33545/gynae.2020.v4.i2d.532>

Abstract

Background: Ovulatory disorders are the leading cause of female infertility. Infertility is age-related decline in fertility. Antral follicular count (AFC) is a reliable marker to assess female fecundity. This study was designed to evaluate the relationship of AFC with age in sub-fertile cases and with healthy (fertility proven) control women.

Materials and Methods: A total of 50 infertile females attending investigation of subfertility and age, sex-matched 50 healthy control subjects were recruited. On 2nd or 3rd day of the ovarian cycle, the basal ovarian volume and AFC were measured by endovaginal ultrasound. Transvaginal USG was carried out on the second and third day of the menstrual cycle.

Results: The mean total ovarian volume in cases was 11.25 and in controls 11.67. The mean antral follicular count in cases was 6.95 ± 1.85 , while in controls 10.44 ± 2.01 . There was an inverse correlation between age and antral follicular count ($r = -0.424$ with p value 0.002). While there was no significant correlation between ovarian volume and antral follicular count ($r = -0.318$ with p value 0.352).

Conclusion: The ovarian volume has no role as a biomarker of ovarian reserve. AFC has been proved significantly as an excellent predictor of ovarian reserve and response when compared to other parameters

Keywords: primary infertility, antral follicular count (AFC), ovarian volume

Introduction

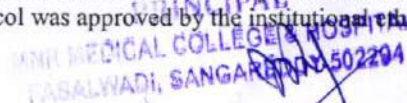
Infertility is an age related decline in fertility, which occurs by multiple factors that give overall reproductive failure, including poor endometrium and substandard oocyte quality [1]. Globally, infertility affects approximately 8-10% of couples [2]. Ovulatory disorders are the leading cause of female infertility in 30% of cases [3]. Autopsy studies on human ovaries demonstrated that the follicular count has been decreased with age. Various methods like anti follicular count (AFC) by USG, day-3 follicle-stimulating hormone (FSH) and anti-mullarian hormone (AMH) have been detected that fertility has been decreased with reproductive age [4]. Few cases with the small ovarian volume on USG shows a poor response to controlled ovarian hyperstimulation in assisted reproductive programs. USG based measurement of ovarian stromal blood flow after pituitary suppression can prognosticate ovarian responsiveness. Transvaginal ultrasonography based antral follicular count (AFC) correlates well with increasing age [5, 6]. Thus, USG help to measure reproductive potential to help the women's prospects for pregnancy [7]. Therefore, this study evaluates the relationship of AFC with age in sub-fertile cases and with healthy (fertility proven) control women.

Materials and Methods

The present case-control study was conducted in the department of obstetrics and gynaecology at MNR Medical College and Hospital, Sangareddy, Telangana during June 2018 to October 2019. A total of 50 infertile females attending investigation of subfertility and age, sex-matched 50 healthy control subjects attending for routine health check-up were recruited. Cases with primary infertility, no ovarian abnormalities were included; cases with ovarian abnormalities, with uterine malformations, history of ovarian surgery, with PCOD and ovarian endometriomas were excluded. Cases confirmed with natural fertility with a minimum one pregnancy, regular menstrual cycles, without ovarian surgeries were recruited as control subjects. Informed consent was obtained from all the cases and study protocol was approved by the institutional ethics

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Sitagliptin Versus Metformin as an Initial Monotherapy in Type 2 Diabetes Mellitus Patients - Observational Study

Gururaj Krishnarao Kulkarni¹, Jaishree Prabhakar²

ABSTRACT

Introduction: Diabetes mellitus is a chronic metabolic disease. So an Observational study Comparing sitagliptin to metformin as an initial monotherapy in type 2 diabetes mellitus patients. Diabetes mellitus is a chronic, progressive disease and lifestyle modifications alone are inadequate, one or more agents are usually required to attain adequate glycemic control.

Material and methods: In the present study 200 known diabetic patients were selected and these patients were randomly divided into two groups, group A comprised 100 patients whose baseline glycemic parameters were recorded and patients were put on sitagliptin 100 mg per day, whereas Group B comprised of 100 patients and these patients were placed on metformin 500mg – 2000 mg per day to achieve glycemic control and repeat testing for HbA1c was done after 24 weeks. patients were monitored closely for ensuring the compliance to diet, drug and exercise.

Results: These 200 patients were randomly divided into two groups, Group A comprised 100 patients were put on sitagliptin 100 mg per day, Group B comprised 100 patients were selected and were placed on metformin 500mg – 2000mg. Both the groups baseline FBS, PLBS, HbA1c was estimated prior to the study. It was observed that the mean baseline HbA1c in the Group A patients was 7.85% and in Group B was 7.99%, whereas the mean HbA1c after 24 weeks of therapy was 7.49% and 7.80% respectively in the Group A and B. There was a significant decrease in HbA1c in both the groups and it was statically significant.

Conclusion: In this 24 week study sitagliptin was not inferior compared to metformin in controlling the HbA1c in patients with type 2 diabetes mellitus. In summary, both sitagliptin or metformin monotherapy helped in improving glycemic control in patients with type 2 diabetes mellitus. Both the group of the drugs was well tolerated by the patients, and the incidence of gastrointestinal-related adverse effects was there but it lower, whereas the weight loss was low in the sitagliptin group of patients. The result of this study provides the data for the use of sitagliptin as initial monotherapy for type 2 diabetes mellitus patients.

Keyword: Type 2 Diabetes Mellitus, Sitagliptin, Metformin, Glycosylated Hemoglobin, Fasting Blood Glucose, Glycemic Variability

improve the glycemic control with little hypoglycemic risk, and weight stability. Sitagliptin is very highly selectivity towards DPP-4, and there is no affinity towards other DDP enzymes like DPP-8 and DPP-9. Sitagliptin and various other DPP-4 inhibitors have a multimodal action in Type 2 Diabetes Mellitus patients, by preserving stimulated circulating incretin hormones, insulin secretion is stimulated under hyperglycemic conditions and glucagon secretion is suppressed.¹

Metformin is recommended as initial monotherapy for treatment of type 2 diabetes mellitus because it decreases the higher blood glucose by suppressing hepatic production of glucose, apart from suppression of hepatic glucose production, it also increases sensitivity of insulin, it also enhances the peripheral uptake of glucose (by inducing GLUT4 enhancer factor phosphorylation), and it also decreases the insulin-induced suppression of fatty acid oxidation. It is proved that metformin Increases the peripheral utilization of glucose due to improved insulin binding to insulin receptors.²⁻³ However, patient on metformin do experience some common side effects like gastrointestinal intolerance and risk of lactic acidosis in poor perfusion states and also in Renal Failure.³ Our objective was to assess the impact of DPP-4 on glycemic levels if initiated as a first line therapy.

MATERIAL AND METHODS

This Observational study was conducted at MNR Medical College to assess similarity of efficacy of a new agent to a standard treatment. In the present study 200 known diabetic patients were selected from MNR Medical College and Hospital, the patients were randomly divided into two groups, group A comprised 100 patients whose baseline glycemic parameters were recorded and patients were put on sitagliptin 100 mg per day, whereas Group B comprised of 100 patients and these patients were placed on metformin 500mg – 2000 mg per day to achieve glycemic control and repeat testing for HbA1c was done after 24 weeks, patients were monitored closely for ensuring the compliance to diet, drug and exercise.

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INTRODUCTION

There are various Oral Hypoglycemic drugs available for glycemic control. Sitagliptin is a DPP-4 (dipeptidyl peptidase 4) inhibitor and it is indicated for the treatment of type 2 diabetes mellitus.¹ In various trials it has been shown that sitagliptin as an initial therapy has shown to



Relevance of metformin as a first line in type 2 diabetes mellitus

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Abstract

Background: Metformin is most commonly prescribed drug in the management of diabetes. There is a global increase in the obesity prevalence in children, adolescents and it is accompanied by the appearance and there is increased prevalence of insulin resistance, prediabetes and type 2 diabetes mellitus (T2DM). All Guidelines have recommended Metformin in Type 2 Diabetes Mellitus patient as a first line drug. Metformin acts by inhibiting production of hepatic glucose and increased uptake of glucose in peripheral tissues. In obese patients apart from glycemic control the Metformin have shown additive effects in controlling the lipids and it has been document to also have a Cardio- protective action. Apart from usage of metformin in treating diabetes it can also be used in other conditions like prediabetes, obesity, PCOD (polycystic ovary disease), NASH-non-alcoholic fatty liver disease. It is a drug of choice of physician due to its insulin sensitizing action. It is therefore a primary drug of choice in these conditions for both prevention and treatment.

Methods: 124 patients were selected between the age group of 26 to 40 years whose BMIs was between 28- 35 kg/m² who were diagnosed with type 2 diabetes mellitus.

Inclusion criteria: 1) Fasting plasma glucose concentrations more than 126mg/dl but less than 180mg/dl and PPBG more than 200 mg/dl but less than 299mg/dl 2) hemoglobin A1C concentrations 6.5-8.5%.

Excluding criteria: 1) Patient with BMI more than 35 and less than 28 were excluded from the study. 2) HB1C more than 8.5 3) Patient with comorbidities were excluded from the study. 4) Elderly patient 5) any other systemic organ dysfunction 6) if FBS>200mg/dl, PPBS >300mg/dl

Results: This study has shown better glycemic level controls when patient were started on medication than compared to placebo group. Fasting Blood glucose level in the Metformin group of patients was significantly reduced than in placebo group. Metformin group of patient had a reduction of BMI by a mean of 1.12 kg/m² when compared with placebo. Metformin group of patient had significant reduction of HbA1c. This signifies the metformin still holds the good in management of obese diabetic patients.

Conclusions: Metformin is the most commonly prescribed therapy for patients with T2DM. It has a good safety profile and is associated with low cost. The study has confirmed that usage of metformin as an initial drug help in getting the glycemic control unless contraindicated. Patients treated with metformin had weight reduction in obese children and adolescents. Apart from reduction of BMI, metformin also helps in reduction of resistance to insulin in hyperinsulinemia children and adolescents who are obese. Longer-term studies in different populations are required to establish metformin role in the treatment of overweight children.

Keywords: concentrations, populations, children, establish, metformin

Introduction

In 1950 Jean Sterne a French physician discovered metformin importance in humans and it was used in 1957 by France, but it FDA regulatory approval in 1995 as an oral hypoglycemic agent [1-2]. Metformin is grouped in the most essential drugs category by World Health Organization's, and it is termed as most essential drug for the Diabetic Patient. Metformin is recommended as a first line drug in patients with Type 2 Diabetes mellitus by European Association of the Study of Diabetes and American Diabetes Association guidelines [3]. Metformin is a biguanide derivative, by controlling blood glucose level it decreases complications of Diabetes. Metformin works by helping to restore the body's response to insulin. It decreases the amount of blood sugar that the liver produces and that the intestines or stomach absorb [4-5]. Metformin, other than hypoglycemic activity, has been taken with diet and exercise changes to prevent diabetes in people who are at high risk for becoming diabetic. It is also used in women with

polycystic ovarian syndrome. Metformin acts by counteracting the resistance of insulin, particularly in liver and skeletal muscle. It suppresses hepatic gluconeogenesis, increases peripheral sensitivity of insulin in tissues like adipose tissue and muscle, and results in peripheral utilization of glucose. Half-life of metformin is nearly five hours and major excretory mode i.e. 90% of the drug is via renal system within 24 hours [6-7].

Methods

124 patients were selected between the age group of 26 to 40 years whose BMIs was between 28- 35 kg/m² who were diagnosed with type 2 diabetes mellitus.

Inclusion criteria: 1) Fasting plasma glucose concentrations more than 126mg/dl but less than 180mg/dl and PPBG more than 200 mg/dl but less than 299mg/dl 2) hemoglobin A1C concentrations 6.5-8.5%

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Utility of pap smears screening in the detection of cervical neoplasia

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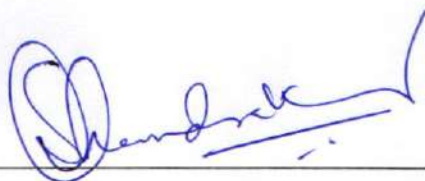
I will be discussing and describing on spectrum of lesions of cervical neoplasia and the utility of cervical cytopathology in detecting the premalignant and malignant lesions. Discussion on the risk of these lesions in different age groups, so that appropriate and preventive measures can be taken specifically to the age group effected.

Audience Take Away:

- This study will help for the early detection of cervical neoplasia
- Our study will help in risk stratification of the specific group effected by lesions of cervical neoplasia and hence the effected group can be subjected to repeated Pap screening program to detect the early lesions (dysplasia) and treated appropriately to prevent cervical cancer
- Yes, other faculty can use the knowledge obtained from our study by increasing the inclusion of patient in the affect-ed age group and subjecting them for repeat Pap Smear for early detection of cervical neoplasia in the patients at risk
- Yes, the observations made from our study as identified at risk age group for the cervical neoplasia and further in the implementation of early detection and preventive strategies
- In the planning for the screening of the age group at risk for the cervical neoplasia in a cost effective manner

Biography

I Dr. Saritha Karre born and brought from Hyderabad, completed my MBBS from Andhra Medical College, MD Pathology from Telangana, INDIA. Worked as Assistant Professor in Kamineni Institute of Medical Sciences, Presently I work as Associate Professor in ESIC Medical College & Hospital. Completed Internal Auditor & Quality Management systems certificate course.(Foundation for quality (India). Published 9 papers (3international and 6 national) 1 poster internationally, presented 3papers (oral presentation) and 1 poster in state conference. I completed Masters in Divinity that is accredited by the Asia Theological Association in 2018. I achieved National Award- Medical Excellence Award from Governor in 2018. International consortium for clinical research excellence, ethics and education declared me as subject expert in pathology in 2017.



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Multidetector Computed Tomography Evaluation of Subtypes of Renal Cell Carcinoma

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Abstract

Introduction: Renal cell carcinoma (RCC) accounts for approximately 5% of all cancers in men and 3% in women and is the second most common urologic neoplasm.¹

Aim: The purpose of our study is to identify the different demographic characteristics of patients with RCC, to study different features of subtypes on multidetector computed tomography (MDCT), and to determine the differentiating features of subtypes.

Materials and Methods: We reviewed four subtypes of RCC. 24 patients with RCC who underwent nephrectomy, pre-operative MDCT evaluation, and with pathological diagnosis of RCC were included in our study. Features of tumors and attenuation pattern in CT were evaluated and analyzed.

Results: The clear cell RCC was the most common (75%) tumor subtype with smaller size of the lesion at presentation, heterogeneous enhancement, and cystic degeneration, hypervascularity with post-contrast HU of >100 in corticomedullary phase. The tumor had various patterns of spread and the tumor to aorta enhancement ratio was >0.3. The papillary RCC (pRCC) was 17%, smaller lesions, and hypovascular with post-contrast HU of <100. The tumor-to-aorta enhancement ratio was <0.23. Single case of translocation type RCC (4%) and chromophobe RCC (4%) were observed which presented with intermediate features and tumor-to-aorta enhancement ratio was 0.3 and 0.23-0.3, respectively. Chromophobe RCC showed calcification and high-attenuation values. Excepting pRCC, other subtypes were observed more in females.

Conclusion: In addition to CT tumor attenuation values, the combination of other parameters play an important role in diagnosing and differentiating among the different subtypes of RCC. Other important differentiating parameter observed was tumor-to-aorta enhancement ratio.

