

Abstract: Clinical Sciences

Clinical Study on Chronic Pain Abdomen with Special Reference to ROME-III Criteria and Visual Pain Scale

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INTRODUCTION

Children with chronic abdominal pain present as a difficult diagnostic dilemma. So the present study was planned to know the prevalence of chronic abdominal pain and to know the diagnostic and prognostic use of ROME III criteria and visual face pain analogue for management of chronic abdominal pain in children.

METHODS

It was a hospital based prospective study conducted on IPD patients who presented with chronic abdominal pain from August 2018 to December 2019 in the Department of Pediatrics.

RESULTS

Among 100 children (67 female and 33 male), 20% had irritable bowel syndrome, 19% had functional constipation, 16% acid peptic disease, 15% functional dyspepsia, 12% functional abdominal pain syndrome, 7% reactive airways disease, 5% cyclic vomiting syndrome, 3% Koch abdomen, 2% liver abscess, and 1% had ulcerative colitis. The difference in visual analogue scale for pain was statistically significant in both organic and functional disease. More significant pain difference from admission to discharge was found in children with organic causes in comparison with functional causes of pain abdomen. Among 100 children, we could diagnose the cause of chronic/recurrent pain abdomen using pediatric ROME III criteria in 71 children.

CONCLUSION

Functional pain abdomen is a common complaint of childhood with associated familial, psychological, and co-morbid conditions. Epidemiologic studies of functional pain abdomen in children may offer information on the evolution of functional bowel disorders through the life span.

A Prospective Study on Clinical Profile of Childhood Central Nervous System Tuberculosis and Comparison of CSF-CBNAAT and Culture and Sensitivity

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INTRODUCTION

The recent introduction of Cartridge Based Nucleic Acid Amplification Test (CBNAAT) has significantly transformed the diagnostics of tuberculosis. Therefore, we conducted a study on clinical profile of childhood CNS tuberculosis and comparison of role of culture and sensitivity and CBNAAT in the diagnosis of childhood CNS tuberculosis from CSF.

METHODS

A prospective study was conducted from December 2018 to November 2019 consisting of 65 randomly selected patients suspected of CNS tuberculosis who had their CSF tested for CBNAAT and culture and sensitivity along with Mantoux test and other routine investigations. Chi square test was applied for statistical analysis.

RESULTS

Altered sensorium, seizures, fever, and weight loss/no weight gain were the most common presenting complaints. The sensitivity, specificity, positive predictive value, and negative predictive value of CBNAAT were 70.6%, 90%, 70.6%, and 89.6%, respectively.

CONCLUSION

Analysis of CSF sample with CBNAAT is a sensitive and specific method for rapid diagnosis of CNS tuberculosis in children. Results of CBNAAT relate better with clinical parameters like history of contact and presence of BCG scar.

Effectiveness of Tamsulosin in Prevention of Post-Operative Urinary Retention (POUR)

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INTRODUCTION

Postoperative urinary retention (POUR) is a common surgical complication after spinal anesthesia, defined as the inability to void after surgery when the bladder is full. Tamsulosin acts on the smooth muscles of the ureter and the bladder. The present study was conducted to investigate the efficacy of Tamsulosin compared with placebo for preventing POUR in surgeries performed under spinal anesthesia.

METHODS

In this randomized placebo controlled study, 100 male patients aged 18 to 60 years, admitted for surgeries under spinal anesthesia were randomly assigned to receive either two doses of 0.4 mg Tamsulosin (n = 50) or placebo (n = 50), 14 and 2 hours before surgery. Patients were closely monitored for the presence of urinary retention, any voiding difficulty, and side effects during 12 hour after surgery and the occurrence of POUR was compared between both groups.

RESULTS

Patients who received Tamsulosin preoperatively developed lesser POUR. In case group, 50 patients were given Tamsulosin, out of which 15 (30%) developed POUR and in control group who received placebo, 30 patients (60%) developed POUR. This observation was statistically significant (p value < 0.05).

CONCLUSION

Preoperative Tamsulosin administration reduces the incidence of postoperative urinary retention and the need for catheterization in males after surgeries under spinal anesthesia.

To Validate a Predictive Scoring Method for Difficult Laproscopic Cholecystectomy: A Single Institution Study

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INTRODUCTION

Open cholecystectomy is rapidly being replaced with laparoscopic cholecystectomy which could be associated with complications. Preoperative prediction of risk factors helps in assessing the intraoperative difficulties. This study aimed to validate a preoperative scoring system that will predict difficult laparoscopic cholecystectomy.

METHODS

A preoperative score was given to all the patients (100 patients) based on history, clinical examination, and sonographic findings. A score <5 was predicted as easy, 6-10 as difficult, and 11-15 as very difficult. Intraoperative events such as duration of surgery, bile/stone spillage, and injury to duct/artery were recorded and surgery was labelled as easy/difficult/very difficult based on these findings. The scores were compared with each patient to conclude practicality of preoperative predictive scores.

RESULTS

Gender (p = 0.029), palpable gall bladder (p = 0.04), thick gall bladder wall (p = 0.027), and impacted stone (p = 0.04), were considered as significant factors that predict difficult laparoscopic cholecystectomy. Sensitivity and specificity of this scoring method were 93.75% and 70%, respectively. The positive predictive value for easy and difficult cases, using this scoring method, was 92.59% and 73.68%, respectively.

CONCLUSION

The pre-operative scoring system evaluated in the present study is reliable and beneficial in predicting the difficulty of laparoscopic cholecystectomy. However, further randomized prospective multicentric studies with large sample size are required to validate the efficiency of the scoring system.

An Epidemiological Prospective Study of Asthma-COPD-Overlap (ACO) Diagnosis in Patients Previously Diagnosed as COPD

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INTRODUCTION

Current GINA guidelines and GOLD consensus (2020) defined Asthma-COPD-Overlap (ACO) as COPD and asthma as different entity that may exist together. The study was conducted to determine the prevalence of ACO among stable COPD patients and their characteristics and to compare the pool with various national/international data. and need for addition/withdrawal of ICS.

METHODS

Stable COPD cases (171 sample size) who underwent spirometry, FeNO, sputum and blood eosinophils, and serum IgE were included in the study and were pooled into ACO and COPD group by predefined diagnostic criteria.

RESULTS

Prevalence of ACO was 26.9% with male preponderance, mostly smokers/ex-smokers in both groups. ACO group was found to have more exacerbations in last 2 years ($p < 0.05$), post-bronchodilator reversibility ($p < 0.001$), increase level of serum biomarkers (sputum eosinophil ($p < 0.05$), TEC ($p < 0.001$), blood eosinophil percentage ($p < 0.001$), FeNO, and serum IgE, longer duration of illness ($p < 0.05$), and history of atopy ($p < 0.001$) as compared to COPD group. Prevalence of ACO among COPD was high with no significant age, gender, smoking status difference. History of bronchial asthma/atopy was significantly associated with ACO group. Inhaled corticosteroid played an important role in reduction of exacerbation and ER visit in ACO group. IgE and FeNO didn't help significantly in classification of ACO among COPD.

CONCLUSION

Chronic respiratory disease patient should be evaluated thoroughly for simultaneous presence of symptoms of one or more common diseases.

To Evaluate the Prevalence of Rifampicin Resistance by CBNAAT in Presumptive Drug Resistance Pulmonary Tuberculosis Cases at Tertiary Care Centre TB and Chest Hospital, Badi, Udaipur

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INTRODUCTION

The prevalence of drug resistant TB (DR-TB) is an important epidemiological indicator to assess the amount of transmission of resistant bacteria in the community. Hence, there is a need to strengthen the surveillance for DR-TB to ensure continuous monitoring of the epidemiological profile of MDR-TB and XDR-TB.

METHODS

A hospital based prospective observational study with intake of 100 cases admitted at NODAL Centre and DOTS PLUS site was conducted. Routine investigations, X-ray chest PA view, sputum microscopy, CBNAAT, Line Probe Assay (LPA) 1st in all patients and LPA 2nd only in Rifampicin resistant cases were performed.

RESULTS

Out of 100 cases, 53% were previously treated and 47% were new cases. The overall prevalence of Rifampicin resistant TB was 13% out of which, 17% were previously treated and 8.5% were newly diagnosed TB cases (p value < 0.001). As per 1st line LPA, 20 were DR-TB cases. In these 20 cases, 2nd line LPA detected resistance to fluoroquinolone in five patients and resistance to 2nd line injectables in one patient. All newly diagnosed cases were fluoroquinolone sensitive but around 38.46% of previously treated were found fluoroquinolone resistant in 2nd line LPA (p value 0.015). There were 13 MDR-TB cases, six of them subsequently turned into pre-XDR-TB by DST reports. pre-XDR cases were due to resistance to fluoroquinolones (83.33%) or 2nd line injectables.

CONCLUSION

CBNAAT and LPA are needed to be employed routinely to minimize the diagnostic time period and to minimize the transmission of resistant strains.

Retrospective Study to Know the Safe Distance between Electrode/Tunnel and Facial Nerve in Veria Technique of Cochlear Implantation

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INTRODUCTION

Cochlear implant (CI) is surgically implanted electronic device that provides a sense of sound to a person with moderately severe to profound sensorineural hearing loss. Veria technique is simple, helps in faster healing and earlier fitting of the processor, and is precise thereby minimizing trauma to the facial nerve. The surgery can be performed in infants who have not yet developed the mastoid completely. The present study was done to know the safe distance between electrode/tunnel and facial nerve in Veria technique of cochlear implantation.

METHODS

The study consisted of 15 patients undergoing CI surgery for moderately severe to profound hearing loss. Six months after cochlear implant surgery, high resonance computed tomography (HRCT) of temporal bone was done and superior oblique cuts of facial recess were taken. The distance between the electrode and the vertical part of facial nerve was measured in millimetres.

RESULTS

It was observed in the present study that the mean distance of electrode and facial nerve was 2.5 ± 0.59 mm, thus cochlear implant surgery is a safe surgery via Veria technique and the risk of major complications are very less.

CONCLUSION

Veria technique for cochlear implant surgery is found safe with respect to facial nerve injuries.

Comparative Study of External Dacryocystorhinostomy versus Endoscopic Endonasal Dacryocystorhinostomy in Management of Chronic Dacryocystitis

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INTRODUCTION

Variations in patient selection, surgical techniques, and post-operative care may influence surgical success rates and complications associated with dacryocystorhinostomy. The study was done to evaluate the effectiveness of endoscopic endonasal dacryocystorhinostomy compared with external dacryocystorhinostomy by comparing the outcomes of both procedures.

METHODS

A prospective longitudinal study was done on 120 patients with chronic dacryocystitis who were taken for external and endoscopic endonasal dacryocystorhinostomy randomly (i.e. 60 cases for each).

RESULTS

After 48 hours, seven days, one, three, and six months of surgery, endoscopic endonasal dacryocystorhinostomy had slightly more patent passage as compared to external dacryocystorhinostomy. Thirty four patients of endoscopic endonasal dacryocystorhinostomy did not develop any complication and excessive bleeding occurred in 10 cases. The external dacryocystorhinostomy group recorded more complications i.e. excessive bleeding in 36 cases, trauma to middle turbinate in 24, accidental injury to anterior ethmoid in 16, and loss of nasal mucosa and orbital injury in eight cases each. Postoperative complications were absent in endoscopic endonasal while were significantly present in external dacryocystorhinostomy (34 and 30 cases, respectively). Mean surgical duration was 41.2 ± 7.92 minutes in endoscopic endonasal and 43.2 ± 8.2 minutes in external dacryocystorhinostomy.

CONCLUSION

Endoscopic endonasal dacryocystorhinostomy is a simple, minimally invasive, day care procedure and is now considered a better and safer alternative for treating nasolacrimal duct obstruction.