Key words: Chromophobe, Clear cell, Papillary, Subtypes

INTRODUCTION

Renal cell carcinoma (RCC) accounts for approximately 5% of all cancers in men and 3% in women and is the second most common urologic neoplasm.¹ RCC accounts for 85-90% of all kidney tumors, representing 1-3% of all malignant visceral neoplasms and have maintained an increasing prevalence.^{1,2} Clear cell RCC is the most common variety accounting for 70% followed by papillary RCC

(pRCC) 10%, chromophobe RCC (Chr RCC) 5%, collecting duct carcinoma - <1%, medullary carcinoma <1%, mucinous tubular and spindle cell carcinoma - <1%, neuroblastoma-associated RCC - <1%, Xp 11.2 translocation - TFE3 carcinoma - <1%, and unclassified lesions - 4%.²

Early mortality of most of the (40%) of patients with RCC is because of the disease progression, advanced stage at presentation, and delayed diagnosis. Thus, this tumor is the most lethal malignant urological tumor. The histological classification of RCCs is extremely important, due to implications of the subtypes in the prognosis and treatment of these tumors.^{3,4} In this context, a pre-operative radiological characterization of RCCs subtypes is of utmost importance and depending on the clinical situation, it may be supplemented or not by confirmatory percutaneous biopsy.^{5,6}

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Lymphnode cytopathology and CD4 count in HIV positive patients

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Abstract

Introduction: CD4 is an important prognostic as well as therapeutic marker in the management of HIV and this study identifies the correlation between CD4 counts and FNAC lymphnode (LN) patterns in these patients.

Study Design: The study was conducted in the rural areas at Nalgonda district by Kamineni Institute of Medical Sciences, Telangana. Eventhough Fine Needle Aspiration Cytology (FNAC) was done on total 56 selected patients who had lymphadenopathy and were tested HIV positive, only 50 of them have CD4 counts and were selected as final study group. Suspected cytosmears have acid fast staining done by Ziehl Nelson technique. The final cytopathological findings were correlated with CD4 counts.

Results: In our study, high CD4 counts were associated with reactive lymphadenitis (26%;13/50) most and Low CD4 counts were associated with less frequent suppurative lymphadenitis and particularly TB lymphadenitis was noticed in 56% (28/50) and morphologically exhibited 4 different patterns- caseous with epitheloid granuloma, only caseous necrosis, only epitheloid granuloma and suppurative.

Conclusion: CD4 count correlated well with the different stages of immunosuppression in HIV patients. The patients with reactive lymphadenitis demonstrated high CD4 counts suggesting good immunological response. The low CD4 counts seen in patients with suppurative lymphadenitis and cryptococcal infection suggests severe immuno-compromised state.

Keywords: Cytopathology, CD4 count, Granuloma, HIV, Lymphnode, Tuberculosis.

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Accepted: 11th October, 2017

Introduction

Human immunodeficiency virus¹ (HIV) infection causes acquired immunodeficiency predisposing the affected patients to opportunistic infections and secondary cancers, sometimes involving multiple systems.² As per UNAIDS report on Global AIDS epidemic 2010, people living with HIV at the end of 2011 were around 34 million and major burden was shared among south Africa, Nigeria and India.

Pathogenetically, HIV infects T cells using CD4 molecule as receptor and CCR5 & CXCR4 as co-receptors. Once infected the CD4 cells are destroyed by lysis due to cytopathic effect. The CD4 count dwindles as the disease progresses to final stage AIDS as uninfected cells also undergo apoptosis.³

The role of CD4 counts in predicting immunological damage during infection and monitoring recovery after antiretroviral treatment has been well established and the reason behind considering CD4 counts along with different clinical spectrum of HIV infection in the current CDC classification system for HIV infected adolescents and adults.⁴

One of the earliest manifestation of HIV infection is lymphadenopathy.⁵ In India, there is need for simple and cost effective investigation for HIV associated lymphadenopathy and FNAC, an outpatient technique suits the best in this regard. The present study describes the cytopathological patterns associated with HIV lymphadenopathy and also demonstrates its correlation with CD4 count.

Materials and Methods

The present study was conducted by KIMS, Narketpally, Nalgonda after the due approval of Ethical committee. We collected total 56 patients for around 2 years who had lymphadenopathy and tested HIV positive. The NACO (National AIDS Control Organization) guidelines were strictly followed in making HIV diagnosis.

The study group includes only 50 patients with their CD4 counts done. Patients on highly active anti-retroviral treatment (HAART) and Anti Tubercular treatment that could influence FNAC findings were excluded. FNAC was performed with informed consent of the patients

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- V. D. Praveen Kumar Gorrela (/article/search?authors= V. D. Praveen Kumar Gorrela)¹,
- Satyanarayana Vee (/article/search?authors= Satyanarayana Vee)¹

1. No data

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Histopathologic spectrum of adrenal lesions

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Abstract

Introduction: The bipartite adrenal gland has tumors arising from cortex, medulla or as metastasis from extra-adrenal sites. Distinguishing benign from malignant types is a challenging task for pathologists, this study gives an insight into adrenal lesions with their histopathological and immunohistochemical findings and its role in categorizing these tumors to aid in their diagnosis and proper management.

Aim: To study the Histopathological patterns of adrenal lesions with clinical correlation.

Materials and Methods: In a five year period 10 surgical specimens of adrenal tumors were resected and studied between July 2010 to June 2015 at Kamineni Institute of Medical Sciences, Narketpally and King Koti. Tissues were processed and stained sections were studied for histopathological patterns and IHC markers used were vimentin, synaptophysin, NSE, chromogranin immunohistochemistry was done wherever necessary and the markers used were vimentin, synaptophysin, NSE, chromogranin.

Result: Out of ten adrenal lesions we have studied, two cases were adrenal cysts,¹ three were cortical adenoma, one case is Adrenocortical carcinoma-positive for synaptophysin, vimentin, two cases were neuroblastoma-positive for NSE, chromogranin and synaptophysin and two cases are pheochromocytoma - positive for chromogranin.

Conclusion: Pathological evaluation and immunohistochemical profiling has got important role in categorizing adrenal tumors along with clinical, radio logical and biochemical inputs and their subsequent management.

Keywords: Adrenal cyst, Adrenal adenoma and Carcinoma (Weiss system), Neuroblastoma, Pheochromocytoma.

Introduction

A pair of adrenals are located in the retroperitoneum on the superomedial portion of both kidneys. They have structurally and functionally two distinctive zones cortex and medulla arising from mesoderm and neuroectoderm² respectively. The primary function of cortex is to secrete cortisol, aldosterone and sex steroids and medulla is to secrete catecholamines. Tumors arising from cortex are mainly adenomas and carcinomas where as from medulla are pheochromocytomas and neuroblastomas.

Adreno cortical carcinomas are very rare tumors with a frequency of 2 in a million per year. The relative incidence among malignant tumors is 2% and shows a bimodal presentation with peak occurrence at < 5 years and 50-70 years. Hereditary syndromes like Li-Fraumeni, Beckwith Wiedemann and Carney complex are associated with these tumors and account only for smaller percentage of cases.

Non neoplastic lesions associated with adrenals include hypoplasia, hyperplasia, cytomegaly, cysts, nodules and accessory tissue. Most of these are non-functional even though some functional tumors may show clinical features like virilisation, cushingoid features, feminisation and hyperaldosteronism.³ The current study aims at studying histopathological

patterns of adrenal lesions with immuno-histochemical and clinical correlation.

Materials and Methods

A five year study was done at Kamineni Institute of Medical Sciences, Narketpally from July 2010 to June 2015. Clinical findings were recorded with clinical details of all subjects with respect to symptoms at presentation, age and gender. Relevant radiological investigation i.e adrenal ultrasound, intravenous pyelogram and computerized tomography scans for primary tumors and metastasis were done. The adrenocortical functions (hormonal evaluation) and provisional diagnosis were correlated with histopathological findings.

Case Definition

The criteria for cushings syndrome include clinical features like weight gain, moon face, buffalo hump, centripetal fat distribution with/without hypertension along with biochemical investigations like Dexamethasone suppression test, Serum & urinary levels showing high cortisol with suppressed ACTH.

The affect of sex steroids can be feminising like precocious puberty - thelarche, pubarche, menarche or virilising like clitoromegaly, macrogenitosomia, hirsutism, deep voice, increased muscle mass, acne in

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Dated: Mar 24, 2019

To,
Dr. V. Umamaheshwara Rao 1, Mittapally Shankar 2*;
(*Corresponding Author)

Subject: Manuscript Acceptance Letter

Manuscript Number: SJM-67-2019

Dear Sir/Madam,

I am pleased to inform you that your manuscript "Efficacy of demedetomidine, tramadol and pethidine in the prevention of intra operative shivering"

is accepted for Publication in (SJM: Volume-4: Issue-3, March, 2019) in Saudi Journal of Medicine (SJM) ISSN: 2518-3397 (Online), ISSN: 2518-3389 (Print). (Monthly Journal)

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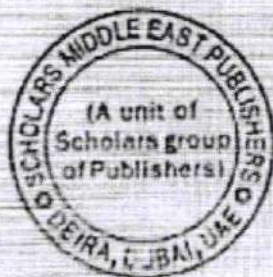
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Complications and management of otitis media in children

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ABSTRACT

Background: Otitis media is a main cause of hearing difficulty in children. The aim of this study was to determine the efficacy of medical treatment in the management of otitis media.

Methods: This cross sectional study was conducted at the department of ENT, MNR Medical College and Hospital, during the period of February 2015 to March 2017. A total of 62 patients were included in this study and standard medical treatment of otitis media was given. All the data were recorded and analyzed.

Results: Among 62 patients, 42 (67.7%) completely recovered from the disease while 20 patients (32.25%) did not improve.

Conclusions: Conservative treatment is effective in the management of otitis media.

Keywords: Otitis media, Conservative treatment, Hearing difficulty, Effectiveness

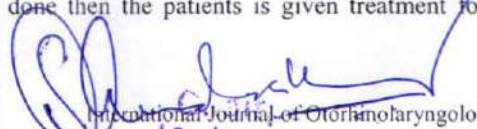
INTRODUCTION

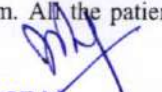
Otitis media is the presence of fluid in the middle ear cleft behind an intact tympanic membrane.^{1,2} It is also called Otitis media with effusion, serous otitis media, glue ear or non suppurative otitis media. Otitis media with effusion is the most important cause of deafness in children the world over.^{1,3,4} An accurate diagnosis of otitis media can be made by proper clinical history, otoscopic examination and hearing tests like tuning fork tests, audiogram and tympanogram.^{1,5} Otitis media in children is often delayed for months or years resulting in poor development of speech, language, cognition and behaviour and poor performance at school.^{2,4,6} It also results in chronic non-specific pain or discomfort in the ear. So the early diagnosis and treatment of otitis media is very important. If untreated; it can progress in to chronic infective stage.⁷ Once the diagnosis of Otitis media is done then the patients is given treatment for at least 3

months including antibiotics, anti-histamines, mucolytics and nasal decongestants.^{4,5,8} After the medical treatment if there is need then surgical options should be considered like myringotomy and ventilation tube insertion. Complications of ventilation tube insertion include tympanosclerosis, atelectasis, residual perforations and rarely cholesteatoma formation.^{4,7} The present study was aimed to assess the effectiveness of medical treatment in Otitis media.

METHODS

This cross-sectional study was conducted at the ENT Department, MNR Medical College and Hospital, Sangareddy, during the period from February 2015 to March 2017. The diagnosis of Otitis media was made on the basis of proper history, otoscopic examination, tuning fork tests supported by audiological investigations like pure tone audiogram and tympanogram. All the patients


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Original Research Article

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Primary and secondary atrophic rhinitis: a microbiological and histopathological study

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ABSTRACT

Background: Atrophic rhinitis is a distressing chronic nasal pathology characterized by progressive nasal mucosal atrophy, formation of thick crusts and a distinct foul odor. The etiology of this condition is still controvertible. The present study was undertaken to evaluate the microbiological flora and histopathological changes in primary and secondary atrophic rhinitis patients.

Methods: A total 50 atrophic rhinitis patients (15 males & 35 females) were considered, all patients were undergone for complete haemogram, microbiological examination of nasal pus and histopathological examination for biopsied material.

Results: A total 82% patients were shown primary atrophic rhinitis and 18% cases were secondary atrophic rhinitis. *Pseudomonas aeruginosa* was commonly isolated bacteria in 72%, followed by *Staphylococcus aureus* (12%) and other bacteria were *E. coli* (8%) and *Proteus mirabilis* (6%) and sterile swab in 2% cases. Squamous metaplasia was found in 78% cases, while transitional metaplasia in 16% cases. The incidence of dilated blood vessels, endarteritis, and periarteritis in lamina propria is 44%, 30% and 16% respectively.

Conclusions: *Pseudomonas aeruginosa* was most commonly isolated bacteria. The most important pathological change is squamous cell metaplasia in atrophic rhinitis patients.

Keywords: Primary atrophic rhinitis, Secondary atrophic rhinitis, squamous metaplasia, *Pseudomonas aeruginosa*

INTRODUCTION

Atrophic rhinitis is a chronic inflammatory nasal complication manifested by atrophic changes of nasal mucosa with resorption of underlying bone, the formation of thick crusts and foetor to which is attributed the term ozaena.¹ The etiology of chronic rhinitis is still controvertible and its etiopathogenesis is explained by few theories.² Atrophic rhinitis is a common condition in tropical countries like India China etc., but significant decline in the incidence was observed in North America, some parts of Europe.^{3,4}

Atrophic rhinitis can be classified as primary and secondary. Primary atrophic rhinitis have a complete

infectious background and based on triad of characteristics such as foetor, greenish crusts and roomy nasal cavities, but secondary atrophic rhinitis is a late postoperative complication following excessive surgical destruction of nasal mucosa.^{4,5} Bacteria like *Klebsiella ozaenae*, *Proteus*, *E.coli* and *Bacillus pertussis* have been isolated from cases. In atrophic rhinitis, there is atrophy of tissue of ectodermic and mesodermic origin (6, 7). The present study was aimed to evaluate histopathological changes and microbiological flora in atrophic rhinitis patients.

METHODS

This present study was conducted in Department of otorhinolaryngology, MNR Medical College and


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Original Research Article

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Primary and secondary atrophic rhinitis: a microbiological and histopathological study

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ABSTRACT

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Conclusions: *Pseudomonas aeruginosa* was most commonly isolated bacteria. The most important pathological change is squamous cell metaplasia in atrophic rhinitis patients.

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INTRODUCTION

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Atrophic rhinitis can be classified as primary and secondary. Primary atrophic rhinitis have a complete

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METHODS

This present study was conducted in Department of otorhinolaryngology, MNR Medical College and

RESEARCH ARTICLE

Management of parapneumonic effusion and thoracic empyema with intrapleural instillation of 2-mercaptoethane sulfonate sodium and conservative approach – A comparative study

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ABSTRACT

Background: The aim of pleural effusion management is to provide symptomatic relief by draining excessive fluid in the pleural space and stable the patient before the surgical and therapeutic intervention of underlying disease. Intrapleural fibrinolytic therapy is an effectively adjunct to improve the drainage of loculated effusion in complicated empyema especially in cases who fail chest tube drainage. **Aim and Objectives:** The aim of the study was to compare the efficacy of intrapleural instillation of 2-mercaptoethane sulfonate sodium (MESNA) and conservative approach in the management of loculated parapneumonic effusion and thoracic empyema. **Materials and Methods:** A total of 50 cases with loculated parapneumonic effusion and empyema above 21 years of age were recruited. Cases were randomly divided into two groups, that is, Group 1 managed with intrapleural instillation of MESNA for adhesiolysis of loculations through tube thoracostomy and Group 2 managed with conservative approach through tube thoracostomy. **Results:** Effusion in 84–80% and empyema in 16–20% were observed in Group 1 and Group 2, respectively. The mean value of number of days in ICD was 14.98 days in Group 1 and 19.5 days in Group 2. The amount of fluid drained (125.3–95.6 ml) and mean duration of hospital stay (22.2–28.5) was statistically significant between study groups. No adverse complications were noticed; however, cough and pain at the site of injection were reported in two cases each. Around, 32–64% cases required surgical intervention in Group 1 and Group 2, respectively. **Conclusion:** The intrapleural fibrinolytic therapy by 2-MESNA has better efficacy than conservative thoracostomy. The MENSNA has better outcome in regard to breaking loculations, limited requirement of surgical intervention, less duration of hospital stay, and faster absorption of pleural fluid in effusion and empyema.