A Prospective Study of Various Factors Leading to Lens Induced Glaucoma and Visual Outcome Following Its Management

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INTRODUCTION

Lens induced glaucoma (LIG), due to hypermature cataract, is an important cause for secondary glaucoma in developing countries. There is an ever increasing backlog of cataract in India due to population explosion, increased life expectancy, and poor availability of eye care services in developing world. Also the availability of services and their approach to rural community, from where most of the cases of lens induced glaucoma are usually seen, is very poor.

METHODS

It was a cross sectional prospective study done on patients with lens induced glaucoma between April 2019 to December 2020.

RESULTS

Total 40 patients were enrolled into the study. Female to male ratio was 1.35:1. Mean age of presentation was 65.31 years. It was observed that majority of cases (97.5%) were of phacomorphic glaucoma. Majority of the patients had good vision in the other eye as a result of which they neglected the affected eye till they developed LIG leading to pain at the time of presentation. The main reason for delayed presentation was no escort in 50% of cases, followed by ignored symptoms in 27.5% of cases and financial problems in 22.5% of cases.

CONCLUSION

It is important to impart health education and create awareness regarding cataract and its implications among the rural community, medical officers, and peripheral health workers. There is a need to educate health care workers in periphery for early identification of signs and symptoms of lens induced glaucoma and early referral to an eye hospital.

Immediate Changes in Diurnal Variation in Intraocular Pressure after Laser Peripheral Iridotomy in Primary Angle Closure Glaucoma Patients

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INTRODUCTION

The purpose of the study was to determine the immediate changes in diurnal variation in intraocular pressure (IOP) after Laser Peripheral Iridotomy (PI) in primary angle closure glaucoma patients, to check the angle of anterior chamber by Shaffer's method using gonioscope, and to check the patency of Peripheral Iridotomy by anterior segment OCT and Slit Lamp.

METHODS

A prospective study was conducted on 128 eyes of 64 patients in whom PI was done. IOP was measured every 3 hourly for 24 hours and diurnal variation was noted. Angle of anterior chamber was seen by Shaffer's method using gonioscope pre-PI. Anterior segment OCT and slit lamp examination was done 24 hours post-PI to check the patency of PI.

RESULTS

Average IOP immediately after PI spiked (22.4 ± 4.5 mm Hg) in treated eyes and (15.9 ± 2.6 mmHg) in fellow eyes. The IOPs of treated eyes were higher than those of fellow eyes at every time point, including peak and trough showing parallel properties without any significant differences in IOP fluctuation. On OCT and slit-lamp, PI was found patent. The diurnal IOP curves showed relatively parallel properties, with trough IOP in the morning hours and peak IOP in midnight hours due to elevated episcleral venous pressure by the supine position at night, causing nocturnal IOP elevation.

CONCLUSION

Eyes in which more laser energy and a higher number of laser pulses were used and with shallower central anterior chamber were at increased risk of increased IOP.

Comparative Study of MRI and Radiograph in Patients of Painful Hip Joint

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INTRODUCTION

MRI imaging is a valuable tool in the evaluation of hip disorders because it enables assessment of articular structures, extra articular soft tissues, and the osseous structures that can be affected by hip disease. Many of the hip disorders appear normal or show subtle radiographic findings, however MR imaging can detect these subtle early findings and aid in a correct diagnosis. This study was conducted to determine the diagnostic accuracy of MRI in assessing the severity and extent of underlying lesion in various conditions of painful hip joint as compared to radiographs.

METHODS

The study was conducted for evaluation of one hundred patients presenting with clinical history of hip pain referred from Orthopedics department over a period of one year. Examination was done by 1.5 Tesla machine using T1WI coronal/axial, T2WI coronal/axial, and STIR coronal sequences.

RESULTS

In this study, males were the dominant group comprising of 70% study population. Maximum number of patients was between age group of 31-40 years of age. The commonest cause of hip pain was found to be avascular necrosis (42%) followed by osteoarthritis (22%). Of all cases of AVN, only 13 cases were accurately diagnosed on plain radiography, whereas all were detected on MRI.

CONCLUSION

MRI is an informative, diagnostic, non-invasive, rapid, and accurate imaging modality for the assessment of hip pain as compared to radiographs.

Role of Contrast Enhanced Computed Tomography Scan in Diagnosis of Local Spread and Distant Metastasis and Staging of Breast Carcinoma

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INTRODUCTION

Contrast enhanced CT (CECT) scan is a useful modality to improve lesion's conspicuity and to identify local spread and distant metastasis of breast carcinoma. The present study aimed to identify suspicious breast masses (BI-RADS 4, 5, and 6) using CECT scan imaging and to identify chest wall invasion, skin invasion, loco-regional lymph node metastasis, and distant metastasis.

METHODS

This cross sectional study was done on 30 patients of category (BI-RADS) 4, 5, and 6 of breast carcinoma. CECT scan was done with injection of non-iodinated contrast media (iohexol 100 mg, 4 ml/sec.). Staging was done according to American Joint Committee of Cancer (AJCC), eighth edition.

RESULTS

According to ultrasound and mammography findings (before CECT), there were 1 (3.3%), 4 (13.3%), and 25 (83.3%) patients in stage I, II, and III, respectively. According to T and N staging after CECT examination, 1 (3.3%), 4 (13.3%), 13 (43%), and 12 patients (40%) were classified as stage I, II, III, and IV. Twelve (40%) cases from stage III upstaged to stage IV after CECT meaning that these cases had distant metastasis at the time of study. The overall sensitivity, specificity, positive predictive value, and negative predictive value of CECT to detect distant metastasis was 92.3%, 89.4%, 85.71%, and 5.55%, respectively. In stage IV, six (50%) cases were found with lung metastasis, three (25%) with bone metastasis, three (25%) with liver metastasis, and one (8.3%) with multiple organ metastasis.

CONCLUSION

CECT is a modality which identifies the presence of distant metastases or local invasion in breast cancer and helps in staging the disease.

Comparison of Concurrent Chemoradiation with Weekly Paclitaxel v/s Cisplatin for Locally Advanced Cervical Cancer

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INTRODUCTION

Cervical cancer is the second most common cancer among women in India. Patients with cervical cancer (stage IB2-IIIC1) have poor prognosis. In the present study, the differences in acute toxicities between weekly Cisplatin and weekly Paclitaxel based concurrent chemoradiotherapy (CCRT) regimens given to patients of FIGO Stage IB2IIIC1 cervical cancer were compared.

METHODS

This comparative prospective study was conducted during the period of one year. Sixty two patients satisfying the eligibility criteria were included. After pretreatment evaluation, patients were sequentially randomized into two arms. The toxicities were assessed according to Radiation Therapy Oncology Group Acute Radiation Morbidity Criteria. While chemotherapy toxicities were assessed with Common Terminology Criteria for Adverse Events (CTCAE).

RESULTS

Grade I acute skin toxicity occurred in 20% patients of weekly Cisplatin arm and 23.33% of weekly Paclitaxel arm and grade II toxicity occurred in 16.67% of weekly Cisplatin arm and 13.33% of weekly Paclitaxel arm. The neurological reaction occurred more in weekly Paclitaxel (26.67%) arm as compared to weekly Cisplatin (6.67%) arm. The major limiting acute toxicities in the Cisplatin arm were nausea and vomiting followed by lower G.I toxicity, whereas the major limiting toxicities in the Paclitaxel arm were hematological toxicity, neurological reactions, and severe allergic reactions.

CONCLUSION

The Cisplatin arm has slightly better response. Thus, weekly Paclitaxel based CCRT can be used as an alternative to weekly Cisplatin, especially in patients having higher chances of nausea and vomiting.

A Comparative Study between Conventional Field Radiotherapy and Extended Field Radiotherapy in FIGO Stage III Cancer Cervix

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INTRODUCTION

The present study was conducted to examine tumour control and clinical outcomes of extended field irradiation and compare it with conventional field in same disease profile. Also, toxicities associated with radiation treatment were determined.

METHODS

This study included 50 biopsy proven and registered FIGO stage III cases of carcinoma cervix treated with concurrent CT (inj. Cisplatin 40 mg/m² weekly) + EBRT upto 50 Gy + HDR ICBT (22.5 Gy). Twenty five patients were randomized to each arm. Arm-A was given conventional field EBRT 50 Gy with concurrent weekly chemotherapy followed by ICBT while Arm-B was given extended field EBRT 50 Gy with concurrent weekly chemotherapy followed by ICBT.

RESULTS

At 12 months follow up, 43 patients had attained CR and seven were in non-CR group (i.e. patients with PR, SD, or PD). The non-CR rate was 16% for Arm A and 20% for Arm B. Among seven patients of non-CR, six had local disease and one had failure at distant site. Five patients, two in arm A and three in arm B died. Residual disease was seen in two patients. Grade III diarrhoea was seen in eight patients, three in Arm A and five in Arm B. Fifteen patients developed grade III skin toxicity, seven in Arm A and eight in Arm B. Twenty five cases presented with varying stages of vaginal adhesions and stenosis.

CONCLUSION

Majority of patients achieved complete response with minimal acute and late toxicities with similar results in both arms. No patient had pelvic or para-aortic metastasis until recent follow up.

A Comparative Study of Effectiveness of 3% Saline versus Mannitol in Children with Cerebral Odema of Non Traumatic Aetiology

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INTRODUCTION

Clinical presentation of cerebral oedema is variable, ranging from asymptomatic to severe autonomic dysregulation, coma, and death. The present study aimed to show the effects of hypertonic saline (3%) in children with cerebral oedema (non-traumatic) and to compare it with mannitol in terms of efficacy and side effects.

METHODS

This was a comparative hospital based study conducted for a period of one year and included children with cerebral oedema of non-traumatic etiology admitted in pediatric intensive care unit. A total 93 patients were enrolled and 60 cases meeting criteria were included and divided in two groups; group I: receiving only Mannitol and group II: receiving only 3% hypertonic saline. Data was collected using a questionnaire.

RESULTS

Out of the total 60 patients, 55% were male and 45% were female. The improvement in GCS score was much faster in the 3% saline group as compared to the mannitol group. The duration of coma was lower in patients receiving 3% saline ($p = 0.001$). The level of serum sodium was higher in the 3% saline group after 24 hours of admission ($p = 0.001$). Mortality was 6.67% in both the groups.

CONCLUSION

For the treatment of cerebral oedema in children of non-traumatic etiology, 3% NS can be considered a safe and effective modality as compared to mannitol and may be preferred in situations like shock where mannitol cannot be used. Also, 3% saline was better than mannitol in reducing the duration of coma.

Study of Correlation of Red Cell Distribution Width with Acute Exacerbation of Chronic Obstructive Pulmonary Disease

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INTRODUCTION

Acute exacerbation of COPD (AECOPD) is one of the most common disease in patients with infections, having frequent hospitalization. The aim of this study was to find whether there is any relationship between red cell distribution width (RDW) with mortality in AECOPD.

METHODS

The hospital based case control study was conducted on 50 patients with primary and final diagnosis of AECOPD and 50 patients of stable period of COPD.

RESULTS

Mean admissions per year were significantly higher in AECOPD patients as compared to stable COPD patients. Mean FEV1% was significantly lower in AECOPD patients (43.87 ± 14.26) as compared to stable COPD patients (48.12 ± 20.18). Mean RDW was significantly higher in AECOPD ($17.60 \pm 5.70\%$) as compared to stable COPD patients ($13.80 \pm 3.33\%$). The difference in both groups was found to be statistically significant. RDW was significantly higher in those who died ($19.50 \pm 0.70\%$) as compared to survived patients ($17.52 \pm 5.61\%$). The difference in both groups was found to be statistically significant.

CONCLUSION

Mean red cell distribution width on the day of presenting the illness was significantly higher in AECOPD as compared to stable COPD. Those patients who had a high red cell distribution width during admission were associated with poor prognosis.