KEY WORDS: 2-Mercaptoethane Sulfonate Sodium; Pleural Effusion; Empyema; Septations

INTRODUCTION

Parapneumonic pleural effusions are encountered in pleural spaces, which occur approximately up to 36–57% of pneumonia cases and infections to the gathered fluid lead

to empyema in 15–20% cases.^[1-3] The mortality rates in empyema are gradually increasing and are approximately 20% globally.^[4,5] The management of thoracic empyema and parapneumonic effusions through intrapleural chemical fibrinolysis in has been in practice for several years. Variety of fibrinolytic agents such as streptokinase, alteplase, urokinase, and recombinant tissue plasminogen activator has been administered selectively and safely in the management of pleural effusion and thoracic empyema.^[6-11]

Mucolytic and fibrinolytic agent 2-mercaptoethane sulfonate sodium (MESNA) has ability to degrade the disulfide bonds

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Original Research Article

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Comparison between dressing of cellulitis with normal saline and Magnesium sulphate

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ABSTRACT

Background: Cellulitis is an acute inflammatory condition of the skin that is characterized by localized pain, erythema, swelling and heat. Cellulitis may be caused by indigenous flora colonies of the skin appendages.

Methods: This study comprises of patients attending MNR Medical College and Hospital between February 2015 to January 2018. After proper history taking, examination and investigations patients were admitted or treated as out-patients.

Results: Patients treated with normal saline dressing responded better than Magnesium sulfate dressing. No complication was observed, and healing was faster.

Conclusions: In this study, author have observed patients treated with normal saline dressing responded better than Magnesium sulfate dressing. No complication was observed, and healing was faster.

Keywords: Cellulitis, Dressing, Normal saline, Patients

INTRODUCTION

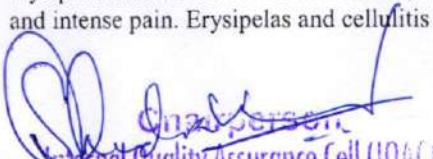
Cellulitis is an acute inflammatory condition of the skin that is characterized by localized pain, erythema, swelling and heat. Cellulitis may be caused by indigenous flora colonies of the skin appendages eg., *S. aureus* and *S. pyogenes* or by a wide variety of exogenous bacteria.¹

Relatively, low number of bacteria may cause cellulitis and that the expanding area of erythema within the skin may be a direct effect of extra cellular toxins or of the soluble mediators of inflammation elicited by the host.²

Erysipelas is the more superficial infection of dermis and upper subcutaneous layer. The distinctive features of erysipelas are well-defined in duration, rapid progression and intense pain. Erysipelas and cellulitis often co-exist.³

Cellulitis is the non-suppurative invasive infection of tissue. Cellulitis occur as bacteria gain access to the epidermis through cracks in the skin, abrasion, cuts, burns, insect bites, surgical incision and intravenous cathedral. There is poor localization in addition to cardinal sign of inflammation, spreading infection typically caused by bacteria such as *β*-haemolytic *staphylococcus* tissue destruction and ulceration follows.⁴

Lymphangitis is a part of similar process and presents as painful red streaks in affected area. If not treated leads to toxemia chills fever and rigors. Treatment includes antibiotic, anti-inflammatory best to the part along with the treatment of associated problems like diabetes. Dressing of cellutic part is important part of treatment. Dressing was usually done with Magnesium sulfate. It has been


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Assessment Of Psychiatric Comorbidities Associated in Cases with Cannabis Use

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Received: 02-07-2022 / Revised: 30-07-2022 / Accepted: 30-08-2022

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Conflict of interest: Nil

Abstract

Introduction: Cannabis is the frequent psychoactive illicit substance consumed after alcohol and tobacco across worldwide. Cannabis use was associated with robust increases in risk for psychiatric comorbidities. This study was aimed to evaluate psychiatric comorbidities among cases with cannabis use.

Material and Methods: Fifty-eight cases under cannabis use attending the outpatient department of psychiatry and fulfill criteria for cannabis dependence according to ICD-10 above 15 years of age was included. Participant details were collected using semi-structured patient proforma and details of cannabis dependence were collected by using marijuana problem scale, and the cannabis withdrawal scale.

Results: Onset of cannabis abuse was below 18 years in 34.48% cases and above 18 years in 65.52% cases. Psychotic disorders (55%) were the common psychiatric comorbidity associated followed by Nonalcoholic psychoactive substance use disorders (NAPSD) (19%), manic episode (14%), ASPD (7%) and Depression (5%). The comparison of mean difference between time period of cannabis abuse and time period of illness and symptoms of cannabis withdrawal was statistically significant ($p < 0.05$).

Discussion and conclusion: Cannabis abuse is serious public health concern that requires active implementation of preventive and rehabilitation programs and educates adolescents on the risks associated with its use.

Keywords: Cannabis Use, Psychiatric Comorbidity, Psychosis, Sociodemographic Data

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Introduction

Cannabis is the widely consumed psychoactive illicit substance across globally [1]. According to national survey on Extent, Pattern and Trend of Drug use in India, cannabis is regularly consumed psychoactive illicit substance in India [2]. In the year 2000, prevalence of cannabis used in in India was 3.2%. In 2019, All India Institute of Medical Sciences (AIIMS), New Delhi stated in its study that approximately 7.2 million Indians were under cannabis abuse.

According to "Magnitude of Substance use in India 2019" report by The Ministry of Social Justice and Empowerment's, around 2.8% (31 million) of Indian population between 10-75 years of age group were actively consuming cannabis products. Among them, 10% of people were in a state of cannabis dependence [3-5].

The crescent in use of cannabis is linked to a series of complex issues including health related and appropriate social behaviour. Cannabis use is linked with a high

A cross sectional study on awareness of breast self-Examination and its practice in women of rural area in South India

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Abstract

Background: Breast cancer is the most common cancer among women worldwide, and it can be detected at an early stage through self-examination. BSE is an inexpensive, simple, non-invasive method for early detection of breast tumors. Thus, knowledge about the procedure and consistent practice could protect women from severe morbidity and mortality due to breast cancer. This study assessed the knowledge and practice of BSE among women in Chittur taluk before participating in the study and after participating in the study. **Methodology:** This cross-sectional study was conducted for a period of 1 month in August 2018 in the Rural Health Training Centre (RHTC) service area of the Karuna Medical College Hospital. 254 women aged above 30 years were included in the study. A questionnaire was used to obtain information about the knowledge of breast cancer and BSE, attitude, practice of BSE. Women were explained about significance of BSE, how it is done, and the frequency to be done. Later after 1 week the same houses were visited and women were asked if they practiced BSE, the steps, their finding if any and whether they have visited surgeon. **Results:** Out of the 250 participants, 193 (77%) were aware about breast cancer, 87 (45%) were aware about breast self-examination (BSE). The percentage of women performing BSE increased after education as at BSE from 21% to 85%. After participating in the study and getting educated about BSE there was decrease in the number of women who do not know any step of BSE from 74% to 12%. **Conclusion:** BSE is considered to be a simple, inexpensive, quick, non-invasive, non-hazardous intervention. Lack of knowledge about how to perform BSE is one of the most important reason amongst women for not performing BSE. Efforts should be made to develop educational programs to increase knowledge and practice of breast self-examination among women.

Keywords: Awareness, Breast self-examination, Breast cancer, Women.

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INTRODUCTION

Breast cancer is the second most common cancer worldwide and is the most common cause of cancer among women both in developed and also in developing countries. It is commonly associated with high levels of morbidity and mortality in India due to late presentation. Breast cancer is the most common cause of death due to cancer among women.¹ Breast cancer reduces the life expectancy of the population at risk specially those between 31-50 years. Breast self-examination can help in early detection of the disease. Studies have shown that most patients with breast cancer in developing countries present late for the first time at 2nd and 3rd stages. The reasons for late

Arjun Bansode, Sharad Prabhakarrao Ingole, Shalaka Bansode, A cross-sectional study on awareness of breast self-examination and its practice in women of rural area in South India. *Indian Journal of Community Health* 2021; 63(1): 1-5

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Study of nutritional status of primary school children in an urban field practice area of Pune

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Abstract

Childhood years constitutes the most crucial period in life, when the foundations are laid for cognitive, social and emotional language, physical and motor development and cumulative lifelong learning. The young child is most vulnerable to the vicious cycles of malnutrition, infection and resultant disability all of which influence the present condition of a child at micro level and the future human resource development of the nation at the macro level. The present study was a cross sectional study which was carried out in two randomly selected municipal schools of an urban area. The Study consisted of 400 school children from 6 - 9 yrs age group, in which 75 (18.75%) children were found to be stunted and 114 (28.5%) children were underweight. Prevalence of Malnutrition in the form of stunting, and underweight significantly associated with socioeconomic status, educational status of mother, type of family and high birth order. Health education, personal hygiene education, nutrition education may be made as part of the school curriculum.

Keywords: nutritional status, Primary school children.

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INTRODUCTION

Nutritional status during school age is a major determinant of nutritional and health status in adult life. Globally, including in India, health hazards associated with undernutrition and micronutrient deficiencies remain major public health problems¹. According to Food And Agricultural Organisation (FAO), nearly 870 million people, or one in eight, were suffering from chronic undernourishment in the year 2010-2012². Various studies have found the prevalence of malnutrition in primary school children in the range of 50%-60%³. One in three malnourished child in the world lives in India. Prevalence of malnutrition varies across states with Madhya Pradesh recorded highest and Kerala lowest⁴. The school age

group spans the period between preschool years and adult life. This age group forms a very large proportion of the population. Population projections indicate that over the next decade this age group will show by far the largest increase in numbers. It is therefore essential that over the next decade efforts should be focused on improving the health and nutritional status of school-age children, (irrespective of whether they are studying in school or are school dropouts) so that they reach adult life with optimal nutrition and health status^{1,5}. Determining a child's nutritional status is important because it helps define the child's health status. Proper nutrition levels are generally associated with better health status among children and later health when these children reach adolescence and adulthood. Accurate assessment of nutritional status is indispensable to planning, implementation and evaluation of nutrition interventions. So the present study was planned to assess nutritional status of school age children.

MATERIAL AND METHODS

The present study was a cross sectional study which was carried out in two randomly selected municipal schools of an urban field practice area of Medical College in Pune. The study was carried out from Jan to Dec 2013. The study was approved by the Institutional Ethics

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A study on sleep deprivation among students aged 15-18 years from a high school in Kerala state

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Abstract

Background: To identify the prevalence of sleep deprivation among students of age 15-18 years and to identify the factors influencing sleep deprivation. **Study Design:** The study was done as a cross sectional study to identify the prevalence of sleep deprivation among 200 school students aged 15-18 years in a high school. A structural questionnaire was used for data collection. **Results:** In the present study the prevalence of sleep deprivation was 125/200 (62.5%). **Conclusion:** Sleep deprivation among students of age 15-18 years is a considerable problem. The factors like nightmares, family problems, menstrual discomforts, stress depression, use of gadgets influence sleep deprivation as they have significant association with sleep deprivation.

Keywords: Sleep deprivation, Adolescents, Prevalence, Questionnaire.

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INTRODUCTION

Sleep deprivation is a major problem that can affect a student's physical and mental health and school performance. Sleep affects physical growth, behavior, and emotional development besides determining cognitive functioning, learning and attention¹. The reasons for student's sleep deprivation may include a wide range of social, cultural, environmental and biological factors. A range of lifestyle and physiological factors can also interfere with sleep. The prevalence of sleep deprivation

among students by different studies ranges between 56-68%²⁻⁴. As there is a high prevalence of sleep deprivation in India as well as worldwide, we conducted a cross sectional study in higher school.

MATERIAL AND METHOD

OBJECTIVES

Objectives of this study were to identify the prevalence of sleep deprivation among students of age 15-18 yrs and to identify the factors influencing sleep deprivation.

Study design: The study was done as a cross sectional study to identify the prevalence of sleep deprivation among 200 school students aged 15-18 yrs in Sreekrishna High school Nallepilly, Palakkad, and Kerala. This study was conducted in the month of November 2018.

Methods of data collection: The study was done using structural questionnaire. The questionnaire was in English and was filled by students themselves. The participating adolescents were explained the rationale for the study and their oral consent was taken prior to administration of a questionnaire aimed at gathering information regarding sleep habits. Individual items of the questionnaire were

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Umbilical Cord Blood Serum Albumin as an Early Predictor of Neonatal Hyperbilirubinemia in Healthy Full-Term Newborns

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Conflict of interest: Nil

Abstract:

Introduction: Neonatal hyperbilirubinemia is one of the most significant factors in early neonatal re-admissions. In a growing nation like India, socioeconomic issues are one of the most frequent causes of early discharge and less readmissions. Cord blood serum albumin, and cord blood serum bilirubin, are essential in predicting neonatal hyperbilirubinemia. The present study was aimed to assess the cord blood serum albumin in the prediction of neonatal hyperbilirubinemia at tertiary care hospital, Sangareddy.

Material and Methods: A source of 120 full term healthy neonates with more than 2.5 kg birth weight and APGAR score above 7/10 at 1 minute were included. A two ml of cord blood was collected from the maternal side umbilical cord. The blood sample was utilized to analyse the total serum bilirubin and serum albumin.

Results: The levels of serum albumin were ≤ 2.8 g/dl in 45.83%, 2.9-3.33 g/dl in 33.33% and ≥ 3.4 g/dl in 20.83%. The diagnostic prediction of albumin levels in related to neonatal hyperbilirubinemia showed sensitivity, specificity, positive predictive value and negative predictive values for serum albumin level ≤ 2.8 g/dl was 93.1%, 88.8%, 59.7% and 98.5%, for 2.9-3.3 g/dl was 7.5%, 58.2%, 3.8% and 80.4% and for >3.3 g/dl was 0%, 61.2%, 0% and 81.8% respectively.

Conclusion: There was a significant correlation between healthy full-term infants with hyperbilirubinemia with low levels of cord blood serum albumin (2.8g/dl). Cord blood serum albumin is a sensitive marker for the diagnosis of neonatal hyperbilirubinemia.

Keywords: Serum albumin, Bilirubin, Neonatal Hyperbilirubinemia, Cord blood.

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Introduction

Neonatal hyperbilirubinemia, which is seen in 84% of newborns, is a common reason for hospital readmission in neonates. Kernicterus is the result of severe hyperbilirubinemia, which is characterised by excess total blood bilirubin levels above 20 mg/dl [1, 2]. Early identification of newborns who run the risk of having substantial hyperbilirubinemia is essential for preventing negative consequences.