Study of Postnatal Maturation of Amplitude Integrated EEG in Preterm SGA and Preterm AGA Neonates

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INTRODUCTION

The aim of the present study was to assess postnatal maturation of amplitude integrated EEG in preterm SGA and preterm AGA neonates.

METHODS

This was a cross-sectional study of stable preterm neonates admitted in neonatal intensive care unit from May 2019 to May 2020. The a-EEG tracings were recorded using the amplitude integrated EEG machine as per standard methodology on 3rd, 7th, and 14th day of life during admission. Each recording was done for at least 4-hour duration to ensure good sleep-wake cycling recording.

RESULTS

Out of 56 neonates, 27 were preterm SGA and 29 preterm AGA. 29 (51.79%) were male and 27 (48.21%) were female and 13 (23.21%) males belonged to SGA and 14 (25.0 %) belonged to AGA. The mean continuity score on day 3 and 7 was delayed in SGA group neonates as compared from the AGA group and was statistically significant. The mean cycling score and mean amplitude score on day 7 were delayed in SGA group neonates as compared to the AGA group and was statistically significant. The mean total a-EEG scores on day 3, 7, 14 were delayed in SGA group than the AGA group and total a-EEG score for day 7 had a p value of < 0.000 which was statistically significant.

CONCLUSION

The total a-EEG maturation score in P-SGA neonates as compared to P-AGA was delayed on 3rd, 7th, 14th postnatal days and all the maturation a-EEG scores of clinically stable and neurologically normal P-SGA neonates were found to be significantly delayed at any point of life on postnatal day 7th.

A Hospital Based Observational Study of Comprehensive Psychological Assessment, Cognitive Impairment, and Adaptive Functioning among Children with β -Thalassemia Major

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INTRODUCTION

The therapy regime of β -thalassemia is complex. Hence, this study was undertaken to evaluate psychological difficulties, cognitive functions, and adaptive behaviors in children with thalassemia and the factors influencing them, so as to accentuate the importance of accomplishing not only physical well being but also the mental and social well being among these children.

METHODS

This prospective hospital based observational study was conducted in the Department of Pediatrics from September 2019 to August 2020.

RESULTS

In the study population, psychiatric disorder(s) were present in 41.5% cases and 12.5% controls. Only single psychiatric disorder was present in 21.54% cases and 11.46% controls. Two or more psychiatric disorders were present in 20% cases and 1% controls ($p < 0.001$). Anger was the most common psychiatric domain followed by somatic symptoms and depression. There was a higher prevalence of psychiatric disorders among children in age group 12-17 years as compared to 6-11 years ($p < 0.001$). The mean communication skills, daily living skills, and social skills scores were lower among cases as compared to controls. The mean MMSE scores were lower among children with thalassemia compared to normal children.

CONCLUSION

The present study emphasizes the need for psychological support through screening and subsequent treatment of psychiatric illness, proper adaptive skill and cognitive development through competent behavioral and cognition therapy, adequate chelation therapy, and consistent growth monitoring in children with thalassemia major.

A Prospective Study for Predicting the Outcome of Patients of Perforation Peritonitis using APACHE II Score

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INTRODUCTION

Grading the severity of acute peritonitis has assisted in decision making and has improved therapy in the management of severely ill patients. In this study, Acute Physiology and Chronic Health Evaluation (APACHE) II scoring system for prediction of mortality risk in patients with peritonitis has been used by estimating the severity of intra-abdominal sepsis and thus providing intensive treatment to high risk patients in a hospital with limited resources.

METHODS

This study included 50 admitted patients with hollow viscus perforation with age more than 16 years. Patients with traumatic perforation or other causes of peritonitis other than hollow viscus perforation were excluded from study. All the parameters of APACHE II score were recorded at the time of admission and the score was calculated by adding all the points of those parameters.

RESULTS

By using parametric and non-parametric test, it was concluded that patients with score between 0 and 5 had only 5.8% mortality as compared to 100% mortality in patients with score above 15. Mean score of patients who survived was 6.5 as compared to 15.06 in those who died.

CONCLUSION

The prognosis of the patient can be predicted in terms of score at the time of admission in a hospital. This will allow in assessing the condition of patient and appropriate treatment for the patient in a hospital with limited sources.

A Study on Acute Kidney Injury (AKI) in Neonatal Intensive Care Unit and Role of SNAPPE-II Score for Predicting Morbidity and Mortality

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INTRODUCTION

In neonates with acute kidney injury (AKI), score for Neonatal Acute Physiology Perinatal Extension-II (SNAPPE-II), which is a modification of SNAP score and consisting of 9 parameters, is one of the best scoring systems to predict neonatal mortality in NICU. The objectives of the present study were to study the risk factors for AKI in neonates admitted in NICU and role of SNAPPE-II score in predicting mortality and morbidity in neonates with AKI.

METHODS

This was a hospital based observational study conducted on inborn neonates admitted in NICU over a duration of one year (2019-2020). Cases being 90 neonates with AKI and controls as 90 neonates with clinical conditions other than AKI. For diagnosis of AKI, pRIFLE criteria were used. All the nine variables of SNAPPE-II score were applied.

RESULTS

Most frequently observed risk factors in neonates with AKI were sepsis, perinatal asphyxia, prematurity, mechanical ventilation, hypovolemia, and nephrotoxic drugs. Mean SNAPPE-II score in neonates with AKI (49.97 ± 22.93) was found to be significantly higher than the control group (37.82 ± 24.45). Majority of the neonates with AKI who expired were in very severe category of SNAPPE-II (58.3%) while those in the control group were in moderate and severe category. As per the ROC curve analysis, cut-off for predicting mortality in neonates with AKI was found to be ≥ 62 with $AUC = 0.869$.

CONCLUSION

In the setting of AKI, higher SNAPPE-II score category

Comparison of Analgesic Efficacy of Topical Tramadol (5%) and Ropivacaine (0.5%) in Post-operative Pain Control in Children after Tonsillectomy: A Prospective Randomized Double Blind Control Study

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INTRODUCTION

Post-operative pain control after tonsillectomy has been a great challenge and no optimal analgesic regimen has been established yet. The aim of this study was to compare the analgesic efficacy of topical 5% Tramadol and 0.5% Ropivacaine in controlling post-operative pain in children after tonsillectomy.

METHODS

A prospective, randomized, control study was conducted in 105 children, age 5-12 years undergoing tonsillectomy. All children were allocated into 3 groups. Group R: received Ropivacaine 0.5% diluted upto 5 ml with NS (normal saline), group T: received 5% Tramadol diluted upto 5 ml with NS and Group NS received 5 ml NS at the end of the surgery before giving reversal. FLACC scale was used to assess pain control among all groups at 1st, 2nd, 4th, 6th, 12th, 18th, 24th, 36th, and 48th post operative hours. Time to first rescue analgesic, total rescue analgesic consumption, and incidence of post-operative complaints were recorded.

RESULTS

Post-operative pain scores (FLACC score) were comparable in all groups at 1st hour but significantly lower in group R than group T and group NS at rest of the time intervals. Time to first rescue analgesic was significantly longer and total rescue analgesic consumption was significantly lower in group R. Incidence of nausea and vomiting was higher in group T.

CONCLUSION

Administration of 0.5% Ropivacaine is a safe and effective analgesic compared to 5% Tramadol in children undergoing tonsillectomy surgery.

Association of Serum Ferritin Levels with Immunological Status and Clinical Staging of HIV patients

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INTRODUCTION

High prevalence of elevated serum ferritin levels has been reported in HIV infection and serum ferritin levels increase with clinical worsening of infection and with decreasing CD4 lymphocyte counts. This study was designed to find the role of acute phase reactant serum ferritin in the progression of the disease of HIV which is complicated by opportunistic infections by finding the correlation of serum ferritin with immunological and clinical stages of HIV patients.

METHODS

This cross-sectional study was conducted on 75 patients admitted in various wards of Department of Medicine or attending Medicine outdoor or ART centre. Serum ferritin, total iron binding capacity, and total serum iron were analysed using Cobas analyser. CD4 cells were measured using flow cytometry technique.

RESULTS

In the present study, 10% of the patients belonging to HIV stage 4 had serum ferritin value below normal range and 30% of the patients belonging to stage 4 had serum ferritin value more than the normal value. There was a negative correlation among serum ferritin and CD4 cells with $r = -0.195$ which was statistically significant ($p < 0.05$).

CONCLUSION

As the CD4 cell count decreased, the level of serum ferritin increased. Elevation of serum ferritin levels is associated with a low count of CD4 in HIV patients. Elevation of serum ferritin is also associated with patients with advanced clinical stage of HIV.

A Clinico-morphometric Study of Inguinal Area of Patients undergoing Open Inguinal Hernia Surgery and Correlation with Required Size of Mesh

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INTRODUCTION

The current standard management of inguinal hernia is Lichtenstein's tension-free mesh repair of the posterior wall inguinal canal. This study was undertaken to study the clinico-morphometric features of the inguinal canal in different types of inguinal hernias in the Indian population in order to determine the appropriate size of the mesh required to cover all the potential sites of recurrence.

METHODS

A prospective study conducted on 25 patients during period of 2 years included patients for open inguinal hernia surgery under local/regional/general anaesthesia. The parameters that were taken preoperatively included distance from anterior superior iliac spine (ASIS) to deep inguinal ring (DIR) and superficial inguinal ring (SIR). Intraoperative parameters (diameter of DIR and SIR, distance from mid-point of inguinal ligament to summit of muscular arch (conjoint tendon), length and width of mesh applied) were taken. Maximum area of mesh required in the study population (mean \pm 2SD) was determined.

RESULTS

The study included a total of 25 patients with mean age of 52.24 ± 14.31 years. Minimum weight of mesh used was 570 mg and maximum weight was 1370 mg. Mean weight of the mesh was 1137 ± 147 mg. Area of the standard mesh was 112.5 cm^2 . Minimum area of mesh applied was 42.75 cm^2 and maximum area was 102.75 cm^2 . Mean area of the mesh used was $85.26 \pm 11.04 \text{ cm}^2$.

CONCLUSION

After determining the area of mesh applied in accordance to the proportion of standard mesh taken, the ideal mesh size for the study population would be $14.6 \times 7.3 \text{ cm}^2$ to cover all potential sites of recurrence.

Correlation of Clinico-radiological Profile and Lung Function Test in Patients with Post-pulmonary Tuberculosis Sequelae

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INTRODUCTION

Despite adequate pharmacologic treatment, tuberculosis while healing leaves permanent sequelae in the lungs. The aim of the study was to estimate the clinico-radiological profile in treated pulmonary TB (PTB) patients and to estimate the pulmonary function test (PFT) for measurement of airway disease pattern and severity of dyspnea, correlation of clinico-radiological profile and lung function test in patients with post-pulmonary tuberculosis sequelae.

METHODS

A total of 100 patients of treated pulmonary TB were enrolled in the Department of Respiratory Medicine for this hospital based prospective type of observational study.

RESULTS

In the present study, out of 100, 77% patients were male and 23% female. Majority of the patients had cough (92%), expectoration (72%), breathlessness (91%), chest pain (23%), hemoptysis (22%), fever (5%), and 16% had fatigue. We found that 42% patients had obstructive, 35% had restrictive, 15% had mixed, and 8% patients had normal pattern on PFT. Correlation between smoking status and PFT pattern was statistically significant. Maximum number of patients had fibrosis (47%) followed by 42% patients with bronchiectasis and 38% with cavitory lesion.

CONCLUSION

Significant number of post-PTB patients were found to have marked impairment of lung function and dyspnea which is in direct correlation with radiological abnormalities irrespective of age. Hence, treatment completed PTB patients need continued follow up and pulmonary function assessment to limit disability and improve quality of life.