The American Academy of Paediatrics (AAP) advises that neonates who are released from the hospital within 48 hours should visit again in 48-72 hours to check for any serious jaundice or other issues [3]. In developing countries like India, due to the socioeconomic factors influence It has become crucial to have accurate predictors that allow medical professionals to ascertain whether prematurely released neonates are more likely to

develop significant hyperbilirubinemia. Infants who are likely to develop hyperbilirubinemia can easily be readmitted if neonatal jaundice is detected early and can get simple and affordable phytotherapy treatment [4]. A number of research have been conducted to determine whether first day bilirubin levels, albumin, and cord bilirubin levels can be used as screening measures for later newborn hyperbilirubinemia [5-7].

Predictors including cord blood albumin, cord blood bilirubin, cord blood albumin/bilirubin ratio and alpha fetoprotein have been explored in neonatal hyperbilirubinemia [8]. In continue, we aimed to assess the cord blood serum albumin in the prediction of neonatal hyperbilirubinemia at tertiary care hospital, Sangareddy.

Materials and Methods

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RESESRCH ARTICLE

Vitamin D and autoimmune thyroiditis in children – A prospective case-control study

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ABSTRACT

Background: The deficiency or insufficiency of Vitamin D has been widely reported to be linked with autoimmune thyroid diseases. Several studies were evaluated the immunomodulatory effects of 25 hydroxyvitamin D (25(OH)D) and its counterparts in autoimmune diseases especially in autoimmune thyroiditis. **Aim and Objectives:** The aim of the study was to assess the Vitamin D status in children with autoimmune thyroiditis at tertiary care hospital, Sangareddy, Telangana. **Materials and Methods:** A source of 80 newly diagnosed cases with autoimmune thyroiditis and similar volume of age and sex matched control subjects between ≥6 and 12 years were included in the study. Parameters such as thyroid function tests, serum calcium, serum phosphorus, serum alkaline phosphatase, 25(OH)D, and antithyroid antibodies levels were assessed. The antithyroid antibodies levels were assessed through chemiluminescence assay. **Results:** The 25(OH)D levels were 14.98ng/ml in cases and 17.46 ng/ml in control subjects. The mean levels of 25(OH)D, serum calcium, and alkaline phosphatase were statistically significant ($P < 0.05$). **Conclusion:** The levels of Vitamin D and four groups of antithyroid peroxidase antibody and antithyroglobulin antibody among cases and control subjects were not significant ($P > 0.05$). The estimation of Vitamin D in high-risk group may be helpful in designing the treatment strategies to decrease the morbidity.

KEY WORDS: 25 Hydroxyvitamin D; Antithyroid Peroxidase Antibody; Antithyroglobulin Antibody; Autoimmune Thyroiditis


INTRODUCTION

Vitamin D deficiency or insufficiency is termed as serum levels of 25 hydroxyvitamin D [25(OH)D] are <20 ng/mL.^[1] The levels 25(OH)D deficiency are susceptible to immune related disorders such as tuberculosis, Type 2 diabetes, autoimmune thyroiditis, hypothyroidism, and cancers.^[2] Autoimmune thyroiditis is a leading cause of hypothyroidism

with female predominance in incidence (10:1, Male: Female ratio).^[3] Autoimmune thyroiditis including hashimoto's thyroiditis (HT) and Grave's disease is affecting 5% of population.^[4]

Several community studies from India reported a prevalence of Vitamin D ranging from 50% to 94% due to lower dietary intake of calcium and lack of sufficient exposure to the sun.^[5-7]

Vitamin D intimately prevalents in autoimmune thyroiditis and has an immunomodulatory effects. Several studies reported that the relation between Vitamin D levels and different groups of antithyroid peroxidase antibody and antithyroglobulin antibody is not clear or unknown. Few studies reported an inverse correlation between thyroid

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Umbilical Cord Blood Serum Albumin as an Early Predictor of Neonatal Hyperbilirubinemia in Healthy Full-Term Newborns

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Corresponding author: Dr. Tummala Shilpa Reddy

Conflict of interest: Nil

Abstract:

Introduction: Neonatal hyperbilirubinemia is one of the most significant factors in early neonatal re-admissions. In a growing nation like India, socioeconomic issues are one of the most frequent causes of early discharge and less readmissions. Cord blood serum albumin, and cord blood serum bilirubin, are essential in predicting neonatal hyperbilirubinemia. The present study was aimed to assess the cord blood serum albumin in the prediction of neonatal hyperbilirubinemia at tertiary care hospital, Sangareddy.

Material and Methods: A source of 120 full term healthy neonates with more than 2.5 kg birth weight and APGAR score above 7/10 at 1 minute were included. A two ml of cord blood was collected from the maternal side umbilical cord. The blood sample was utilized to analyse the total serum bilirubin and serum albumin.

Results: The levels of serum albumin were ≤ 2.8 g/dl in 45.83%, 2.9-3.33 g/dl in 33.33% and ≥ 3.4 g/dl in 20.83%. The diagnostic prediction of albumin levels in related to neonatal hyperbilirubinemia showed sensitivity, specificity, positive predictive value and negative predictive values for serum albumin level ≤ 2.8 g/dl was 93.1%, 88.8%, 59.7% and 98.5%, for 2.9-3.3 g/dl was 7.5%, 58.2%, 3.8% and 80.4% and for >3.3 g/dl was 0%, 61.2%, 0% and 81.8% respectively.

Conclusion: There was a significant correlation between healthy full-term infants with hyperbilirubinemia with low levels of cord blood serum albumin (2.8g/dl). Cord blood serum albumin is a sensitive marker for the diagnosis of neonatal hyperbilirubinemia.

Keywords: Serum albumin, Bilirubin, Neonatal Hyperbilirubinemia, Cord blood.

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Introduction

Neonatal hyperbilirubinemia, which is seen in 84% of newborns, is a common reason for hospital readmission in neonates. Kernicterus is the result of severe hyperbilirubinemia, which is characterised by excess total blood bilirubin levels above 20 mg/dl [1, 2]. Early identification of newborns who run the risk of having substantial hyperbilirubinemia is essential for preventing negative consequences.

The American Academy of Paediatrics (AAP) advises that neonates who are released from the hospital within 48 hours should visit again in 48–72 hours to check for any serious jaundice or other issues [3]. In developing countries like India, due to the socioeconomic factors influence It has become crucial to have accurate predictors that allow medical professionals to ascertain whether prematurely released neonates are more likely to

develop significant hyperbilirubinemia. Infants who are likely to develop hyperbilirubinemia can easily be readmitted if neonatal jaundice is detected early and can get simple and affordable phytotherapy treatment [4]. A number of research have been conducted to determine whether first day bilirubin levels, albumin, and cord bilirubin levels can be used as screening measures for later newborn hyperbilirubinemia [5-7].

Predictors including cord blood albumin, cord blood bilirubin, cord blood albumin/bilirubin ratio and alpha fetoprotein have been explored in neonatal hyperbilirubinemia [8]. In continue, we aimed to assess the cord blood serum albumin in the prediction of neonatal hyperbilirubinemia at tertiary care hospital, Sangareddy.

Materials and Methods

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MNR Medical College & Hospital
Sangareddy, Telangana
Singh et al.

CEFIXIME AND OFLOXACIN IN THE ERA OF ANTIBIOTIC RESISTANCE REVIEW OF ITS USE IN UTI



Microbiology

KEYWORDS:

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Clinical context

Urinary tract infection (UTI) is a common bacterial infection that frequently contributes to morbidity in the hospitalized and outpatients. Worldwide, around 150 million people are estimated to suffer from asymptomatic and symptomatic UTIs each year. UTIs due to multidrug-resistant (MDR) uropathogens have increased concern globally since the last 2 to 3 decades. Microorganisms have developed resistance to the newer and more potent antimicrobial agents thereby limiting the therapeutic options. *Escherichia coli* has been reported to be a common uropathogen, accounting for 75 to 90% of the UTI isolates. The resistant *E. coli* has shown to impair the antimicrobial therapy of the commonly used antimicrobial agents. *E. coli* is also reported to be MDR due to presence of antibiotic resistant genes in its transferable R-plasmid. Therefore, the situation of prevailing MDR uropathogens is crucial for deciding the proper use of antimicrobial drugs in order to fight against MDR UTIs.

Some authors recommend cefixime as a first line antibiotic in community-acquired URTI. It is a potent broad-spectrum antibiotic with excellent efficacy in community acquired infections resistant to macrolides. Ofloxacin has been recommended as the drug of choice for the empirical treatment of UTI. It belongs to a new generation of fluorinated quinolones and is active against most gram-negative and many gram-positive bacteria. Ofloxacin has shown to be effective against acute and chronic UTIs, is well tolerated and has a unique feature of being exempted from plasmid-borne bacterial resistance.

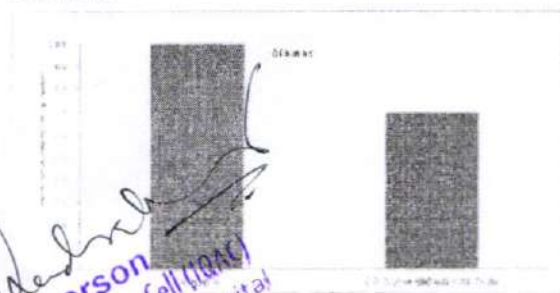
Efficacy and safety of cefixime in UTIs

Cefixime was found to have greatest activity against *E. coli*, which was the most frequently isolated bacteria causing uncomplicated acute UTIs in a study by Chaudhary et al. around 61 of the 65 patients (93.85%) with UTI recovered after cefixime therapy administered twice a day for 7-10 days. Cefixime was well-tolerated with minor side-effects such as nausea, gastritis and drowsiness. Another study has also demonstrated the efficacy of cefixime prophylaxis for UTIs associated with urinary tract anomalies.

Cefixime vs amoxicillin + clavulanic acid

Francois et al evaluated the comparative efficacy and safety of cefixime with amoxicillin + clavulanic acid in urinary tract infections. Bacterial susceptibility was found to be greater with cefixime (100% of cases) than with amoxicillin-clavulanate (69%) ($p=0.0001$; Figure 1).

Figure 1 Bacterial susceptibility to cefixime and amoxicillin-clavulanate



Cefixime is effective against resistant strains of uropathogens.

- A study was conducted to investigate the activity of cefixime against pathogens of UTIs resistant to ciprofloxacin or producing extended-spectrum β -lactamases (ESBL). Cefixime was found to inhibit around 85.7% of non-ESBL-producing *E. coli* isolates, whereas ciprofloxacin inhibited 80.2% of these isolates. It inhibited around 80-90% of ciprofloxacin-resistant isolates and was active against less than 20% of ESBL-producing isolates.
- In a study by Smith et al, >99% of *E. coli* isolates were susceptible to cefixime including those resistant to ampicillin.

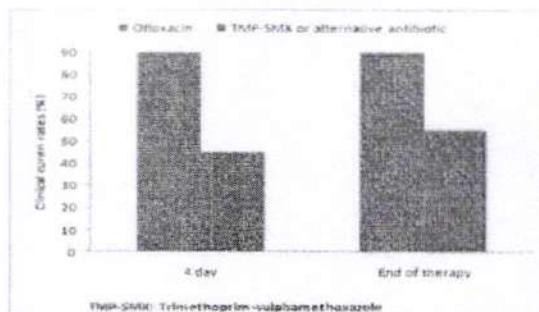
Efficacy of ofloxacin in UTIs

In a study conducted by Raz et al, ofloxacin was found to cure around 94% of women after 3 days of therapy. Around 86% of women were found to be free of symptoms and urinary cultures were found to be negative in around 80% of women after follow up at 28th day. Therefore, ofloxacin is effective in treating uncomplicated UTI in young women.

Ofloxacin vs TMP-SMX and other antibiotics

Reida et al in a randomized study compared ofloxacin with trimethoprim-sulphamethoxazole (TMP-SMX) or an alternative antibiotic in patients with UTIs. The clinical cure rate (asymptomatic patient with sterile urine) at 4-day was found to be 90% with ofloxacin, which was significantly greater than 48% for the comparison group ($p=0.003$) and the rate at end of therapy (7-day) was 90% with ofloxacin, against 57% ($p=0.015$) as shown in Figure 2. Bladder cell biofilm eradication was significantly greater with ofloxacin therapy than the other antibiotic group on day 4 (62 vs 24%; $p=0.035$) and day 7 (67 vs 35%; $p=0.014$). Therefore, ofloxacin was better than TMP-SMX or alternative antibiotics in relieving infection and eradicating bladder cell biofilm of patients with UTI.

Figure 2 The clinical cure rates in patients with urinary tract infections on ofloxacin and alternative antibiotics



Ofloxacin is effective against resistant strains of uropathogens

Cefixime and ofloxacin were found to be effective against *E. coli* strain resistant to ampicillin from positive urine cultures.

Summary

Cefixime is recommended as a first-line antibiotic in community-acquired URTI by few authors. It has greatest activity against *E. coli* that frequently causes UTIs. Ofloxacin is active against most Gram-

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**AN ANATOMICAL STUDY OF MYOCARDIAL
BRIDGES ON THE CORONARY ARTERIES OF HUMAN
CADAVERIC HEARTS**

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Abstract:

Introduction: Myocardial bridging is a common anatomical anomaly characterized by muscle bridge on the epicardial artery, Myocardial bridges may compress the coronary vessel and compromise myocardial blood supply, it is considered to be associated with myocardial ischaemia, myocardial infarction, arrhythmias and even sudden death. **Materials and methods:** This observational prospective study, conducted in the department of Anatomy, Fathima Institute of Medical Sciences, Kadapa, India, from April 2019 to January 2022. Eighty cadaveric human hearts collected from preserved adult human cadaveric hearts, the epicardium and fat were removed carefully from the surface of the heart. The origin and the course of all the coronary arteries and their important branches were carefully delineated and studied. **Results:** Of the total 80 hearts dissected, 74 showed MB in at least one coronary artery or in one of its significant branches, of which 49(66.21%) were males and 25(33.78%) were females. Myocardial bridging were found to be more common in the major branches of Left Coronary Artery (LCA). Though almost all the major branches were involved left anterior descending artery was significantly more involved. The maximum length of myocardial bridge was cm originated on the left anterior descending artery. **Conclusion:** The


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214
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Development and validation of an in-house handheld ELISA kit to detect glycosylated hemoglobin in human whole blood



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ABSTRACT

Background: Diabetes mellitus (DM) is known as one the oldest disease known to a human being and it is defined as a group of metabolic disorders characterized by the presence of hyperglycemia. **Aims and Objectives:** The present study describes the development and evaluation of a cost-effective and straightforward in-house handheld enzyme-linked immunosorbent assay (ELISA) kit for the determination of HbA1c in human whole blood of diabetic patients and is suitable for resource-poor settings. **Materials and Methods:** A total of 1056 specimens were collected for assay validation purposes. To check the proficiency of our diagnostic strategy, we compared our test results with high-performance liquid chromatography (HPLC) and a commercially available ELISA kit for HbA1c. The Institutional Ethical Committee approved this study (IEC). SPSS 16 statistical software analyzed all the data. The correlation regression was done to compare the assay. The level of significance of this study was $P < 0.001$. **Results:** The sensitivity, specificity, and efficiency of the in-house HbA1c ELISA kit range from 98.8%, 100%, and 99.24%. **Conclusion:** The newly developed in-house handheld HbA1c ELISA test kit is not only cost-effective, accurate, and straightforward but also gives good correlation with optimized methods such as HPLC and commercially available techniques in deciding the glycemic status of patients. Therefore, highly recommended for use in resource-poor settings in the management and diagnosis of DM.