Efficacy of Autologus Incus in Ossicular Reconstruction in Middle Ear

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INTRODUCTION

The results of ossiculoplasty using an autologous incus graft depend to a large extent on the severity of disease in the middle ear which is present preoperatively. The present study was done to assess the efficacy of autologous incus in ossicular reconstruction in middle ear.

METHODS

A total of 50 patients who had undergone ossiculoplasty using an autologous incus were studied. All cases were followed at three and six months. Pre-operative and post-operative audiometric findings at the final follow-up visit were compared. Results were considered good if the post-operative air-bone gap was reduced to 25 dB or less.

RESULTS

In the present study, the mean pre-operative air-bone gap of approximately 45 dB was reduced to 25.6 dB post-operatively, leading to a 19.3 dB average gain in hearing (p value = 0.000).

CONCLUSION

Ossiculoplasty using autologous incus graft material is an effective and safe surgical method for reconstruction of the ossicular chain and for hearing restoration.

Comparative Study between Trabeculectomy with Collagen Implant versus Trabeculectomy with Mitomycin C in Patients Requiring Glaucoma Surgery

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INTRODUCTION

Glaucoma is a chronic multifactorial degenerative optic neuropathy and is the second leading cause of irreversible blindness worldwide.

METHODS

A total of 50 eyes of 44 patients were assigned randomly to undergo trabeculectomy either with collagen implant (study group) or with Mitomycin C (control group). Pre-operative data included age, gender, IOP, and number of pre-operative medications. Post-operatively IOP, number of glaucoma medications, and complications if any were recorded on follow up at seven days, one month, and three months.

RESULTS

The IOP in patients undergoing trabeculectomy with collagen implant was consistently and statistically lower than those who underwent trabeculectomy with Mitomycin C. The number of antiglaucoma medications used post-operatively in the cases were significantly lower than those used in the control arm. Fifteen patients receiving a collagen implant achieved complete success as opposed to seven in the control arm. However, seven cases achieved a qualified success as opposed to 14 controls. There was only one treatment failure in the collagen implant arm against four treatment failures in the control arm. In postoperative complications, 0.12% eyes of cases developed flat anterior chamber as compared to 0.16% of controls. Hypotony was similar in both the groups (0.12%). 0.04% of the eyes in cases developed hyphema in comparison to 0.08% in controls.

CONCLUSION

This study supports superiority of collagen implant with trabeculectomy as opposed to trabeculectomy with Mitomycin C (MMC) in terms of better clinical outcome and reduced post-operative anti-glaucoma medications.

Study of HRCT Lung Findings Based on the Histological Pattern in Collagen Vascular Disease Associated Lung Disease

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INTRODUCTION

Connective tissue diseases can cause pulmonary parenchymal involvement as well as vascular and pleural abnormalities due to autoimmune processes. For evaluation of the presence and extent of parenchymal and pleural abnormalities, high-resolution computed tomography (HRCT) has been shown to be more helpful than radiography. The present study aimed to assess the role of HRCT in the evaluation of early as well as advanced changes in the lung in different types of collagen vascular diseases.

METHODS

The study was conducted during the period from March 2019 to August 2020 on patients with connective tissue disorders. Clinical and biochemical profiles were assessed and HRCT examination of lungs was performed.

RESULTS

Out of 86 patients (54% females and 45% males), 62% had rheumatoid arthritis, and 24% had scleroderma. The most common lung manifestation in majority of the patients (78%) was interstitial lung disease (SLP), out of which 45% were diagnosed with usual interstitial pneumonia and 52% with non specific interstitial pneumonia. In patients with rheumatoid arthritis, the most common lung manifestation was usual interstitial pneumonia pattern (72.5%) and in patients with scleroderma was non-specific interstitial pneumonia (87.5%). Bronchiectasis was the most common airway disease (41.8%). The most common parenchymal manifestation seen were fine reticular opacities (67%) followed by coarse interlobular septal thickening (59%). Parenchymal abnormalities were commoner in rheumatoid arthritis patients.

CONCLUSION

The most common pattern of interstitial lung disease seen in rheumatoid arthritis was usual interstitial pneumonia and in scleroderma is non specific interstitial pneumonia.

A Prospective Study to Analyse the Prognostic Value of First Trimester HbA1c Test in Detecting Gestational Diabetes Mellitus and its Role in Predicting Adverse Pregnancy Outcomes at a Tertiary Care Hospital in North-West Rajasthan

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INTRODUCTION

The purpose of this study was to find out the utility of first trimester HbA1c level in detecting gestational diabetes mellitus (GDM) and to evaluate the role of HbA1c and its threshold in predicting adverse pregnancy outcomes.

METHODS

In the present study, 150 pregnant women between 8-13 weeks of gestation who underwent HbA1c test and 2- hours 75-g OGTT (DIPSI) test in the ANC/OPD from 1st January 2020 to 30th November 2020 were enrolled. Four patients were diagnosed as overt diabetes and were excluded. Remaining women underwent repeat 2-hours, 75-g OGTT (DIPSI) test between 24-48 weeks and were followed till delivery.

RESULTS

The mean HbA1c in GDM women was significantly higher than those without GDM. The area under ROC curve of HbA1c to detect GDM was 0.861. A cut off of 5.55% to rule out GDM had sensitivity, specificity, PPV, and NPV as 92.9%, 65%, 22.4%, and 98.9%, respectively and a cut off of 6.05% to rule in GDM had sensitivity, specificity, PPV, and NPV as 28.6%, 100%, 100%, and 92.9%, respectively. This method would have obviated the need of OGTT in 63% women. Adverse outcomes like hyperemesis, pre-eclampsia, polyhydramnios, macrosomia, shoulder dystocia, RDS, and neonatal hypoglycaemia were significantly more in women with HbA1c >5.55% than in women with HbA1c <5.55%.

CONCLUSION

HbA1c cannot replace OGTT but can be used as an initial screening test for GDM.

A Clinical Study of Causes and Outcome of Primary Caesarean Section in Multiparous Women at Tertiary Centre

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INTRODUCTION

Caesarean section is the most commonly performed major surgery among women. The objective of this study was to find the indications of primary caesarean section in multiparous women and evaluate the maternal and perinatal outcomes.

METHODS

The prospective descriptive study was conducted on 120 multiparous women of primary caesarean sections. Indications and the maternal as well as perinatal outcomes were analyzed using appropriate statistics.

RESULTS

Maximum patients (45%) were from 26-30 years age group. 66.67% women were booked for antenatal care. 46.67% women were anemic, 25% presented with preeclampsia, 23.33% presented with ante-partum hemorrhage, 10% were Rh-negative, and 1.67% women presented with eclampsia. Most common (30%) cause of LSCS was fetal distress followed by placenta previa (18.33%), hydramnios (11.67%), breech (8.33%), and obstructed labor (8.33%). 120 cases underwent emergency cesarean section and only 16 cases had elective cesarean section. Four patients developed paralytic ileus, four developed puerperal fever, three developed wound gaping, and three patients developed UTI. Birth weight of 63.33% neonates was >2.5 Kg and 0.50% neonates died. In 71.67%, pregnancy was term. Most common neonatal complication was meconium aspiration syndrome (MAS) (21.67%) followed by IUGR (6.67%), and sepsis (5%).

CONCLUSION

Good antenatal and intra-partum care and early referral will reduce the maternal and perinatal morbidity and mortality in multipara. Multipara in labour should be given the same attention as primigravida.

A Randomised Comparative Study of Effect of IM Camylofin Dihydrochloride and IM Valethamate Bromide on Cervical Dilatation in Labor

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INTRODUCTION

There is a search for a good cervical dilating agent which is not only more efficacious in cervical dilatation but also effective in relieving pain during labour with no or very little harmful effects on mother and foetus. The aim of the present study was to compare the effect of intramuscular Valethamate Bromide and intramuscular Camylofin dihydrochloride on rate of cervical dilatation and to study the relief of pain to mother during labour.

METHODS

The present study was conducted between October 2019 and December 2020 and 118 patients were selected randomly. Two groups (group I and group II) were made by simple random sampling, each consisting of 59 patients. First group received intramuscular Camylofin dihydrochloride and second group received intramuscular Valethamate Bromide.

RESULTS

Mean duration of active phase of first stage of labor was shorter in group I (313.17 minutes) than in group II (356.3 minutes) but was not statistically significant. Mean cervical dilatation rate was significantly more in group I (2.02 cm/ hr) than group II (1.81 cm/ hr). Camylofin was effective in pain relief with mean pain score 5.31 ± 1.06 while mean pain score for Valethamate Bromide group was 7.37 ± 1.07 .

CONCLUSION

Intramuscular Camylofin dihydrochloride was found to be more efficacious than intramuscular Valethamate Bromide in shortening the duration of labor as well as in pain relief.

A Comparison between Intrathecal Nalbuphine versus Fentanyl as an Adjuvant with 0.5% Hyperbaric Bupivacaine for Post-operative Analgesia in Patients Undergoing Lower Segment Caesarean Section

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INTRODUCTION

Nalbuphine, when used as an adjuvant to hyperbaric Bupivacaine has improved the quality of peri-operative analgesia. Fentanyl does not cause respiratory depression and improves duration of sensory anesthesia without producing significant side effects. The aim of this study was to compare intrathecal Nalbuphine and Fentanyl as adjuvants to hyperbaric Bupivacaine for post-operative analgesia in lower segment cesarean section.

METHODS

A total of 100 ASA class I and II patients were enrolled for lower segment caesarean section. Patients were randomly allocated into 2 groups - group F (n = 50) received inj. Bupivacaine 0.5% (H) 1.6 ml (8 mg) + Fentanyl 20 µg (0.4 ml) and group N (n = 50) received inj. Bupivacaine 0.5% (H) 1.6 ml (8 mg) + Nalbuphine 0.4 mg (0.4 ml) under subarachnoid block. Time of onset and duration of sensory and motor blockade, VAS score, and duration of analgesia were noted in both groups. Hemodynamic changes and any adverse events were also noted.

RESULTS

Onset of sensory and motor blockade were faster in group F while duration of sensory block was longer in group N (p < 0.05). Duration of analgesia was significantly longer in group N (214.34 ± 9.31 min.) compared to group F (195.00 ± 9.18 min.). No significant hemodynamic changes and adverse effects were noted in both groups.

CONCLUSION

Intrathecal Nalbuphine prolonged the post-operative analgesia maximally and may be used as an alternative to intrathecal Fentanyl in lower segment cesarean section.

Prevalence of Pulmonary Hypertension in Patients of Chronic Kidney Disease in Western Rajasthan: A Cross Sectional Study

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INTRODUCTION

Chronic kidney disease (CKD) increases the mortality and morbidity risks and has become a major public health problem. The aim of this study was to detect the prevalence of pulmonary hypertension in patients with chronic kidney disease.

METHODS

This hospital based cross-sectional study was conducted on 108 diagnosed cases of CKD (according to different stages based on GFR) and age more than 18 years. 2D echo was done for pulmonary artery pressure.

RESULTS

Maximum (53.70%) subjects were in 46-60 years age group. Seventy six (70.67%) subjects were male and 32 (29.63%) subjects were female. 41.67% patients were suffering from diabetes and 55.56% patients were suffering from hypertension. In 66.67% subjects, CKD duration was <5 years and in 43.52% subjects, CKD stage was 5. Prevalence of pulmonary hypertension in CKD patients was 15.74%. Pulmonary hypertension was mild in 47.06% patients, moderate in 41.18%, and severe in 11.11% patients. The association between pulmonary hypertension and diabetes was found statistically insignificant. Association between pulmonary hypertension and CKD stage increased with increase in stage.

CONCLUSION

Pulmonary hypertension had positive correlation with stage of CKD, duration of CKD, and age of patients.

A Role of Oxytocin Sensitivity Test and Bishop Score in Induction of Labor

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INTRODUCTION

Induction of labor is usually performed when risk of continuing a pregnancy is more than benefit of delivery. Bishop score and oxytocin sensitivity test have got a close relationship with the success rate of delivery. In this study, role of Bishop score and oxytocin sensitivity test (OST) in induction of labor was studied.

METHODS

This was a prospective randomized study undertaken on 100 cases that were allocated randomly according to inclusion and exclusion criteria. In first group, normal pregnant women with 39 to 40 weeks gestational age of fetus were studied. In second group, patients were admitted for induction of labor due to certain indication mainly pre-eclamptic, IUGR, and post maturity. Bishop score was done along with oxytocin sensitivity test in both groups at the time of admission with separation of membranes.

RESULTS

Bishop score is directly proportional to success of spontaneous labour and indirectly proportional to rate of failure of induction. OST is indirectly proportional to success rate of spontaneous labor and induction of labor.

CONCLUSION

Bishop score and oxytocin sensitivity test (OST) both should be used together in every case before induction of labor. Both procedures are simple, safe, and efficient.

Comparative Study of Clinical and Functional Outcome between Efficacy of PRP versus Injection Methyl Prednisolone Acetate in Chronic Shoulder Joint Pain

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INTRODUCTION

Chronic complex musculoskeletal injuries that are slow to heal pose challenges to physicians and researchers alike. Frozen shoulder is a common disorder which is characterized by pain and loss of movement. Peri-arthritis of the shoulder, therefore, is a collective term for a number of different lesions of the shoulder, the only common feature being pain and limitation of movement in the shoulder joint. The study was done to compare the management of peri-arthritis shoulder (frozen shoulder or adhesive capsulitis) by autologous platelet rich plasma (PRP) concentrate injections and methylprednisolone (MPS) injection and to assess the results of above procedure in terms of benefits and complications.

METHODS

A prospective study was conducted from October 2018 to February 2020. Group A patients were treated by PRP, group B was assigned to patients being treated by injection Methylprednisolone (MPS). Patients were followed up at one week post injection, then after one month and then at three months. A minimum of 25 cases each were studied.

RESULTS

In this study, excellent results were seen in five patients post PRP injection and in four patients post MPS. Poor outcome was seen in eight patients post PRP injection and in 12 patients post MPS. No complications were seen after PRP and MPS except local site pain and giddiness.

CONCLUSION

Both PRP and MPS showed equal efficacy in treating frozen shoulder. Injection Methylprednisolone has sudden onset of action and has better result at 1 week follow up post injection. But in long term (at 3 months follow up), PRP has better efficacy as compared to MPS.

A Comparative Study of Cognitive Dysfunction and It's Correlation with Brain Derived Neurotrophic Factor (BDNF) Level in Patients of Schizophrenia and Bipolar Affective Disorder

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INTRODUCTION

Schizophrenia and bipolar affective disorder (BPAD) are major mental health problems in India. The aim of this study was to assess the relationship between cognitive dysfunction and brain derived neurotrophic factor (BDNF) level in schizophrenia and BPAD in comparison with controls.

METHODS

A total of 20 schizophrenia patients, 20 BPAD patients, and 20 healthy controls (HC) were enrolled in this study. Cognitive functions of all subjects were assessed by Trail making test (TMT), PGI-BBD memory scale, and stroop test. The serum levels of BDNF were measured by ELISA.

RESULTS

Cognitive functions were severely impaired in schizophrenia and BPAD group in comparison to control group. The mean value of total score for memory impairment, TMT A and B score, and stroop test score was significantly higher in the BPAD and schizophrenia group in comparison to the control group ($p < 0.01$). The mean serum level of BDNF was not significantly different among the groups. It was 0.20 ± 0.20 , 0.13 ± 0.05 , and 0.15 ± 0.06 ng/ml for BPAD, schizophrenia, and control group patients, respectively. In the schizophrenic patients, the serum BDNF level significantly but negatively correlated with mental balance and verbal retention for similar pairs.

CONCLUSION

The present study suggests that mean serum BDNF level was almost similar in schizophrenia, BPAD, and control. Cognitive functions were severely impaired in case of schizophrenia and BPAD in comparison to control. Cognitive dysfunctions were not significantly correlated with serum BDNF level.

Comparative Phenomenology of Major Depressive Disorder Among Young, Middle, and Old Age Group Adults

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INTRODUCTION

Depression is the most common mental health problem affecting individuals of all age groups and cultures. This study aimed to observe the differences in phenomenology of major depressive disorder (MDD) among various adult age groups for the purpose of identifying depressive disorder as early as possible.

METHODS

A total of 122 patients were selected using simple convenient sampling from the outpatient department. Depression was diagnosed using the diagnostic and statistical manual of mental disorder 5 diagnostic criteria for major depressive disorder. HAMD 21 was used for assessment and comparison of phenomenology of depression between three age groups. Mini mental state examination (MMSE) was used to rule out dementia in elderly patients.

RESULTS

It was found that there was a modest difference in the phenomenology of major depressive disorder among young, middle, and old age group adults. Young age group participants were having severity of depressed mood, feeling of guilt, and weight loss symptoms as compared to middle and old age group participants. Also, sleep (intermittent) symptoms were found to be more disturbed in the middle age group as compared to young age group and old age group. These differences were statistically significant.

CONCLUSION

The results signified that as the age increases, the reluctance to recognize depressive cognition also increases which in turn may decrease the help seeking behavior.

A Prospective Follow-up Study of Evaluation of Shoulder Function after Antegrade Interlocking Humerus Nailing in Humerus Shaft Fractures

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INTRODUCTION

This study was conducted to assess the shoulder function after antegrade interlocking humerus nailing in humerus shaft fractures, duration of union, and immediate and late complications of this fixation.

METHODS

In this prospective study, 40 cases with humerus shaft fractures were treated with antegrade interlocking humerus nailing and followed up for functional outcomes and complications.

RESULTS

In the present study, 40 cases were studied. The age of patients ranged from 18 to 57 years. The assessment of shoulder function was made according to Constant score. Out of 40 patients, shoulder function was excellent in 35 cases (87.5%), very good in 3 cases (7.5%), and fair in 1 case (2.5%).

CONCLUSION

We concluded that locked intramedullary nailing is a novel treatment option for diaphyseal fractures of the humerus. By making correct entry, repairing rotator cuff, placing the nail inside proximal end, and proper physiotherapy shoulder function outcome can be improved to excellent in cases of humerus diaphyseal fractures treated with antegrade interlocking humerus nailing.

Clinical Significance of Ultrasonic Placental Grading During Third Trimester in Hypertensive Disorders in Pregnancy and its Correlation with Fetal Outcome

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INTRODUCTION

Hypertension is one of the common complications in pregnancy and contributes significantly to maternal and perinatal morbidity and mortality. The aim of the present study was to study placental grading by ultrasonography in pregnancy complicated with hypertension and normotensive gravidas and to compare the foetal outcome regarding placental grading and its correlation pattern of placental grade distribution, type of delivery, foetal distress, birth asphyxia, foetal maturity, and perinatal morbidity and mortality.

METHODS

The present study was conducted for a period of 12 months, which included 200 patients who attended OPD. Inclusion criteria were hypertensive pregnant women with BP >140/90 mmHg. Exclusion criteria were pregnancy associated with other medical disorders, twin gestation, renal and cardiovascular disease, and diabetes mellitus.

RESULTS

There were 100 pregnant women with pre-eclampsia in the study group. The most common age group in study group was 22-23 years. The grade III placenta was found in early third trimester in study group. Caesarean delivery was the commoner mode of delivery in grade III placenta. In foetal outcome, small for gestational age was more among grade III placenta. Foetal distress, birth asphyxia, perinatal mortality, and morbidity were more among grade III placenta among the study group.

CONCLUSION

Foetal complications were significantly more in study group compared to control group. Ultrasound placental grade III was statistically significant in correlating with foetal complications like foetal distress, birth asphyxia, perinatal morbidity, and mortality.

A Prospective Comparative Study between Results of Orthogonal Versus Parallel Plating in Treatment of Distal Humerus Fracture in Adults

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INTRODUCTION

Fractures of the distal humerus accounts for 2-6% of all fractures. We report the functional outcome of a series of distal humerus fractures with articular extension surgically treated with locking compression plates applied orthogonally and parallelly. The aim of the study was to evaluate results of comparison of orthogonal v/s parallel plating in fracture of distal humerus in adults and also to evaluate advantages, disadvantages, and complications.

METHODS

All patients of either gender, with type C distal humeral fractures were included in the study and divided into two groups. Group 1 included patients operated by orthogonal plating and group 2 included patients operated by parallel plating. Each group consisted of 50 patients. Functional outcomes were assessed by Mayo elbow performance score system (MEPS).

RESULTS

Out of total 100 patients, 64 were male and 36 female. Group 1 had C1- 24% cases, C2- 46% cases, and C3- 12% cases and group 2 had C1-36% cases, C2-44% cases, and C3-18% cases. Results were excellent in 62 cases, good in 16 cases, fair in 14 cases, and poor in 10 patients. Complications encountered in this study were paraesthesia along ulnar nerve distribution (20 cases), infection (superficial treated with antibiotics, 14 cases), stiffness (24 cases), heterotopic ossification (11 cases), hard ware prominence (14 cases), delayed union (4 cases), and non-union and implant failure (1 case).

CONCLUSION

Complications were minimal and outcomes were satisfactory in patients with type C distal humerus fractures who underwent bicolonn locking compression plates fixation applied orthogonally and parallelly by posterior approach.

A Comparative Study to Assess the Expressed Emotion and Caregiver Burden among Persons with Schizophrenia and Bipolar Affective Disorder and their Caregivers

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INTRODUCTION

Expressed emotion (EE) refers to a caregiver's attitude towards a person with mental disorder as reflected by comments about the patient made to an interviewer. This study was conducted to assess and compare the expressed emotions and caregiver burden in persons with schizophrenia, bipolar affective disorder (BPAD), and their caregivers and its association with socio-demographic and clinical variables.

METHODS

A total of 30 persons with schizophrenia and thirty persons with BPAD accompanying their caregivers who visited the outpatient of Psychiatry department were recruited in the study after application of selection criteria and their socio-demographic and clinical details were collected.

RESULTS

Perceived criticism was higher in persons of schizophrenia but failed to reach a level of significance whereas emotional involvement and perceived warmth were higher in BPAD persons and were statistically significant. In 63.33% caregivers of schizophrenia persons and 53.33% caregivers of BPAD persons, high expressed emotion was observed. Caregiver burden was found significantly higher in caregivers of schizophrenia persons. High expressed emotion was perceived by caregivers of BPAD persons with longer duration of illness. Tendency of abuse by caregivers of BPAD persons to their patients increases with longer duration of illness and early age of onset of illness.

CONCLUSION

Higher criticism was perceived by schizophrenia persons whereas emotional involvement and perceived warmth were higher in persons with BPAD. Caregivers of schizophrenia persons perceive higher expressed emotion. Burden of care was found more in schizophrenia caregivers.

Prospective Clinical Study of Haematological, Histopathological, and Molecular Markers Associated with Ruptured Tubal Ectopic Pregnancy

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INTRODUCTION

Ectopic pregnancy (EP) is a complication of pregnancy which occurs when a blastocyst implants somewhere other than the endometrial lining of the uterine cavity. The present study aimed to evaluate the diagnostic performance of serum inflammatory markers like CRP, LC, ESR, NLR, and MPV in ruptured tubal EP. This study also aimed to find out the changes in histoarchitecture and immunohistochemistry in ruptured tubal EP with a special emphasis on salivary biomarker.

METHODS

It was a prospective clinical study done for a period of 18 months. All clinical suspects of tubal EP irrespective of ruptured or unruptured status were subjected to study. Suspects who turned out to be unruptured ectopic were excluded post operatively. Other forms of ectopic were also excluded from the study.