Key words: Diabetes mellitus; Enzyme-linked immunosorbent assay; Glycated hemoglobin; High-performance liquid chromatography; International diabetes federation

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INTRODUCTION

Diabetes mellitus (DM) is known as one the oldest disease known to a human being and it is defined as a group of metabolic disorders characterized by the presence of hyperglycemia, accompanied by a lesser or more significant abnormality in the metabolism of carbohydrates, lipids, and proteins, occurring due to the body does not produce insulin or insulin resistance or both. Chronic hyperglycemia in DM leads to the development of long-term complications affecting and damaging various organs such as blood vessels, eyes, kidneys, nerves, and heart.¹⁻³

Globally, DM became one of the major health problems mainly affecting both developed and developing countries. The prevalence of DM was enormously increasing in low- and middle-income countries in Asia and Africa. According to the WHO report 2016, 422 million people are affected and living with DM globally.⁴ The incidence of DM is rapidly increasing in developing countries, especially India. According to International Diabetes Federation in India 40 million people are affected and living with DM and the prevalence is projected to increase up to 70 million by 2020. India has a high prevalence of DM, so the WHO declared India as the diabetes capital of the world.⁵⁻⁸

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Clinico - etiological study of chronic Urticaria and the role of autologous serum skin test in the diagnosis of chronic idiopathic Urticaria

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ABSTRACT

Introduction: Urticaria is a common pruritic skin disorder that affects 15 to 25% of individuals at some point of their life time. It is one of the most frustrating problem to the affected victim because it produces severe physical and emotional distress. Likewise, it poses a serious therapeutic dilemma to the attending dermatologist because of its chronicity and refractory nature of lesions to the treatment.

Materials and Methods: A total number of one hundred patients of either sex with history suggestive of chronic urticaria reporting to the out patient clinic of Dermatology, Venereology and Lepatology (DVL) department during the period of two years from April 2009 to March 2011, constituted the subjects for the present study.

Results: The patients were in the age group of 11-65 years with maximum number (33%) being in the 21-30 years age group. Females (66%) outnumbered the males (34%) in the series. Majority of the patients (53%) belonged to the urban area and were literate (91%). Duration of the disease varied from 6 weeks to 5 years and the most commonly observed was from 1-2 years. 58% of the patients had only Urticaria and the remaining 42% had Urticaria and angioedema.

Conclusion: From the present study, it is concluded that the etiology is not clear in large number of patients and hence labelled as chronic idiopathic urticaria. Autologous serum skin test (ASST) constitutes one of the important screening test for obtaining urticaria.

Keywords: Urticaria, Angioedema, Autoantibodies, Autologous serum skin test.

INTRODUCTION

The Urticarias are characterized by short-lived swellings (wheals) on the skin due to leakage of plasma from capillary dilatations. A hive or wheal is an erythematous or pale, nonpitting edematous plaque that changes in size and shape by peripheral extension or regression during few hours or days

that the individual lesion exits. The evolution of urticaria is a dynamic process. New lesions evolve as old ones resolve. Hives result from localized capillary vasodilation, followed by transudation of protein-rich fluid into the surrounding tissue; they resolve when the fluid is slowly reabsorbed. Hives may be surrounded by a clear or red halo. Thicker plaques that result from massive transudation of fluid into the dermis and subcutaneous tissue are referred to as angioedema.

Angioedema presents as pale or pink swellings, mainly on the face, around the eyelids and lips usually but other areas of the body may also be affected. Mucosal swellings occur inside the oral cavity on the buccal mucosa, tongue, pharynx and larynx. The lesions may be preceded by itching or tingling sensation although they are not always pruritic. Urticaria and angioedema may be associated at times with headache, dizziness, nausea, vomiting, abdominal pain, diarrhea and arthralgia. Both these conditions may coexist although angioedema may occur in some patients without urticarial lesions due to the deficiency of enzyme C1 esterase inhibitor in hereditary or acquired form.

Urticaria is traditionally classified into acute and chronic based on the duration. When urticaria is present daily or almost daily for less than 6 weeks, it is termed as 'acute urticaria'. If urticaria occurring every day or twice per week, lasting longer than 6 weeks, it is termed as 'chronic urticaria'^{1,2}. The cause of acute urticaria is possible to determine in many cases. However, in chronic urticaria it is clear in only 5% to 20% of cases and as such these patients constitutes a major problem in the diagnosis and treatment.

Based on clinical features and trigger factors many variants of urticaria have been described such as, ordinary urticaria, physical and cholinergic urticarias, urticarial vasculitis, contact urticaria, angioedema without wheals, idiopathic urticaria and other syndromes resembling urticaria or angioedema.

MATERIALS AND METHODS: The present study was conducted on a total number of one hundred patients of either

Adenoidectomy in Paediatric Cases - Endoscopic Assisted Coblation Method versus Conventional Curettage Method

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Conflict of interest: Nil

Abstract

Introduction: Adenoidectomy is a common surgical procedure in children. Conventional curette adenoidectomy claimed few disadvantages including high operative blood loss and postoperative recurrence. Endoscopic assisted coblation adenoidectomy gained better outcome with minimal postoperative complications. The present study was designed to assess the efficacy of endoscopic assisted coblation and conventional curettage method in adenoidectomy in paediatric patients.

Material and methods: A total of 48 cases clinically diagnosed with adenoid hypertrophy between age group 5 to 15 years were included. Study participants were randomly divided in to two groups. Group 1 (conventional curettage adenoidectomy) and group 2 (endoscopic assisted coblation adenoidectomy). Parameters like total surgical duration, operative blood loss, recovery time and visual analogue score was recorded.

Results: The mean operative blood loss was 30.78 ml in group 1 and 12.76 ml in coblation group. The mean pain score was 4 in group 1 and 3 in group 2. The mean recovery duration was 3.56 days in group 1 and 2.59 days in group 2. The mean difference of operative blood loss and pain score between two study groups was statistically significant ($p < 0.05$).

Conclusion: Endoscopic coblation adenoidectomy was effective in terms of minimal operative blood loss, less operative pain score, less recovery period and higher rate of adenoid tissue removal compared to conventional adenoidectomy.

Keywords: Conventional curette adenoidectomy, Endoscopic coblation adenoidectomy, efficacy, children, pain score

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Introduction

Adenoidectomy is second most happening surgical procedure in the paediatric population as alone or combined either with tonsillectomy or grommet insertion [1]. The optimal adenoidectomy should attain a complete and safe removal of adenoid tissue with minimal operative blood loss, less operative duration, post

operative morbidity and post operative recurrence [2].

The conventional cold curette adenoidectomy is a widely used method with reported drawbacks in terms of partial removal of adenoid tissue, auditory tube or nasopharyngeal stenosis and high

Temporalis Fascia Graft versus Sliced Tragal Cartilage Graft for Type-1 Tympanoplasty: A Comparative Study

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Conflict of interest: Nil

Abstract

Introduction: Tympanoplasty is a tissue transference procedure to reconstruct the tympanic membrane perforation inline of chronic otitis media. Cartilage graft and temporal fascia graft are reliable methods for tympani membrane reconstruction. The aim of this study was to compare the temporalis fascia graft versus sliced tragal cartilage graft for type-1 tympanoplasty.

Material and Methods: A source of forty-eight participants with safe type chronic otitis media aged between 14 to 60 years were included. Study participants were randomly divided into group 1 or cartilage group and group 2 or fascia group were undergone mastoidectomy with type 1 tympanoplasty or type 1 tympanoplasty alone. Postoperative follow-up was done at 1st week, 3rd week and 3rd month and pure tone audiometry was conducted to check the hearing gain.

Results: The hearing gain was 9.42 dB in group 1 and 5.64dB in group 2. The mean difference was statistically not significant between study groups ($p>0.05$). One case in each group showed retraction and 12.5% and 29.17% of cases showed reperforation in type-1 tympanoplasty alone and type-1 tympanoplasty with CM respectively.

Conclusion: The temporal fascia graft and sliced tragal cartilage graft are effective for type 1 tympanoplasty. However, type 1 tympanoplasty with sliced cartilage graft have showed better hearing gain than temporal fascia graft.

Keywords: Type-1 tympanoplasty, Temporal fascia, cartilaginous graft, pure tone audiometry, Hearing gain

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Introduction

Tympanoplasty, which aims to repair the damaged tympanic membrane and middle ear ossicles with a central perforation for chronic otitis media, has a good outcome that determined by the membrane's mobility and hearing gain [1,2]. Tympanoplasty has involved the use of a

variety of tissues, including cartilage grafts, skin grafts, vein grafts, perichondrium, periosteum, and temporalis fascia grafts [3]. Among these, tympanoplasty frequently used cartilage and temporal fascia grafts.

Temporal fascia is the most popular choice since it is thin, translucent, and simple to

In Vitro Study of Antimicrobial Activity of *Lactobacillus Fermentum* against Germ Tube Positive *Candida* spp

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ABSTRACT

Background and Purpose: *Lactobacilli* are involved in the microbial homeostasis in the gastrointestinal tract and female genital tract. Due to the high prevalence of fungal and bacterial infections of the female genital tract and the emerging resistance of microbial pathogens to various antimicrobial agents, alternative measures to control these infections are increasingly felt by the scientific community. *Lactobacillus* was considered as probiotic used in controlling some bacterial infections because of the property of *Lactobacillus* exhibiting antimicrobial activity and thus augmenting the therapy by antimicrobial drugs.

Material and method: Many studies were undertaken to evaluate the probiotic properties of *Lactobacillus* against germ tube positive *Candida* spp. namely *C.albicans* & *C. dubliniensis*. The probiotic potential was investigated by using the following criteria: (i) adhesion to host epithelial cells and mucus, (ii) biofilm formation, (iii) co-aggregation with bacterial pathogens, (iv) inhibition of pathogen adhesion to mucus and HeLa cells, and (v) antimicrobial activity. Documented studies reveal *lactobacilli* adhered to mucin, co-aggregated with all genital microorganisms, and displayed antimicrobial activity. *L. fermentum* produced a moderate biofilm and a higher level of co-aggregation and mucin binding. The displacement assay demonstrated that all *Lactobacillus* strains inhibit *C.albicans* & *C.dubliniensis* binding to mucin ($p < 0.001$), likely due to the production of substances with antimicrobial activity.

Results: In this study Clinical isolates of *C.albicans* & *C.dubliniensis* associated with vaginal candidiasis were inhibited by *L. fermentum*. Our data suggest that *L. fermentum* isolated from two days fermented goat milk is a potential probiotic candidate, particularly to complement candidiasis treatment.

Conclusion: *Lactobacillus fermentum* isolated from two days fermented Goat milk had good effect preventing the growth of Germ tube positive *Candida* species (*Candida albicans* and *Candida dubliniensis*).

Keywords: *Candida albicans*, *Candida dubliniensis*, Vitek-II compact system, and YST, YS02 (BIOMERIX IN INDIA)

INTRODUCTION

Candida albicans is an opportunistic fungal pathogen that is responsible for candidiasis in human hosts. *C. albicans* grow in several different

morphological forms, ranging from unicellular budding yeast to true hyphae with parallel-side wall.¹ Typically, *C.albicans* live as harmless commensal in the gastrointestinal and female genitourinary tract and are found in over 70% of the population. Overgrowth of these organisms, however, will lead to disease, and it usually occurs in immunocompromised individuals, such as HIV-infected victims, transplant recipients, chemotherapy patients, and low birth-weight babies.² There are three major forms of disease: oropharyngeal candidiasis, vulvovaginal candidiasis, and invasive

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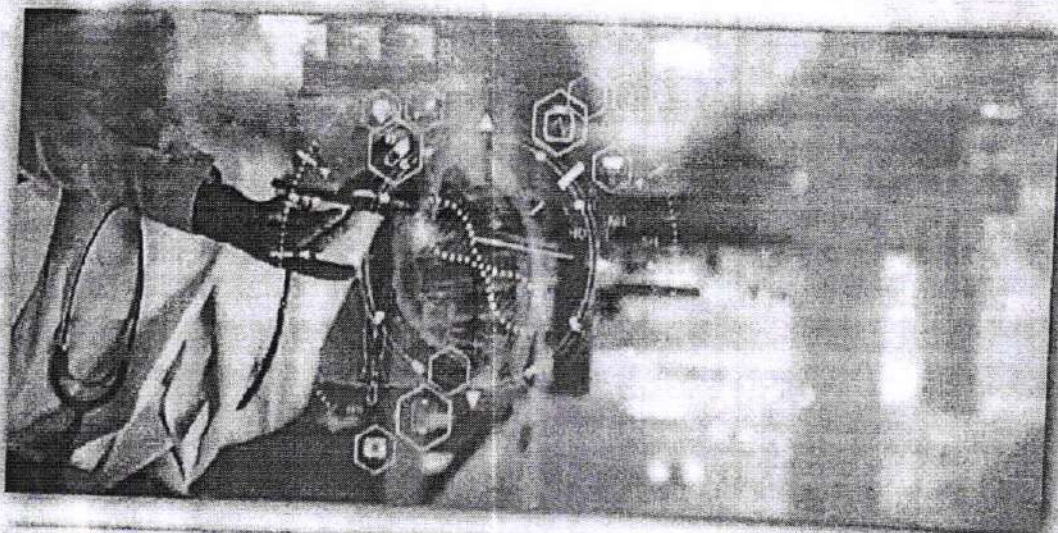


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Tailored Lateral Sphincterectomy versus Conventional Lateral Sphincterectomy in the Management of Chronic Anal Fissures – A Comparative Study

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Conflict of interest: Nil

Abstract

Background: Chronic fissure in ano is a distal anal mucosal tear that require surgical correction. Lateral internal sphincterectomy is considered as gold standard technique with high recovery rate and have transient incontinence and recurrence drawbacks. The present study was designed to assess the efficacy of tailored lateral sphincterectomy and conventional lateral sphincterectomy in the management of chronic anal fissures.

Material and Methods: Fifty-two clinically diagnosed cases of chronic fissure in ano above 21 years of age were recruited. Cases were randomly divided into two groups. Group 1 treated with tailored sphincterectomy and group 2 with conventional lateral internal sphincterectomy. Cases were followed for two weeks and assessed the bleeding per-rectum, pain score, fecal incontinence, and flatus incontinence.

Results: The mean pain score in tailored group was 5.3 on 1st day, 3.0 on 3rd day and 1.3 on 5th day, whereas in group 2, pain scores were 5.4, 3.1, 1.5 on 1st, 3rd, and 5th day respectively. Fecal incontinence (5 in conventional & none in tailored), flatus incontinence (1 in conventional & none in tailored), fecal soiling (1 in tailored & 2 in conventional), and recurrence (1 in tailored and 5 in conventional) was observed and the difference of fecal incontinence ($p<0.001$), flatus incontinence ($p=0.0204$) and recurrence ($p=0.0368$) was statistically significant.

Conclusion: Tailored lateral sphincterectomy is an effective treatment choice for the chronic fissure in ano than conventional lateral sphincterectomy in terms of low fecal and flatus incontinence and recurrence rate.

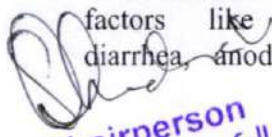
Keywords: Tailored lateral sphincterectomy, Recurrence, Pain, Chronic fissure in ano.