RESULTS

Among 149 subjects, the most common age group prone for tubal rupture EP was 21-25 years. It was common among nulliparous women. The most common risk factor was previous surgery. The most common contraceptive failure being usage of IUCD. Haematological parameters like NLR, MPV, CRP, and ESR and LC can serve as clinical parameters for the detection of ruptured ectopic. The histological analysis of fallopian tube revealed deterioration of mucosal folds, deciliation, hematosalpinx, and hydrosalpinx formation. The expression of *Bcl-2* and Desmin in the tubal pregnancy tissues provides evidence as biomarker for EP. In saliva, complement C4-b, LDH-B chain, and cystatin-A were associated with ruptured EP.

CONCLUSION

Biomarkers aid in the diagnosis of ruptured EP. Further validation and specific research for marker testing is required for their independent use in clinical care.

A Prospective Randomized Comparative Study of Rapidly Absorbing Polyglactin 910 versus Chromic Catgut for Episiotomy Repair

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INTRODUCTION

Beside maternal benefits, episiotomy has some postpartum morbidity also which depend on many factors; out of these, one important factor is the suture material used in episiotomy repair. The aim of this study was to compare suture material rapidly absorbing polyglactin 910 (RAPG 910) and chromic catgut for use in episiotomy repair.

METHODS

A hospital based prospective, randomized, comparative study was conducted from July 2019 to June 2020. Total 300 cases were enrolled and divided into two study groups of 150 each. In group A, RAPG 910 and in group B, chromic catgut was used in episiotomy repair. Cases were closely observed and data obtained was systematically analyzed.

RESULTS

Mean age of patients was 23.2 ± 2.6 years in group A and 23.4 ± 2.7 years in group B. In first 48 hours, majority of cases required analgesic for pain relief. At 7-10 day, 41.3% cases in group A and 64.7% cases in group B required analgesic for pain relief ($p < 0.05$). At day 7-10, 2.7% cases in group A and 8.7% cases in group B had infected wound ($p < 0.05$). In group A, 0.7% cases and in group B, 1.3% cases had complaint of wound gaping ($p > 0.05$). Suture material of group B had longer absorption time. At 3 months, 15.5% cases in group A and 30% cases in group B had complaint of dyspareunia.

CONCLUSION

Suture material RAPG-910 was found associated with lesser incidence of post-episiotomy pain, need of analgesics, wound infection, and dyspareunia and better absorption rate; hence, it can be preferred over chromic catgut in episiotomy repair.

A Comparative Study of Type and Severity of Aggression among the Patients of Schizophrenia, Bipolar Disorder, and Acute and Transient Psychotic Disorders

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INTRODUCTION

There is a modest but consistent association between aggressive behavior and psychiatric illness. The purpose of the study was to compare the type and severity of aggression among the patients of schizophrenia, bipolar disorders (manic phase), and acute and transient psychotic disorder (ATPD) and to predict the risk of violence towards health staff working in psychiatric facilities.

METHODS

This was a cross sectional, observational study. A total of 230 patients were selected, out of which 190 were recruited for the study after applying inclusion and exclusion criteria and were divided into three groups. Results were analyzed using ANOVA and SPSS software.

RESULTS

Type and severity of aggression among groups of verbal aggression was found to be more in ATPD than bipolar affective disorder (BPAD) mania and schizophrenia. Auto aggression was found to be more in ATPD as compared to BPAD mania and schizophrenia. Aggression against property was found to be more in BPAD mania as compared to ATPD and schizophrenia. The physical aggression was found to be less in ATPD as compared to schizophrenia and BPAD mania. No significant difference was found in the total mean score of severity of aggression among three disorders.

CONCLUSION

The mean score of physical aggression was found more in male patients in schizophrenia as compared to BPAD mania and ATPD. The mean score of all types of aggression had significant differences in female patients in all three groups.

Study of Fracture Distal End Radius in Adults Treated with Close Reduction and Percutaneous K-wire Fixation

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INTRODUCTION

The purpose of this study was to analyse the efficacy of close reduction and internal fixation with K-wire of distal end of radius fracture in adults with special emphasis on technical difficulties and complications.

METHODS

A prospective observational hospital-based study was conducted on 50 patients with distal radius fracture in age group 18-75 years, admitted in Orthopaedic department.

RESULTS

The average age of the study patients was 44.98 years with no predominance of either left or right side. There were nine cases of pin site infection, two cases of pin loosening, and one case of reflex sympathetic dystrophy. At final follow-up by 'The Gartland and Werley criteria for functional outcome', 36 (72%) patients had excellent result, 11 (22%) had good result, 2 (4%) had fair result, and 1 (2%) had poor result. The anatomical evaluation by Sarmiento's criteria showed 30 (60%) patients with excellent result, 15 (30%) patients with good result, and 5 (10%) with a fair result.

CONCLUSION

Closed reduction and percutaneous pinning for reducible, unstable distal radius fractures have shown to achieve good anatomical and functional outcome. The complications arising from the procedure were within acceptable limits. The morbidities arising from prolonged anaesthesia were also avoided. Also the financial impact to the patient was

A Comparative Study of Shock Index with Conventional Vital Signs as a Predictor of Outcome in Post-partum Hemorrhage in Tertiary Care Hospital in North West Rajasthan

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INTRODUCTION

The present study was conducted to evaluate the shock index (SI) and measure conventional vital signs in first hour after delivery in women with post-partum hemorrhage (PPH).

METHODS

The study group comprised of 100 females. The inclusion criteria were delivered women ≥ 28 weeks seen during the first hour of PPH with visual blood loss > 500 ml in normal vaginal delivery and > 1000 ml during LSCS. Women presenting after first hour of hemorrhage, with hypertensive disorders, preexisting organ dysfunction, known heart disease, severe anemia (Hb < 7 gm), thrombocytopenia, coagulation disorders, antepartum hemorrhage (placenta previa, morbidly adherent placenta, abruptio placenta), and infection (chorioamnionitis) were excluded.

RESULTS

It was found that a cut off shock index at 1.3 was 90%, 80%, and 60% sensitive and 94.4%, 100%, 94.44%, 93.33%, and 84.4% specific for predicting ICU admission, death outcome, MODS, DIC, and use of vasopressor, respectively. It was found that ROC of shock index for MODS was 0.797, DIC was 0.792, vasopressors was 0.64, cervical/vaginal tear repair was 0.671, balloon tamponade was 0.661, compression sutures was 0.669, IIA ligation was 0.67, hysterectomy was 0.659, ICU admission was 0.844, and death outcome was 0.992. There was statistically significant difference (p value < 0.05).

CONCLUSION

Shock index is a simple, non-invasive, and sensitive tool which can be used for triage of the patients with PPH.

A Comparative Study of Low Dose Magnesium Sulphate Regimen versus Standard Regimen in Severe Pre-eclampsia and Eclampsia

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INTRODUCTION

Average weight of Indian women is less than the western women due to which lower dose of Magnesium sulphate can be used in treatment of eclampsia. The aim of the study was to compare the efficacy of low dose Magnesium sulphate regimen with Pritchard regimen, in the control of convulsion in eclampsia and also to compare neonatal and maternal outcomes.

METHODS

This comparative non-randomized study was conducted on severe pre-eclampsia and eclampsia cases admitted during April 2019 to October 2020. Group A included 120 control subjects who were treated by low dose regimen and group B included 120 cases treated by Pritchard regimen. The recurrence of convulsion, toxicity profile, and maternal and fetal outcome were studied.

RESULTS

Recurrence of convulsion after starting the regimen was lower in both the Magnesium sulphate regimen groups. Only 14 cases (11.6%) in the Pritchard group had recurrence of fits, whereas 11 cases (9.77%) in the A group had recurrence. 93.3% cases in both groups delivered within 18 hours of admission. 65% (78 cases) in the Pritchard group and 68.34% (82 cases) in the A group delivered vaginally. 30 cases (25%) in the Pritchard group and 28 cases (23.3%) in the A group were delivered by LSCS. 12 babies (10%) in the Pritchard group and 8 babies (6.67%) in the A group were stillborn. Maternal morbidity was 14.97% in Pritchard regimen and 12.49% in A group. The perinatal mortality rate doesn't differ in both the groups.

CONCLUSION

Low dose Magnesium sulphate regimen was equally effective in the control of convulsions in eclampsia and can be safely used in Indian women.

A Study of Pre-induction Trans-vaginal Ultrasonographic Cervical Length and its Comparison with Bishop Score in Predicting Successful Labor Induction

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INTRODUCTION

The condition of cervix or favorability is important for successful induction of labor. Assessment of cervix has been used as a predictor of successful vaginal delivery. The present study aimed to compare the predictive value of trans vaginal ultra-sonographic measurement of cervical length versus Bishop score prior to induction of labor in predicting the mode of delivery and maternal and fetal outcome.

METHODS

This prospective observational study was conducted in the Department of Obstetrics and Gynaecology in the year 2020. The study group included 100 pregnant women in which induction of labor was performed at 37-42 weeks of gestation. Before induction of labor, cervical length was measured by trans vaginal ultrasound scanner and digital examination of the cervix for consistency, effacement, dilatation, position, and station of the presenting part as described in Bishop Score were performed and noted on a performa.

RESULTS

Bishop score appears to be a better predictor than the cervical length with sensitivity of 1.00 and a specificity of 0.12 as compared to 0.52 and 1.00, respectively. In the receiver operating characteristic curves, the cut-off point for the prediction of successful induction taken was 2.6 cm cervical length and >4 for the Bishop score ($p < 0.05$).

CONCLUSION

Trans vaginal sonographic cervical length could be used as an alternative to Bishop score for prediction of successful labor induction in the sitting where the appropriate equipment and expertise are available.

Comparative Assessment of Conventional Protocol and a New Protocol of Dexmedetomidine Administration for Controlled Hypotension in FESS under General Anaesthesia: A Prospective Double Blinded Randomised Control Study

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INTRODUCTION

Controlled hypotension reduces blood loss during surgery in FESS. The aim of this study was to compare the effectiveness of the conventional and a new protocol of Dexmedetomidine administration for achieving induced hypotension.

METHODS

A total of 40 patients of ASA grade I-II scheduled for FESS were randomly assigned into two groups. DEX group received Dexmedetomidine at $1 \mu\text{g}/\text{kg}$, 10 min before surgical incision followed by IV infusion at $0.2-0.7 \mu\text{g}/\text{kg}/\text{hour}$, DEXNEW group received Dexmedetomidine at $1 \mu\text{g}/\text{kg}$, 10 min before surgical incision, followed by IV to check work doses of $1/4^{\text{th}}$ of the loading dose to maintain MAP between 65 and 70 mmHg. Mean arterial pressure (MAP), heart rate, emergence time, recovery from anaesthesia, sedation score, and analgesic consumption were recorded.

RESULTS

There was a significant reduction in MAP at 15 min, 30 min, 45 min, and 60 min after surgical incision in comparison with the pre-operative MAP in both the groups. There was a significant decrease in the total amount of consumed Dexmedetomidine in the DEXNEW group ($62.70 \mu\text{g}$) compared with the DEX group ($91.75 \mu\text{g}$). Emergence time was significantly shorter in the DEXNEW group (5.45 min) as compared with the DEX group (9.10 min).

CONCLUSION

New protocol is safe and effective for controlled hypotension, providing an ideal surgical field during FESS.

Ondansetron versus Ketamine to Alleviate Propofol Injection Pain: A Prospective Randomized and Double Blind Study

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INTRODUCTION

The present study aimed to compare the effect of Ondansetron and Ketamine in decreasing the pain after Propofol injection and hemodynamic changes after pre-treatment.

METHODS

This was a prospective randomized double blind study conducted for one year period. A total of 100 patients aged 18 to 60 years belonging to either sex, ASA grade I and II and have undergone elective surgeries under general anaesthesia were divided into two groups i.e. group A (Ondansetron, 4 mg) and B (Ketamine, 0.5 mg/kg). No pre-medication other than injection Glycopyrrolate and injection Fentanyl followed by the study drugs was administered. Patients were asked to fast 8 hours preoperatively. The study drugs were diluted upto 10 ml with normal saline by an independent anaesthesiologist not involved in the study and were given as single IV bolus.

RESULTS

Mean age in group A and B was 40.28 ± 6.40 and 41.54 ± 8.87 , respectively. Mean visual analog scale (VAS) in group A and B at 5 seconds was 0.62 ± 0.49 and 0 ($p < 0.001$), at 10 seconds 1.20 ± 0.40 and 0.18 ± 0.39 ($p < 0.001$), at 15 seconds 1.20 ± 0.40 and 0.18 ± 0.39 ($p < 0.001$), at 25 second 0.80 ± 0.40 and 0 ($p < 0.001$), and at 30 second was 0.49 ± 0.51 and 0 ($p < 0.001$), respectively.

CONCLUSION

In the present study, group with pre-treatment of Ketamine 0.5 mg/kg not only remained hemodynamically stable (fall in BP was less) but also abolished pain due to Propofol more effectively than group A.

Comparison of Analgesic Efficacy of Dexmedetomidine as an Adjuvant to Ropivacaine in USG Guided Supraclavicular Brachial Plexus Block when Administered Perineurally or Intravenously in Adult Patients Undergoing Upper Limb Surgery

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INTRODUCTION

Different adjuvants have been added with local anesthetics in blocks to improve the quality and to prolong analgesia. The aim of this study was to compare the onset and duration of sensory block and postoperative analgesia by adding Dexmedetomidine perineurally or intravenously to Ropivacaine in supra clavicular brachial plexus block in patients undergoing upper limb surgery.

METHODS

Total 105 patients, ASA I and II, aged 18 to 60 years scheduled for elective upper limb surgeries were randomly allocated into three groups. All the three groups received 0.9% NS 2 ml perineurally with 30 ml NS IV over 1 hour. In addition to this, group RC received 0.5% Ropivacaine 28 ml, group RDexIV received 0.5% Ropivacaine 28 ml, with IV Dexmedetomidine $1 \mu\text{g}/\text{kg}$, and group RDexP received 0.5% Ropivacaine 28 ml plus Dexmedetomidine $1 \mu\text{g}/\text{kg}$ for supra clavicular brachial block using USG guidance. The onset and duration of sensory block and duration of analgesia were noted.

RESULTS

The onset of sensory block was faster in group RDexP (8 ± 1.65 min) compared to group RDexIV (12.11 ± 1.99 min) and group RC (17 ± 3.25 min) ($p < 0.0001$). The duration of analgesia was prolonged in group RDexP (807.77 ± 107.58 min) than group RDexIV (752.42 ± 113.60 min) and group RC group (510.74 ± 59.17 min) ($p < 0.0001$).

CONCLUSION

Perineural Dexmedetomidine with Ropivacaine in supra-clavicular brachial plexus block hasten the onset and also prolong the duration of sensory block and analgesia as compared to IV Dexmedetomidine.

A Comparative Study between Oral Clonidine and Oral Pregabalin on Perioperative Haemodynamic Response and Post Operative Analgesia in Patients undergoing Laparoscopic Cholecystectomy under General Anaesthesia

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INTRODUCTION

Airway instrumentation by direct laryngoscopy and tracheal manipulation are powerful noxious stimuli causing adverse hemodynamic responses. The study aimed to compare the effect of oral Pregabalin and Clonidine on cardiovascular response from laryngoscopy and endotracheal intubation and also to find the time for rescue analgesia in patients undergoing laparoscopic cholecystectomy.

METHODS

In this prospective randomized double blind study, sixty patients aged 18-60 years of ASA physical status I and II were randomly allocated into two groups. Group C (n = 30) received oral Clonidine 200 mcg and group P (n = 30) received oral Pregabalin 150 mg as oral premedication. The heart rate, systolic blood pressure, diastolic blood pressure, and mean arterial pressure were recorded serially. Level of sedation, post-operative analgesia, and any adverse effects was also noted.

RESULTS

Clonidine showed significantly better attenuation of stress response to laryngoscopy and intubation than Pregabalin. The level of sedation and mean time for rescue analgesia was higher in Pregabalin group and side effect profile were comparable in two groups ($p > 0.05$).

CONCLUSION

Attenuation of hemodynamic response of laryngoscopy and intubation was better with clonidine whereas Pregabalin was a better analgesic.

A Study of Serum Electrolytes in Patients of Ischemic and Hemorrhagic Stroke

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INTRODUCTION

Stroke is one of the leading causes of death and disability in India. Disorders of sodium and potassium concentration are the commonest electrolyte abnormalities found in cerebrovascular accident (CVA) and may contribute to mortality unless corrected urgently.

METHODS

This cross-sectional study was conducted after taking an informed consent from patients or their relatives on 100 patients of acute stroke over a period of two years.

RESULTS

Nearly 37% of all stroke patients had serum sodium imbalance and 33% had serum potassium imbalance. Hyponatremia (43% cases) and hypokalaemia (41% cases) was more common in haemorrhagic stroke patients as compared to ischemic stroke cases (18% cases). Deaths were more in patients with hyponatremia (50% deaths) and hypokalaemia (62% deaths) in ischemic stroke cases as compared to haemorrhagic stroke cases (25% and 30% deaths, respectively). Deaths were significantly higher in patients with hypocalcaemia (55% deaths) in haemorrhagic stroke cases while no such association was observed in ischemic stroke cases (30% deaths). There was no significant association of serum Cl^- , Mg^{+2} , and P levels with outcome of stroke patients.

CONCLUSION

In haemorrhagic stroke, the incidence of electrolytes imbalance was more common in haemorrhagic stroke than ischaemic stroke and were mostly hyponatraemia and hypokalaemia and deaths were more in patients with hyponatremia and hypokalaemia in ischemic stroke cases.

Analgesic Efficacy of Dexamethasone as an Adjuvant to Caudal Levobupivacaine in Children Undergoing Infraumbilical Surgeries: A Prospective Randomized Double Blind Study

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INTRODUCTION

Caudal epidural blockade remains the cornerstone of paediatric anaesthesia. The study aimed to evaluate the analgesic efficacy of Dexamethasone as an adjuvant to caudal Levobupivacaine in children undergoing infraumbilical surgeries.

METHODS

A total of 80 patients were randomized into 2 groups. Group C (n = 40) received caudal 0.2% Levobupivacaine 1 ml/kg with 1 ml NS and group D (n=40) received caudal 0.2% Levobupivacaine 1 ml/kg with 0.1 mg/kg Dexamethasone in 1 ml NS. FLACC Score was used to assess pain post-operatively. Patients were monitored for intra-operative hemodynamics, duration of analgesia, total dose and number of rescue analgesic consumption, and any side effects in first 24 hours postoperatively. Quantitative and qualitative data was analysed using student's t test and chi square test, respectively.

RESULTS

Duration of analgesia was significantly longer in group D (14.70 ± 1.66 hours) as compared to group C (7.85 ± 1.13 hours). Also, post-operative total number of rescue analgesic doses was lower in group D (2.08 ± 0.47) as compared to group C (3.12 ± 0.51) ($p < 0.05$) and total dose of rescue analgesic requirement was 363.1 ± 128.2 mg in group D and 567.1 ± 137.4 mg in group C. FLACC score was less in group D as compared to group C at 4, 6, 8, and 10 hours post-operative period.

CONCLUSION

Addition of 0.1mg/kg of Dexamethasone to caudal 0.2% Levobupivacaine 1ml/kg in children undergoing infraumbilical surgeries under general anaesthesia provides effective and longer duration of analgesia and reduces 24 hours rescue analgesia consumption without any side effects.

A Comparative Study of Effect of Intravenous Ondansetron in Attenuation of Spinal Induced Hypotension in Caesarean Section: A Randomised Controlled Study

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INTRODUCTION

Spinal induced hypotension occurs due to sympathetic blockade, aortocaval compression, and Bezold Jarisch reflex (BJR). BJR can be inhibited by 5-HT₃ antagonist like Ondansetron. The aim of the study was to study the effect of intravenous (IV) Ondansetron on spinal induced hypotension in elective caesarean section and to study the requirement of number of bolus doses of vasopressor for perioperative nausea, vomiting, and shivering.

METHODS

In the present study, 120 parturients were included and randomly divided into 2 groups. Parturients in Ondansetron group were given IV Ondansetron 4 mg diluted with 2 ml normal saline 5 minutes before giving spinal anaesthesia and those in normal saline (NS) group were given 5 ml normal saline. Intra-operatively, patients were monitored for hemodynamics, vasopressor requirement, and side effects. Student t test and Chi square tests were applied.

RESULTS

The changes in HR, SBP, DBP, MAP were all highly significant ($p < 0.001$) when compared within the group with preoperative values, in both Ondansetron and NS group. When compared between the group, fall in SBP and MAP were more in NS group than in Ondansetron group which was statistically highly significant ($p < 0.001$) whereas in DBP no significant difference was seen. The requirement of vasopressor was more in NS group than Ondansetron group which was statistically highly significant ($p < 0.001$).

CONCLUSION

IV Ondansetron given before spinal anaesthesia reduces spinal hypotension and requirement of vasopressors.

Evaluation of Prevalence and its Association with Outcome in Cardiac Dysfunction and Acute Pancreatitis Patients

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INTRODUCTION

Acute pancreatitis (AP) is an acute inflammatory process of the pancreas with variable involvement of cardiovascular and pulmonary system. Because of the frequent emergency, and multimodality presentation, this study has been planned to observe the prevalence of cardiac dysfunction and its association with outcome in acute pancreatitis in our hospital.

METHODS

After taking informed consent, eligible acute pancreatitis patients were enrolled according to the inclusion and exclusion criteria. Cardiovascular function was assessed by ECG, CK-MB, and 2D Echo at admission.

RESULTS

Patients with CTSI ≥ 7 (severe pancreatitis) had significantly higher CRP score of 125.29 ± 6.84 mg/dl. Positive serum CRP value was present with sensitivity 100% and specificity 16.13%. The mean CK-MB was found to be 33.52 ± 19.51 IU/L and in patients with CTSI ≥ 7 (severe pancreatitis), it was 52.57 ± 26.97 IU/l. In case of severe pancreatitis, positive CK-MB value was present with sensitivity 85.71% and specificity 51.61%. Abnormal ECG changes were seen in 42% wherein ST depression, QT prolongation, ST elevation, and T wave inversion was found in 42%, 33%, 21%, and 21% cases, respectively. In case of severe pancreatitis, abnormal ECG findings were present with sensitivity 100% and specificity 62.37%.

CONCLUSION

There is an association of high serum CRP and CK-MB levels with severe pancreatitis with high sensitivity. Association of 2D ECHO abnormalities with severe pancreatitis was highly specific.

Comparison of Two Non-Channeled Video-Laryngoscopes (McGrath Mac and King Vision) for Endotracheal Intubation in Adults: A Prospective Randomized Study

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INTRODUCTION

In contrast to direct laryngoscopy, Video-laryngoscope (VL) utilizes indirect laryngoscopy via its camera, thus eliminating the need for a direct line of sight to visualize airway structures. This study aimed to compare two non-channeled VLs viz McGrath MAC (MM) and King Vision (KV) for endotracheal intubation in adult patients in operating room setting.

METHODS

A total of 74 patients, aged 20-60 years, of ASA grade I or II, undergoing elective surgeries under general anesthesia, were enrolled and randomized into 2 groups. Thirty-seven patients were intubated using MM and 37 were intubated using KV VL. The primary aim was to compare success rate of intubation. Secondly, we compared the time to visualize glottis, time to intubation, number of attempts, optimal external laryngeal manipulation (OELM) required, C/L grade, POGO score, degree of difficulty, and complications.