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Introduction

Fissure in ano is an anodermal tear that extends between dentate line and anal verge [1]. It is predominant in people between age group 21-39 years and accounting 10% of visits to the colorectal wings [2]. The factors like constipation, infection, diarrhea, anodermal ischaemia, chronic

constipation and hypertonicity of sphincter ani internus and externus musculature are responsible for disease development [3]. It is characterized by bleeding and pain during defecation that persists for quite long which in turn ruins the quality of life of an individual [4]. There may be


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International Journal of Pharmaceutical and Clinical Research


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Topical Silver Dressing versus Conventional Saline Dressing in the Management of Non-Healing Ulcers: A Prospective Randomized Interventional Study

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Conflict of interest: Nil

Abstract

Introduction: Understanding and addressing obstacles in the management of non-healing ulcers steer to favorable outcome, which can reduce economic burden and improve quality of life of the patient. Topical silver dressings are effective in the management of non-healing ulcers. However, their safety and efficacy is always debatable. This study was designed to assess the efficacy topical silver preparations versus conventional saline dressing in the management of non-healing ulcers.

Material and Methods: This prospective randomized interventional study consist of a source of 124 cases with non-healing ulcers of different etiological background approached Department of General Surgery at MNR Medical College and Hospital was recruited. Participants were randomly allotted to group 1 (topical silver dressing) and group 2 (conventional saline dressing). The recovery of wound size and rate of granulation tissue were recorded at the end of first, second and third week of treatment.

Results: At the end of 3rd week, cases managed with topical silver dressing (82.81%) had effective recovery of granulation tissue than conventional saline dressing (32.37%). There was a decreased incidence of microbial flora from first week to third week of treatment in silver dressing. The overall ulcer size was significantly reduced in group 1 than group 2. The mean difference between both study groups was statistically significant ($p < 0.05$).

Conclusion: Topical silver dressing has superior efficacy in terms of wound discharge reduction, early recovery of granulation tissue, diminishing the microbial isolates and reduction of ulcer size than conventional saline dressing.

Keywords: Efficacy, Silver nanocrystalline gel, Lower limb ulcers, Wagner ulcer grade classification.

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Introduction

The advancement of novel and effective interventions in the management of ulcers remains a research scope [1]. Chronic lower limb ulcers often do not cope with wound recovery and become a challenging task for the health facilitators [2]. These ulcers were

common in people with vascular diseases or diabetes, prolonged pressure, arterial diseases and chronic venous insufficiency [3]. These ulcers remain for months, which can impact quality of life and become significant cause of morbidity [4]. Topical

Assessment of Influencing Risk Factors of Deep Venous Thrombosis in Cases Undergoing Surgery at Tertiary Care Hospital

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Abstract

Introduction: Deep venous thrombosis (DVT) is a considerable reason of morbidity and mortality in surgical cases. There is lack of evident information on the incidence of DVT and standard guidelines for facilitating thromboprophylaxis in Indian populations. The present study was designed to assess the risk factors favoring the deep venous thrombosis in surgical cases.

Materials and Methods: A total of 168 patients undergoing surgery at surgery department were assessed for risk factors favoring deep vein thrombosis. The risk factors such as sociodemographic including age and smoking, clinical profile factors including history of DVT, family history, history of varicose veins, medical illness, connective tissue disorders, cancers and its treatment, and Surgical factors including type of anaesthesia technique, duration of surgery, immobilization period and risk assessment score were assessed.

Results: The duration of surgery was up to 60 min in 31.49%, between 61-180 min in 68.62% and above 180 min in 3.70% of DVT cases. The duration of immobilization was 70.37%, 22.22% and 7.40% in ≤ 7 , 8-14, and >14 days respectively. The risk score was low (1-6) in 18.52%, moderate (7-12) in 33.33% and high (>12) in 48.14% of cases.

Conclusion: Health care professional should be trained on standardized diagnostic tools in DVT risk assessment and prophylaxis. Preoperatively, thromboprophylaxis is must in moderate and high-risk category of DVT patients undergoing surgery with postoperative follow-up.

Keywords: Deep Venous Thrombosis, Duration of Surgery, Age, Risk Assessment Score.

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Introduction

Deep venous thrombosis is kindled by coagulation of blood in deep veins, that impede lumen, causes venous blood reflux disorder which gives rise swelling, pain and pulmonary embolism in severe cases [1-4]. The incidence of DVT in European region was 70-140/100000 people per year [5]. The exact incidence rate of DVT was uncertain in

India [6]. However, the reported incidence was 29-43% without any pharmacological prophylaxis in neurosurgical cases with 5% risk for pulmonary embolism and 9-50% risk of mortality [7]. The risk of DVT is advances with age and no specific gender predominance, however, men are more likely affected [8].

Sashikalyan et al.

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A comparative study of bone mineral density in females doing weight bearing exercise and non-weight bearing exercise using dual energy x-ray absorptiometry

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Abstract

Osteoporosis is reported to affect 44 million adults, of whom 80% are women. Exercise appears to influence the osteogenic response and can lead to higher values of Bone mineral density. A minimum research is done on bone mineral density using dual energy x-ray absorptiometry (DEXA) in India. Weight bearing exercises seem to have a better effect than nonweight bearing exercises.

Aim: our aim of this retrospective cohort study is to confirm that weight bearing exercise is beneficial to bone mineral density than non weight bearing exercise.

Materials and Methods: A total of 50 healthy active women (n=50) doing weight bearing exercises like tennis playing and gym weight workouts for atleast one hour, for 5 days a week were taken. (Group A). A total of 50 healthy walkers with minimum walking of one hour for 5 days a week were taken (Group B). Dual-energy X-ray absorptiometry (DXA) was done to assess the bone mineral density in all the participants. Bone mineral density (BMD) in gram per square centimeter of lumbar spine (L1-L4), surgical neck of right humerus and total body BMD was assessed with a hologic QDR-1000/W pencil-beam bone densitometer, using the spine scan mode. Statistical analysis was done using Statistical package for the social sciences (SPSS software, version 13.0). Analysis of covariance was used to determine whether there were significant differences between groups in bone mineral density, adjusting height and weight.

Results: The Total body BMD in gm/cm² in group A is 1.172± 0.034 and the Total body BMD in gm/cm² in group B is 1.078±0.053. (P value < 0.001) Lumbar spine BMD in gm/cm² in Group A is 1.216±0.122 and the Lumbar spine BMD in gm/cm² in Group B is 0.968±/-0.128. (P value <0.05) Humerus BMD in gm/cm² in group A is 1.22±0.043 and the BMD in gm/cm² in group B is 1.110±0.066. (P value < 0.001).

Conclusion: since, the Total body BMD, Lumbar spine BMD, Humerus BMD in gm/cm² is higher in subjects doing weight bearing exercise when compared to the subjects doing non weight bearing exercise. We confirm that weight bearing exercises are beneficial to bones when compared to nonweight bearing exercises.

Keywords: Bone mineral density, Dual energy x-ray absorptiometry, Osteoporosis.

Introduction

Bones¹ in human body have always been considered as only internal framework of the body, but they serve multiple functions like, attachment point for skeletal muscles, tendons and ligaments, haemopoiesis from bone marrow, reserves of minerals important for the body, mostly calcium and phosphorus, buffering the blood against excessive pH changes by absorbing or releasing alkaline salts. Bone cells also release a hormone called osteocalcin, which regulates blood sugar (glucose) and fat deposition. Osteocalcin increases the insulin secretion and sensitivity, and boosts the number of insulin-producing cells and reduces stores of fat.

Bones are imaged, using radiography like ultrasound X-ray, CT scan, MRI scan and dual energy X-ray absorptiometry (DEXA). Arthritis, infections, osteoporosis and tumours, can affect bone making it weak and vulnerable to fractures.

Osteoporosis² is a disease of bone where bone mineral density is reduced increasing the likelihood of fractures. Osteoporosis is defined in women by

the World Health Organization as a bone mineral density of 2.5 standard deviations below peak bone mass, relative to the age and sex-matched average. Osteoporosis can affect both men and women of all ages. Treatment is to quit smoking, decrease alcohol consumption, exercise regularly,³ and have a healthy diet. Calcium supplements may also be advised, as may Vitamin D and medications like bisphosphonates, Strontium ranelate, and hormone replacement therapy.

Physical activity⁴ plays an important role in maintaining healthy bones. Especially weight bearing Physical activity stimulates the bones to remodel and to adapt their structure based on the load they are exposed to. According to previous research, athletes involved in weight bearing play or exercise, had higher bone mass densities, when compared to athletes involved in training which involved less weight bearing like swimming. Our study aims at measuring the bone mineral density in women doing weight bearing exercises and in women doing non weight bearing exercises. So that, a knowledge of this, might want the



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Original Research Article

Assessment of cardiovascular parameters and oxygen saturation levels in induction of sevoflurane with or without nitrous oxide V/s propofol

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Abstract: The study was performed on the anaesthetic induction, cardiovascular parametric changes and patient satisfaction of sevoflurane with nitrous oxide or without nitrous oxide in related to a rapid intravenous anaesthetic agent propofol. A total three hundred patients belonging to physical status I or II of American society of Anesthesiologists were considered and were made into three groups i.e. with sevoflurane (100%) (n=50), sevoflurane (8%) with N₂O (n=50) and 1% propofol at a rate of 0.5ml/sec (n=50). Systolic and diastolic blood pressure and oxygen saturation was recorded before and after induction. Mean pre-operative pulse rate was 81.4 ±9.48 in group I, 80.45±9.23 in group II and 79.68±9.98 in group III. Mean pulse rate was increased in all the groups after induction. Mean SBP 121.9±11.71 in group I, 124.9±7.41 in group II and 124.4±7.19 in group III. Mean SBP was decreased in all the groups after induction. Mean DBP 76.8±6.62 in group I, 77.86±6.32 in group II and 77.37±5.66 in group III. Mean DBP was decreased in all the groups after induction. No arrhythmias were observed in any patient. Patient performance and patient satisfaction was pleasant. 8% of sevoflurane carried in nitrous oxide and oxygen is a rapid, reliable and safe method for induction of anaesthesia while using vital capacity technique.

Keywords: Propofol, Sevoflurane, Nitrous oxide, systolic blood pressure, Diastolic blood pressure.

INTRODUCTION

Over a century, use of inhalational agents in anaesthetic practice has become a standard technique but, it was abandoned due to its slow action, odor, excessive salivation and adverse effects like vomiting and coughing [1]. Different kinds of techniques exist for gaseous exchange in anaesthesia, vital capacity induction is effective one [2].

Sevoflurane is a popular agent for inhalation induction for anaesthesia, which has a low blood gas solubility, less cardiovascular side effects and relative absence of pungency and most suitable for choice for rapid vital capacity induction [3]. The blood: gas partition coefficient of sevoflurane is 0.69 which permits rapid induction of anaesthesia as it rapidly equilibrates with the inspired concentration in addition sevoflurane is pleasant smelling and relatively non-irritation to the airways permitting a high delivered concentration to be inhaled without side effects or discomfort [4, 5]. Propofol is an effective and faster in

recovery. However, it has few adverse effects like negative inotropic and respiratory depressant effect is more than of thiopentone [6, 7]. But a still situation where rapid induction is desirable, propofol is a drug of choice [8].

Halothane has been the agent of choice till recently but with the introduction of sevoflurane in anaesthesia practice, Inhalational induction seems more favorable with sevoflurane owing to its pleasant smell and low blood: gas solubility. With the above background, the present study was carried to assess the induction ability of sevoflurane with or without nitrous oxide in related to propofol.

MATERIALS AND METHODS

The present study was conducted in department of Anaesthesia, MNR Medical College and Hospital, Sangareddy. A total 300 patients between 20-40 years of both sex belonging to physical status I or II according to American society of Anesthesiologists.


Original Research Article

Efficacy of FNAC in early diagnosis of prostatic carcinoma

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Abstract

Background: Prostatic carcinoma is one of the most important causes of mortality in elderly men mainly because of the late detection despite of the fact that it is a potentially curable disease. Fine needle aspiration cytology (FNAC) is an easy to perform outpatient procedure requiring no expensive equipment or anesthesia.

Objectives: The present study was carried out in an attempt to evaluate the fine needle aspiration cytology in the diagnosis of carcinoma prostate.

Materials and methods: The present study was performed on 27 patients admitted in the surgical wards, with complaints suggestive of prostatic disease, in whom there was found to be a suspicion of malignancy of the prostate gland.

Results: Among 27 patients, 14 patients were diagnosed as prostatic malignancy on per rectal FNAC whereas, 19 patients were confirmed with prostatic cancer histologically. Out of 19 histologically confirmed cancer cases, 16 were also positive on FNAC i.e. 84.21% accuracy of FNAC in detecting prostatic malignancy.

Conclusion: Fine needle aspiration cytology is easily available and inexpensive procedure. It is a reliable method in the diagnosis of prostatic cancer. Its positive results are relatively more reliable than the negative ones. It is an effective method in follow up of the cancer cases.

Key words

Fine needle aspiration cytology (FNAC), Prostatic carcinoma, Giemsa or May Grunwald Giemsa stain (M.G.G.)


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Clinico-histopathologic study of nonneoplastic uterine cervical lesions

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Abstract

Background: The cervix of uterus is prone to develop neoplastic and nonneoplastic gynecologic lesions. The histological lesions that are found in the uterine cervix cannot be always established only with conventional cytology. Thus, it is very important that any cytological abnormality be subsequently correlated with biopsy for certification of a cervical lesion.

Objective: To evaluate histomorphologic features of all types of nonneoplastic lesions of the uterine cervix.

Materials and Methods: The retrospective study consists of total 630 cases that were submitted for routine histopathologic investigations. All specimens were fixed, dehydrated, embedded, and subsequently stained with hematoxylin and eosin. Special stains, such as mucicarmine and PAS - Periodic acid-Schiff, were employed wherever necessary.

Result: Among the 630 cervical specimens, inflammatory lesions formed the major part (71.42%) followed by cervical malignancies (12.69%). Benign cervical lesions and cervical intraepithelial neoplasia constituted 6.98% and 4.44%, respectively. The noninflammatory cervical glandular lesions constituted 2.85%.

Conclusion: Inflammatory lesions were the most common cervical lesions followed by malignancies. Among inflammatory lesions, chronic nonspecific cervicitis was commonly found followed by papillary endocervicitis seen in sexually active females with pelvic inflammatory disease, dysfunctional uterine bleeding, uterine prolapsed, and so on. The most common cervical malignancy was squamous-cell carcinoma, moderately differentiated being the most common type.

KEY WORDS: Uterine cervix, nonneoplastic lesions, neoplastic lesions, histopathology

Introduction

The uterine cervix is prone to develop several nonneoplastic and neoplastic gynecologic lesions. These lesions are most commonly seen in sexually active women. These lesions may be nonneoplastic or neoplastic in nature. Majority of the nonneoplastic lesions are inflammatory in nature.^[1]

A wide variety of nonneoplastic lesions occurs in the uterine cervix and is prone to varying extents of misinterpretation. The most common error is to mistake one of these benign but sometimes exuberant processes as neoplastic, with potentially adverse consequences for the patient in the form of inappropriate treatment.

Among women in worldwide, carcinoma uterine cervix is one of the leading causes of cancer death accounts 2%. In India, 90,000 of new cases of cervical cancer occur every year.^[2,3] To detect this widely prevalent cancer at an early stage, the simplest test has been a pap smear. Reporting of pap smears is carried out by the Bethesda System.^[4-7]

Among the various nonneoplastic lesions, cervical inflammations due to noninfective and infective causes were common. The term chronic cervicitis may indicate only the duration of the symptoms, which becomes very difficult for the gynecologist to correlate with clinical diagnosis. Other lesions such as tunnel

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Original Research Article

Incidence and pattern of bone marrow involvement in Lymphoma patients

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Abstract: Lymphomas also refer as primary malignancy of lymphoreticular system. The lymphomas have always presented a challenge to medical science because of its high fatality rate. To identify the incidence and pattern of bone marrow involvement in Hodgkin's and non-Hodgkin's group of lymphoma patients. A total 40 biopsy proved cases of lymphoma with leading symptoms such as significant loss of weight in past six months (6-12% of body weight), history of fever, history of pruritus and history of night sweats were considered. All routine blood and urine investigations and bone marrow examination was conducted. Among 40 cases 4 (10%) cases showed positive bone marrow infiltration and both cases showed diffuse involvement of bone marrow. Bone marrow involvement was equally common in Hodgkin's and non-Hodgkin's group. In this 10% cases showed bone marrow involvement. Incidence of the bone marrow involvement was more or less similar to previous authors in Hodgkin's group while the incidence was lower in non-Hodgkin's group as compared to previous series.

Keywords: Hodgkin's group, Bone marrow, non-Hodgkin's group, Histology, Incidence

INTRODUCTION

The term lymphoma refers to the primary malignancy of the lymphoreticular system of the body. The lymphomas have always presented a challenge to medical science because of its high fatality rate [1, 2]. Magnitude of problem can be assessed by the fact that about 45 per million lives are being lost every year in the Great Britain because if this disease. 50% of these are due to Hodgkin's, 7% due to follicular lymphoma and rest 43% are due to lymphosarcoma [3].

Despite many advances in the field of medicine the prognosis of the disease had been quite gloomy till few years back. However the picture of previous years is changing fast due to the concerted and conjoint efforts on the part of surgeons, pathologists and Radiotherapists and a picture of assurance is emerging fast for these patients [4, 5].

There are many interesting aspects about these primary tumours of lymphoreticular system which have attracted attention of the workers in the recent past [6]. Foremost among these are rational of existing methods for terminology, nomenclature, classification accurate

staging and treatment. Efforts have always been forthcoming where by the histology; staging and treatment could be correlated with each other. So that the ultimate prognosis of these patients could be improved. The present study was hypothesized to found the incidence and pattern of lymphoma with bone marrow involvement.

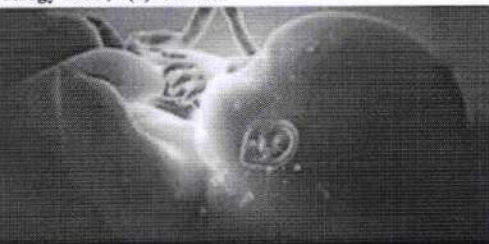
MATERIALS AND METHODS

The cases for the present study were selected from the patients admitted in the M N R Medical College and Hospital, Sangareddy during July, 2014 to September, 2016. A detailed history was taken and leading symptoms were considered in all the cases i.e. significant loss of weight in past six months (6-12% of body weight), significant history of fever, history of pruritus, history of night sweats. All routine blood and urine investigations, routine blood smears, liver function tests, X-Ray and bone marrow examination - aspiration as well as open iliac biopsy.

RESULTS

In total 40 biopsy proved cases of lymphoma who were admitted in MNR Medical College, Hospital,

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Pregnancy outcome in women with first-trimester bleeding per vaginum

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DOI: <https://doi.org/10.33545/gynae.2020.v4.i2f.544>

Abstract

Background: Bleeding per vaginum during early pregnancy is a common obstetric problem. It develops a source of anxiety for the family, mother as well as clinicians. Vaginal bleeding always associated with preterm delivery, intrauterine death (IUD), neonatal mortality and low birth weight. This study was designed to evaluate the pregnancy outcome in women with first trimester bleeding per vaginum.

Materials and methods: A total of 200 pregnant women with first trimester bleeding per vaginum. All the cases were evaluated for the mode of delivery, weight of the newborn, pregnancy outcome, details of miscarriage and APGAR scores were noted.

Results: Majority cases belonged to third decade of age (84.5%). Among the cases, 71% of cases were Primigravida and 29% cases were multigravida. At the time of bleeding, majority cases (60.5%) had more than 8 weeks of gestation and 39.5% had bleeding at less than 8 weeks of gestation. In this study, 9% cases have subchorionic haemorrhage evidenced by USG. 8.50% cases had first trimester miscarriage, 4.50% cases had second trimester miscarriage, 11.50% preterm delivery and 75.50% fullterm delivery. 56.89% cases had child with birth weight between 2.6-3 kg.

Conclusion: Pregnant women with severe bleeding are more likely to abort than women with minimal bleeding. It is necessary to provide proper counseling regarding the possible outcome of pregnancy.

Keywords: First trimester, bleeding per vaginum, pregnancy outcome

Introduction

Bleeding per vaginum is commonly seen early pregnancies and is associated with fetal and maternal morbidity. It develops a source of anxiety for the family, mother as well as clinicians. About 25% of pregnant women complain of bleeding during first trimester [1]. Around 50% of first trimester bleeding will lead to miscarriage [2]. Vaginal bleeding is associated with increased risk of suboptimal pregnancy outcome like preterm delivery, intrauterine death (IUD), neonatal mortality and low birth weight [3-5]. This study was designed to evaluate the pregnancy outcome in women with first trimester bleeding per vaginum.

Materials and methods

The present prospective study was carried out in the department of Obstetrics and Gynaecology at MNR Medical College and Hospital, Sangareddy from April 2018 to December 2020. A total of 200 pregnant women with first trimester bleeding per vaginum admitted in labour ward were recruited. Cases with singleton pregnancy up to thirteen weeks with positive fetal heart motion, positive pregnancy test and bleeding per vaginum were included. Cases with molar pregnancy, bleeding at the time of loss and ectopic pregnancy were excluded. Informed consent was obtained from all the cases and study protocol was approved by the institutional ethics committee.

History of vaginal bleeding included of severity and duration of bleeding was collected. Ultrasound examination was performed for gestational age and fetal viability. Demographic data, clinical and obstetric history was collected. Collected data were analyzed with SPSS statistical software (Version 16).

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Evaluation of antral follicular count (AFC) and total ovarian volume as markers of ovarian reserve in infertile and healthy women (fertility proven)

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DOI: <https://doi.org/10.33545/gynae.2020.v4.i2d.532>

Abstract

Background: Ovulatory disorders are the leading cause of female infertility. Infertility is age-related decline in fertility. Antral follicular count (AFC) is a reliable marker to assess female fecundity. This study was designed to evaluate the relationship of AFC with age in sub-fertile cases and with healthy (fertility proven) control women.

Materials and Methods: A total of 50 infertile females attending investigation of subfertility and age, sex-matched 50 healthy control subjects were recruited. On 2nd or 3rd day of the ovarian cycle, the basal ovarian volume and AFC were measured by endovaginal ultrasound. Transvaginal USG was carried out on the second and third day of the menstrual cycle.

Results: The mean total ovarian volume in cases was 11.25 and in controls 11.67. The mean antral follicular count in cases was 6.95±1.85, while in controls 10.44±2.01. There was an inverse correlation between age and antral follicular count ($r = -0.424$ with p value 0.002). While there was no significant correlation between ovarian volume and antral follicular count ($r = -0.318$ with p value 0.352).

Conclusion: The ovarian volume has no role as a biomarker of ovarian reserve. AFC has been proved significantly as an excellent predictor of ovarian reserve and response when compared to other parameters

Keywords: primary infertility, antral follicular count (AFC), ovarian volume

Introduction

Infertility is an age related decline in fertility, which occurs by multiple factors that give overall reproductive failure, including poor endometrium and substandard oocyte quality [1]. Globally, infertility affects approximately 8-10% of couples [2]. Ovulatory disorders are the leading cause of female infertility in 30% of cases [3]. Autopsy studies on human ovaries demonstrated that the follicular count has been decreased with age. Various methods like anti follicular count (AFC) by USG, day-3 follicle-stimulating hormone (FSH) and anti-mullarian hormone (AMH) have been detected that fertility has been decreased with reproductive age [4]. Few cases with the small ovarian volume on USG shows a poor response to controlled ovarian hyperstimulation in assisted reproductive programs. USG based measurement of ovarian stromal blood flow after pituitary suppression can prognosticate ovarian responsiveness. Transvaginal ultrasonography based antral follicular count (AFC) correlates well with increasing age [5, 6]. Thus, USG help to measure reproductive potential to help the women's prospects for pregnancy [7]. Therefore, this study evaluates the relationship of AFC with age in sub-fertile cases and with healthy (fertility proven) control women.

Materials and Methods

The present case-control study was conducted in the department of obstetrics and gynaecology at MNR Medical College and Hospital, Sangareddy, Telangana during June 2018 to October 2019. A total of 50 infertile females attending investigation of subfertility and age, sex-matched 50 healthy control subjects attending for routine health check-up were recruited. Cases with primary infertility, no ovarian abnormalities were included; cases with ovarian abnormalities, with uterine malformations, history of ovarian surgery, with PCOD and ovarian endometriomas were excluded. Cases confirmed with natural fertility with a minimum one pregnancy, regular menstrual cycles, without ovarian surgeries were recruited as control subjects. Informed consent was obtained from all the cases and study protocol was approved by the institutional ethics

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Ropivacaine versus Bupivacaine for Post-Tonsillectomy Pain Management in Pediatric Cases – A Randomized Double-Blind Comparative Study

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Conflict of interest: Nil

Abstract

Introduction: Post tonsillectomy pain management is important to mitigate common postoperative morbidity. The effective postoperative analgesia is important in reducing postoperative pain. The present study was designed to assess the efficacy of preoperative infiltration of ropivacaine and bupivacaine in postoperative analgesia in pediatric cases undergoing tonsillectomy.

Materials and methods: A total of 36 children undergoing elective adenotonsillectomy between 2-12 years of age belong to ASA grade I and II were considered. Participants were randomly divided into two groups i.e. group A (3 ml of 0.25% of bupivacaine hydrochloride) and group B (0.2% ropivacaine hydrochloride 3ml). Postoperative pain score was assessed by Children's Hospital of Eastern Ontario Pain Scale (CHEOPS) till 24 hours after procedure.

Results: The mean levels of hemodynamic parameters and rate of postoperative complications was comparable between two drug groups. The ropivacaine group showed low pain scores at all time intervals than bupivacaine group. The mean difference of pain scores was significant at 1 hour, 2 hours, 8 hours, 12 hours and 24 hours between two study groups ($p < 0.05$)

Conclusion: Both drugs are effective in minimizing the postoperative pain; however, ropivacaine was superior in postoperative pain relief as compared to bupivacaine.

Keywords: Bupivacaine, Ropivacaine, Postoperative pain, efficacy, tonsillectomy

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Introduction

Postoperative pain is an unpleasant sensory experience, also triggers various biochemical and physiological stress response [1]. Tonsillectomy is frequently observed in children that associated with postoperative pain which lasts for 7 to 10 days after procedure [2]. Management of postoperative pain and post-tonsillectomy morbidities have

significant clinical concern and may challenge to the anesthetist [3,4]. Intraoperative seize of peripheral nerve pain impulses to central nervous system can control its hyperexcitability state that diminishes postoperative pain [5]. Tonsillectomy procedure damages local tissue with release of inflammatory

Rao et al.

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715
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A study of prevalence of chronic kidney disease in type II diabetes mellitus patients at a tertiary health care centre

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Abstract

Background: CKD is seen in majority of the patients of diabetes mellitus. CKD increases the frequency of cardiovascular disease episodes and progresses to end-stage renal disease (ESRD). **Aim and objective:** To study the prevalence of chronic kidney disease in type II diabetes mellitus patients at a tertiary health care centre. **Methodology:** Present study was a prospective study carried out in diabetic clinic at tertiary health care centre. Study population was diagnosed cases of type II diabetes mellitus visiting diabetic clinic at a tertiary health care centre. Data was collected with pre tested questionnaire. Patients were considered as having CKD when they have low eGFR (<60 ml/min/1.73 m²) and/or increased ACR (≥ 30 mg/g or ≥ 3 mg/mmol). Stages of CKD were determined according to KDQOI (Kidney Disease Outcomes Quality Initiative) guidelines. **Results:** Mean age of the patient in our study was 48.25 ± 4.6 years. Male to female ratio in our study was 1.17:1. Mean serum creatinine was 1.2 ± 0.4 mg/dl Mean urine creatinine was 98.6 ± 13.27 mg/dl and Mean urine albumin was 134.5 ± 68.31 mg/l. In our study we found that prevalence of CKD in type II diabetes mellitus was 51.3%. Mean GFR of the patient was 78.41 ± 17.11 ml/min/1.73 m². Mean ACR of the patient was 113 ± 24.5 mg/g.

Key Word: chronic kidney disease, DM.

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INTRODUCTION

Diabetes mellitus is an endocrine disorder affecting multiple organs. Type II diabetes mellitus commonly seen in persons above 40 years. It is known as non insulin dependent diabetes mellitus. Chronic kidney disease is a slow and progressive loss of kidney function over a

period of several years. CKD patients usually have few or no symptoms, especially in the earlier stages, so many of the patients are not aware that they have the disease. Risk factors for CKD include diabetes, hypertension and specific kidney diseases like polycystic kidney disease. Diabetes and hypertension, are responsible for up to two-thirds of the cases. CKD is classified into five stages based on the level of GFR.¹ Stage I refers to the mildest stage of CKD, while stage 5 indicates kidney failure. Kidney damage is assessed using albuminuria and using the albumin-to-creatinine ratio (ACR) Various studies in past indicate Diabetes mellitus and hypertension as important risk factors in development of CKD. In a study conducted in the USA, diabetes and hypertension were responsible for more than 50% of cases of End Stage Renal Disease², and in a study conducted in Khuzestan, Iran, diabetes was the most common cause of disease and glomerulonephritis was responsible for about 10% of

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Original Research Article


Efficacy of epidural and spinal anesthesia techniques in preeclampsia parturients

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Abstract

Background: Preeclampsia is a hypertensive related complication of pregnancy; Parturients with pregnancy induced hypertension may present to the labor and delivery unit with or without a prior diagnosis of preeclampsia and may pose a significant anesthetic challenge. Administration of anesthesia in such cases leads to worse cardiovascular response.

Objectives: To determine the efficacy of epidural and spinal anesthesia techniques in preeclamptic parturients.


Materials and methods: A total 60 women with severe preeclampsia who required anti-hypertensive therapy and suitable to either spinal or epidural anesthesia were included and were divided in to epidural and spinal groups with equal number of distribution.

Results: There were significant differences in SAP at 1 to 15 min ($P < 0.0001$) and at 16 to 20 min ($P < 0.005$) and DAP at 1 to 15 min ($P < 0.0001$) and at 16 to 20 min ($P < 0.01$) between the 2 groups. There were no significant differences in SAP and DAP at 22 to 30 min between groups.

Conclusion: Spinal anesthesia for cesarean delivery in severely preeclamptic patients causes slightly more hypotension than epidural anesthesia during the induction to delivery period. The duration of hypotension, however, was short and there was no difference in neonatal status.

Key words

Preeclampsia, Hypotension, Spinal anesthesia, Epidural anesthesia.


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Page 290

RESEARCH ARTICLE

Evaluation of anti-diabetic and anti-inflammatory activities of Fenugreek (*Trigonella foenum-graecum*) seed extracts on Albino Wistar Rats

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ABSTRACT


Background: Fenugreek (*Trigonella Foenum-Graecum*) is a compound used since ancient times in Indian folk medicine for several medicinal properties. It has been known to produce hypoglycemic and antioxidant actions. **Aim and Objective:** This study aimed to determine ethanolic extracts out of fenugreek seeds for the anti-diabetic including anti-inflammatory effects on Wistar rats. **Materials and Methods:** Inbred Albino male and female Wistar rats were used for the study. The powdered seeds were extracted with 90% ethanol by Soxhlet (100 g) for 3–4 days. The diabetes was assessed after 72 h of alloxan-induced to rats by determining the blood sugar level. Rat Paw volume was measured to the ankle joint in drug-treated and untreated groups at 0 min, 30 min, 60 min, and 120 mins using carrageenan challenge measured mercury plethysmograph. **Results:** Fenugreek at 200 mg/kg dose and 400 mg/kg decreased blood glucose which was dose-dependent. The reductions in blood glucose levels (BGLs) were significant post 14th day in both groups. The anti-inflammatory activity Fenugreek 200 mg/kg did not significantly reduce paw volume. Fenugreek at the dose of 400 mg/kg demonstrated inhibition of paw volume to 39.076% at the end of 2 h which was lesser than standard drug Aspirin. **Conclusion:** *T. foenum-graecum* decreased blood glucose towards the end of 21 days reduced the BGLs like the standard drug Gliclazide. The anti-inflammatory actions of the extracts were not found to be significant at the dose of 200 mg/kg and moderate anti-inflammatory actions at the dose of 400 mg/kg compared to standard drug Aspirin.

KEY WORDS: Fenugreek; *Trigonella foenum-graecum*; Anti-diabetic; Anti-inflammatory; Ethanolic extracts

INTRODUCTION

Trigonella foenum-graecum (TFG) commonly known as fenugreek (Fabaceae), is an annual, herbaceous and aromatic plant. TFG (Linn.) belonging to the family Fabaceae is also known as Fenugreek. It is an aromatic, 30–60 cm tall, annual

herb, cultivated throughout India.^[1,2] It has nearly smooth erect annual Stipulates which are not toothed. Leaflets 2–2.5 cm long, oblanceolate oblong, toothed. Flowers 1–2, axillary, sessile. Calyx-teeth linear. Corolla is much exerted. Pod 5–7.5 cm long, with a long persistent beak, often falcate, 10–29 seeded, without transverse reticulations.^[1,2] It is a nutritional source of minerals such as calcium, iron, carotene, and Vitamins.^[3] Fenugreek is commonly used as a seasoning and in food preparations and possesses nutritive, restorative properties.^[4] the major chemical constituents are phenolic compounds, galactomannan, diosgenin, quercetin, trigonelline, and 4-hydroxy isoleucine.^[5] TFG has been used since ancient times in Indian folklore medicine for its several medicinal properties.^[6] It has been used in hypoglycemic,

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RESEARCH ARTICLE

Effectiveness and tolerability of tramadol versus diclofenac in treatment of knee osteoarthritis: A comparative clinical study

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ABSTRACT

Background: Osteoarthritis (OA) is a progressive joint disease. It causes wear and tear of the articular cartilage of the joint. It is painful and symptoms include joint pain, stiffness, and tenderness. Performing daily life activities gets affected over time. **Aim and Objectives:** The aim of the present study was to compare the effectiveness and tolerability of tramadol versus diclofenac in treating chronic pain due to knee OA and to determine Adverse drug reactions (ADRs) with the use of the drugs. **Materials and Methods:** Consecutive patients of OA reporting to our hospital with chronic knee pain aged 45–65 years were divided into two treatment groups, tramadol and diclofenac groups, and received the tramadol drug and diclofenac drug orally with doses of 50 mg and 75 mg 2 times a day, respectively, for 8 weeks. Overall improvement was evaluated through various parameters. **Results:** There was a 16.73% decrease in time taken to walk 100 feet in the diclofenac group and an 18.30% decrease in the tramadol group. There was a 42.85% decrease in pain score at rest in diclofenac and a 50.72% decrease in the tramadol group. A decrease in pain score during active movement was 32.4% in diclofenac and 44.8% decrease in the tramadol group. The overall incidence of ADRs reported in the study was $n = 8$ (16%) in the tramadol group and $n = 13$ (26%) in the diclofenac group. **Conclusions:** Tramadol was superior to diclofenac for reducing knee joint pain, stiffness, tenderness, and difficulty in daily performing tasks. There was a significant improvement in the standard of life in patients suffering from knee OA when treated with tramadol.

KEY WORDS: Osteoarthritis; Tramadol; Diclofenac; WOMAC Osteoarthritis Index

INTRODUCTION

Osteoarthritis (OA) is a chronic, inflammatory joint disease in the whole world.^[1] In India, more than 20% of the total population is suffering from arthritis; although the chief cause of the disease is unknown, morphological changes witnessed in OA include cartilage erosion as well as

inflammation.^[2] The most affected joints include the hips, knees, back and neck, joints of the fingers, the base of the thumb, and big toe.^[3] OA is more common in women than in men. The worldwide estimates are that 9.6% of men and 18% of women aged more than 60 years have symptomatic OA.^[4] Symptoms of OA vary, depending on the affected joints and severity of the disease. The most common symptoms are pain and stiffness, particularly first thing in the morning or after resting.^[5] OA symptoms can be effectively managed, although the underlying process cannot be reversed. Staying active, maintaining a healthy weight and other treatments, may slow the progression of the disease and helps in improving pain and joint function.^[6] Diclofenac is a non-selective COX inhibitor type belonging to the heterocyclic arylacetic acid derivative subtype of nonsteroidal

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ORIGINAL ARTICLE

A STUDY OF RENAL ANOMALIES: ABBRENT VESSEL

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K. Rattaiah, P. Venkateswara Rao. "A Study of Renal Anomalies: Abbrent Vessel". Journal of Evidence based Medicine and Healthcare; Volume 2, Issue 9, March 02, 2015; Page: 1302-1311.

ABSTRACT: INTRODUCTION: The subject of kidney anomalies including their incidence has created much interest to the scientists in late 1950 and 1960 with the aim of preventing and curing them as much as possible. Knowledge about their incidence particularly helps us to know how frequently they are seen in the population and makes us to search the possible etiological factors for such high occurrence. An attempt has been made to know the various anomalies, detailed dimensions of specimens available from the cadavers. To apply this knowledge to the incoming post graduates in their research works. Renal vascular segmentation was originally recognized by John Hunter in 1794. **MATERIALS & METHODS:** The parameters like weight, length of the kidney, breadth of the kidney and the breadth at the superior pole, inferior pole and at the hilum are taken with the help of electronic weighing machine, vernier calipers, the scale and thread are used. During the routine dissections the kidneys identified and the photographs are taken in situ wherever necessary. The parameters are taken, anomalies are noted and detailed diagrams are drawn. **OBSERVATIONS:** In the present study 176 specimens of kidneys were studied out of which 40 were fetal specimens and the rest were adult specimens consisting of both cadaveric and sonograms. The adult specimens from cadavers were 76 and 60 from sonograms. **SUMMARY & CONCLUSION:** It is stated that anomalies of the urinary tract rank third or fourth in position and they constitute 3 – 4% of total congenital anomalies and seen in 2-3% of population. In the present study, 14 aberrant vessels are observed.

KEYWORDS: Aberrant vessel: birth defects aorto graphy renal parenchyma. Fornix.

INTRODUCTION:

- The subject of kidney anomalies including their incidence has created much interest to the scientists in late 1950 and 1960 with the aim of preventing and curing them as much as possible.
- Knowledge about their incidence particularly helps us to know how frequently they are seen in the population and makes us to search the possible etiological factors for such high occurrence.
- Human kidney serve to filter more than 1700 liters of blood per day into about 1 liter of highly specialized concentrated fluid called urine. In doing so the kidney excrete the waste products of metabolism, precisely regulates the body's concentration of water and salts, maintains the appropriate acid base balance, and serves as endocrine organ, secreting such hormones as erythropoiten, renin, and prostaglandins. The physiologic mechanism that the kidney has evolved to carrying out these functions requires a high degree of structural complexity.
- Embryology explains the etiological factors of many birth defects including the anomalies of the kidneys and among the explained many are due to various genetic and environmental

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Complications and management of otitis media in children

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ABSTRACT

Background: Otitis media is a main cause of hearing difficulty in children. The aim of this study was to determine the efficacy of medical treatment in the management of otitis media.

Methods: This cross sectional study was conducted at the department of ENT, MNR Medical College and Hospital, during the period of February 2015 to March 2017. A total of 62 patients were included in this study and standard medical treatment of otitis media was given. All the data were recorded and analyzed.

Results: Among 62 patients, 42 (67.7%) completely recovered from the disease while 20 patients (32.25%) did not improve.

Conclusions: Conservative treatment is effective in the management of otitis media.

Keywords: Otitis media, Conservative treatment, Hearing difficulty, Effectiveness

INTRODUCTION

Otitis media is the presence of fluid in the middle ear cleft behind an intact tympanic membrane.^{1,2} It is also called Otitis media with effusion, serous otitis media, glue ear or non suppurative otitis media. Otitis media with effusion is the most important cause of deafness in children the world over.^{1,3,4} An accurate diagnosis of otitis media can be made by proper clinical history, otoscopic examination and hearing tests like tuning fork tests, audiogram and tympanogram.^{1,5} Otitis media in children is often delayed for months or years resulting in poor development of speech, language, cognition and behaviour and poor performance at school.^{2,4,6} It also results in chronic non-specific pain or discomfort in the ear. So the early diagnosis and treatment of otitis media is very important. If untreated, it can progress in to chronic infective stage. Once the diagnosis of Otitis media is done, the patients are given treatment for at least 3

months including antibiotics, anti-histamines, mucolytics and nasal decongestants.^{4,5,8} After the medical treatment if there is need then surgical options should be considered like myringotomy and ventilation tube insertion. Complications of ventilation tube insertion include tympanosclerosis, atelectasis, residual perforations and rarely cholesteatoma formation.^{4,7} The present study was aimed to assess the effectiveness of medical treatment in Otitis media.

METHODS

This cross-sectional study was conducted at the ENT Department, MNR Medical College and Hospital, Sangareddy, during the period from February 2015 to March 2017. The diagnosis of Otitis media was made on the basis of proper history, otoscopic examination, tuning fork tests supported by audiological investigations like pure tone audiogram and tympanogram. All the patients

Characteristics of Homicide followed by Suicide Incidence of our Experience

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Abstract

Background: Homicide-suicides are a distinct group of violent deaths that separate them from murders and suicides. Although such incidents are uncommon, they have devastating effects on families and societies, and typically attract a lot of mainstream media coverage. **Aims:** present study aims to incidents of homicide followed by suicides that occurred within our experience. **Materials and methods:** The observational data obtained from records of post mortem from the department of Forensic from 2017 to 2019. **Results:** Out of the total 82 cases of homicides there were 11 cases murder-suicides involving 11 victims and 5 assailants. It is about 13.4% of all homicides and 3.4% of 2384 medico legal autopsies conducted during the period. female victims were distributed in a wide range of age . Most commonly involved age group ranges between 0-14 years and 15-24 years with 4 cases (36.4%), married subjects 6 cases (54%) of rural areas with five cases (63.7%). Drowning or burns was the method of choice in murder-suicide deaths. Most of the cases have a relationship to perpetrator is spouse , boyfriend or girlfriend 5 cases(45.5%) and most of the patients have mental illness in study of 6 cases 54.5%. **Conclusions:** A risk assessment should include determining the chance of involvement not only in suicide and homicide, but also in murder-suicide as a perpetrator or a victim.

Keywords: Homicide-Suicides; Victims; Assailants; Perpetrator.

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Introduction

Homicide-suicides, also referred to as dyadic deaths, involve homicide committed against one or more victims followed shortly thereafter by the suicide. Homicidesuicide denotes a perpetratormurder case, followed by his suicide almost immediately or soon after the homicide.¹ They are fairly uncommon, and responsible influences, and the mode of involvement varies from region to region.² Multifactorial factors such as extramarital sex, mental illness, tension at work, financial difficulties, domestic conflicts etc.³ More than 95 percent of the offenders were identified to the victims of past murder / suicide studies.⁴

The attacker was most frequently a former or

current husband or other intimate partner with the crime taking place at the victim's home.

Some experts consider the homicides to be simply a side effect of the suicide, wherein the specific decision to kill oneself precipitates a perceived necessity to kill others. Other experts say that murder-suicide cannot be categorized with either homicides or suicides but is actually a distinct behavior. Although there are some common risk factors among perpetrators of homicide, suicide, and murder-suicide, the latter behavior has some distinct characteristics. Although murdersuicide is a uncommon occurrence, it is widely reported in the media, and therefore such occurrences can appear to increase in frequency. This analysis looks at how murder-suicide rates are increasing.⁵

Pattern of Injuries in two wheeler Accidental Deaths in our Experience

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Abstract

Background: Deaths from injuries from motorcycle accidents have over the years remained a significant public health concern in India. **Aims:** Our aim is to determine the distribution of the victims' age and gender and to classify the cause of death and the anatomical pattern of injuries observed. **Materials and methods:** It is a 2-year autopsy based analysis of all fatalities from motorcycle accidents seen from our Teaching Hospital experience. The data were extracted from autopsy records, from police journal excerpts from hospital case notes and analyzed using SPSS version 20. **Results:** For Male there were 30 (85.7 percent) males and 5 (14.3 percent) females: 6:1 female ratio. The highest age group was 31-40 years. Majority of the victims 18 (51%) were Motorcycle riders, followed by passengers on back seat who accounted for 10 (29%), while the remaining 7 (20%) of the victims were pedestrians. Commonest injury in the cases are head injuries constituting 77% followed by thorax 57% and abdominal injuries 42.8%. Causes of death in study are mostly due to craniocerebral injuries 51.4% followed by multiple injuries in 40% and severe hemorrhage 5.7% and septicemia 2.8%. **Conclusion:** This study found that males are the main victims of death from motorcycle accidents during the fourth decade of life. Most of the victims were a motorcycle driver. Many died from craniocerebral damage.

Keywords: Injuries; Two Wheeler; Accidental Deaths.

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Introduction

Globally, traffic deaths were the first cause of death for people 15-29 years of age. For every person who died in a motorway, at least 20 people suffered non-fatal injury in the accident. Such accidents could affect life considerably. Performance, yet also with substantial economic costs. Two-wheeled vehicles are rising in number around the world, especially in developed countries, as motorcycles are fairly cheap to own and run in comparison with other vehicles. The strength, pace and ease of circumventing road traffic holds ups, and its ability to navigate through challenging terrain has made the motorcycle a common means of transportation in major cities and remote areas of India.^{1,2} The poor condition of the country's roads and the inefficiency of the public transport network, as well as the worsening of traffic congestion and increased

unemployment are major reasons for the booming motorcycle industry.³

Head and neck accidents are the leading cause of death from motorcycle collisions, with many deaths taking place despite good use of the available and advanced rehabilitation interventions. Around the same time, there is ample evidence that motorcycle safety helmets are effective in minimizing head injury incidence and severity due to motorcycle accidents. According to the statistics, death is the result of just 1% of motorcyclists injured too seriously to seek medical attention while non-use of motorcycle helmets leads to a change in the continuum of accidents, not just to more deaths but also to more serious non-fatal accidents.

The aim of this paper is to examine the epidemiology of motorcycle accidents and the forensic examination of injury rates in fatal