RESULTS

Success rate of intubation was 100% in both the groups but the mean time to visualize glottis (5.94 versus 5.13 seconds) and total time for intubation (19.10 versus 17.32 seconds) was significantly more with KV. There were insignificant differences in hemodynamic parameters, ease of insertion, OELM requirement, C/L grade, POGO score, and number of attempts.

CONCLUSION

It takes longer to intubate with KV than MM. All other parameters are comparable. The lesser intubation time with MM can be utilized further in emergency scenarios.

A Prospective Study of Effect of Cataract Surgery on Macular Thickness and Visual Outcomes in Diabetic Patients

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INTRODUCTION

Macular oedema is one of the most common causes of visual loss after uncomplicated cataract surgery. Diabetes has been associated with an increased incidence of post-operative macular oedema. The aim of this study was to find the incidence of changes in macular thickness and visual outcome in diabetic patients undergoing cataract surgery.

METHODS

It was a prospective study done on 80 patients with diagnosed diabetes mellitus undergoing cataract surgery at M. B. Hospital, Udaipur.

RESULTS

Out of 80 patients, 54 patients (67.5%) didn't have any diabetic retinopathy change. Twenty two (27.5%) showed mild to moderate non-proliferative diabetic retinopathy (NPDR), and four (5%) showed proliferative diabetic retinopathy (PDR). After surgery, 100% patients showed improvement with visual acuity 6/24 or better. In patients having diabetic retinopathy (DR), 15.5% achieved 6/6, 38.5% achieved 6/9, 38.5% achieved 6/12, 1.3% achieved 6/18, and 1.3% achieved 6/24. There was an increase in the foveal thick-ness from pre-operatively $217.43 \pm 27.287 \mu\text{m}$ to $224.93 \pm 26.186 \mu\text{m}$ at post-operative day 7 and $227.99 \pm 24.753 \mu\text{m}$ at post-operative 1 month and decreased at 3rd month to $224.66 \pm 24.272 \mu\text{m}$. Central macular thickness increased following surgery and reached its peak at 6 weeks. 20% patient of diabetic retinopathy and 5% patients without DR showed an increase in macular thickness more than 10% at 6 weeks and remained same at 3 months.

CONCLUSION

The result of this study suggests that post operative changes in macular thickness and visual outcome depends significantly on the diabetic status, duration, and retinopathy levels.

A Comparative Study to Evaluate the Efficacy of Intraperitoneal Instillation of Levobupivacaine with or without Clonidine for Postoperative Analgesia in Patients Undergoing Laparoscopic Cholecystectomy

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INTRODUCTION

The use of local anaesthetic with adjuvants for post-operative pain management after laparoscopic cholecystectomy provides adequate analgesia without considerable side effects. The aim of this study was to compare the analgesic efficacy and safety of Levobupivacaine alone or with Clonidine as an adjuvant given through intraperitoneal instillation in laparoscopic cholecystectomy under general anaesthesia.

METHODS

In this prospective randomized double blind study, 100 patients, aged 18-60 years of ASA physical status I and II were randomly allocated into two groups. Group L (n = 50) received 0.25% Levobupivacaine 28 ml + 2 ml normal saline while Group LC (n = 50) received 0.25% Levobupivacaine 28 ml + Clonidine 0.75 $\mu\text{g}/\text{kg}$ with normal saline (2 ml) as intraperitoneal instillation before removing trocar. The duration of analgesia, total amount of rescue analgesic consumed in 24 h, haemodynamics, and side effects were noted.

RESULTS

Duration of analgesia was significantly prolonged in group LC ($744.10 \pm 96.72 \text{ min}$) as compared to group L ($525.20 \pm 67.91 \text{ min}$). The total dose of rescue analgesic consumption in 24 hours was lesser in group LC as compared to group L ($p < 0.05$). Haemodynamics and side effect profile were comparable in two groups.

CONCLUSION

Clonidine as an adjuvant to Levobupivacaine for intraperitoneal instillation was found to be safe and effective for post-operative analgesia in laparoscopic cholecystectomy.

An Assessment on Effects of Pulmonary Rehabilitation on Pulmonary Function Measures, Exercise Capacity, Quality of Life, and Psychosocial Parameters of Patients with Chronic Obstructive Pulmonary Disease

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INTRODUCTION

Pulmonary rehabilitation (PR) includes patient assessment, exercise training, self-management education, and psychosocial support. The aim of the study was to assess impact of PR on various outcome parameters like perception of dyspnea, exercise tolerance, functional capacity, quality of life, psychosocial, and nutritional aspect of stable COPD patient.

METHODS

This observational study included 50 outpatients with COPD who completed a 24-week PR Program (PRP), three times a week. All were assessed before and after PRP using the six-minute walk test (6 MWT), the modified Medical Research Council (mMRC) dyspnea index, BODE index, CAT score, SGRQ-C score, HADS anxiety, and depression score.

RESULTS

After 24 weeks of PR training there was an improvement of lung function measured by FEV1 (45.24 ± 12.18 to 55.34 ± 12.53 ; p -value < 0.001), improvement in dyspnea measured by mMRC score (1.92 ± 0.75 to 0.82 ± 0.77 ; p -value < 0.001), significant increase in functional capacity measured by 6MWT (292.10 ± 33.21 to 326.3 ± 26.10 ; p -value < 0.001), improved quality of life measured by decrease in CAT score (16.26 ± 4.81 to 13.42 ± 3.87 ; p -value < 0.001) and SGRQ-C score (39.42 ± 7.77 to 19.80 ± 5.34 ; p -value < 0.001), significant improvement in psychosocial aspect measured by HADS anxiety score (7.68 ± 1.33 to 5.32 ± 1.27 ; p -value < 0.001), and HADS depression score (5.12 ± 1.25 to 13.42 ± 1.35 ; p -value < 0.001).

CONCLUSION

Pharmacological management with PR and multidisciplinary approach is important for overall improvement in quality of life of COPD patients.

Comparative Study of Helical Blade PFN (PFNA2) and Screw PFN in Treatment of Inter-trochanteric Femur Fractures

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INTRODUCTION

Conventional conservative management for treatment of inter-trochanteric femur fractures has been replaced by surgical management due to better fracture reduction, early mobilization, and better functionality. Intra-medullary (IM) devices like screw PFN and PFNA2 are gaining popularity over extra-medullary implants like DHS due to less exposure, less blood loss, and short surgery duration. The objective of the study was to assess and compare the results of screw PFN and PFNA2 in management of inter-trochanteric femur fracture and to study and compare the results in terms of functional outcome, radiological outcome, surgery time, complications etc.

METHODS

This prospective study was undertaken at Government Medical College. Patients of both sex, of all ages with inter-trochanteric femur fracture, meeting inclusion and exclusion criteria during the study period from May 2018 to November 2020 were included. Total 50 (25 cases by PFNA2 and 25 cases by PFN) patients were evaluated clinically, radiologically, and functionally and were followed up at 2, 4, 6, 12, and 24 weeks after surgery. Final outcome was assessed using pre-determined criteria, Parkers mobility score, and social function score.

RESULTS

Entire 50 patients were followed up for average 6 months, and conclusions can be drawn that PFNA2 has lesser surgical time, blood loss, fluoroscopy time, ambulation time, union time, complications, and better functional score.

CONCLUSION

PFNA2 is better than screw PFN in treatment of inter-trochanteric femur fractures. PFNA2 has better contact area, lesser complications than screw PFN in addition to lesser surgical duration and blood loss.

A Study of Cord Blood Albumin as a Predictor of Significant Neonatal Hyperbilirubinemia in Term Neonates

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INTRODUCTION

Neonatal hyperbilirubinemia (NH) is the most common clinical abnormality in neonatal period affecting 60% of term and 80% of pre-term babies in the first week of life. Determination of at-risk neonates early will help to avoid the complications associated with neonatal jaundice. The objective of this study was to study various levels of cord blood albumin as a predictor of significant hyperbilirubinemia in term neonates and the average level of cord serum albumin.

METHODS

This was a hospital based prospective observational study conducted in the NICU. We included 200 term neonates in whom cord albumin levels during the period of 12 months were studied and all the babies were followed up daily for first 4 postnatal days and were assessed daily for NH and its severity. Cord albumin levels were categorized into four groups. Significant hyperbilirubinemia was considered when serum bilirubin levels were ≥ 17 mg/dl after 72 hours of life.

RESULTS

Out of total 200 term neonates, 26 developed significant hyperbilirubinemia. 42.50% new-borns had cord serum albumin level between 2.9-3.2 gm/dl. Only 7.50% new-borns had cord serum albumin level below 2.5 gm/dl. Mean cord serum albumin level was $3.15 \text{ gm/dl} \pm 0.43$. Out of 15 subjects with cord serum albumin level $< 2.5 \text{ gm/dl}$, 14 developed significant hyperbilirubinemia, thus correlation between serum bilirubin and cord serum albumin was found statistically significant. 26 new-borns needed phototherapy and none of them required exchange transfusion.

CONCLUSION

Cord serum albumin level ($< 2.5 \text{ gm/dl}$) taken in our study can be used as a risk indicator to predict the development of significant hyperbilirubinemia.

The Study of Neonates with Neonatal Thrombocytopenia in Neonates admitted in SNCU: Aetiological Profile, Clinical Courses, and Immediate Outcome

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INTRODUCTION

Neonatal thrombocytopenia is one of the common hematological problems. The paucity of studies from India and the increasing prevalence of this condition in the SNCU instigated us to determine the etiology, clinical profile, and immediate outcome of the neonates with thrombocytopenia.

METHODS

A prospective observational hospital based study was conducted on 250 neonates admitted in SNCU with thrombocytopenia.

RESULTS

In the present study, 72.80% neonates presented within 72 hours and 27.20% presented after more than 72 hours. 59.20% babies were male and 40.80% female. Mean neonatal weight was $2.20 \pm 0.56 \text{ kg}$. Mean platelet count was 1.20 ± 0.33 lakh per mm^3 . Most common maternal risk factor was anaemia (29.60%) followed by eclampsia (15.6%), PIH (9.60%), PROM (6.40%), GDM (6.00%), and oligohydroamios (4.80%). Most common neonatal risk factor was sepsis (52.80%) followed by birth asphyxia (16.80%), RDS (15.20%), neonatal hyperbilirubinemia (11.60%), MAS (9.60%), and NEC (5.20%). IUGR prevalence was 40.80%. 13.20% neonates died. 170 (68%) patients had mild thrombocytopenia, 52 (20.80%) had moderate, and 28 (11.20%) had severe thrombocytopenia. The association between platelet count and assisted ventilation, platelet count and bleeding, clinical feature during hospital stay and platelet count, and need for platelet transfusion and platelet count was found to be statistically significant.

CONCLUSION

Severe thrombocytopenia can be used as a prognostic indicator in sick neonates. Septicemia was the major etiology of thrombocytopenia.

Minimally Invasive Plate Osteosynthesis with Distal Tibial Anatomical Plate for Distal Tibia Fracture

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INTRODUCTION

Distal tibia fracture mostly requires operative treatment and it is difficult to manage. Closed reduction and minimally invasive plate osteosynthesis (MIPO) with distal tibial anatomical plate has emerged as an alternative treatment option because it respects biology of distal tibia and fracture hematoma and also provides biomechanically stable construct. The aim of study was to evaluate result of minimally invasive plate osteosynthesis with distal tibial anatomical plate for distal tibial fracture.

METHODS

This prospective study included 25 patients with closed distal tibia fracture without intra articular extension (AO classification: 43A1, 43A2, 43A3), treated with MIPO with distal tibial anatomical plate and were prospectively followed for a duration of 6 months.

RESULTS

The average duration of injury-hospital and injury-surgery interval was 1.08 days (range 0-4 days) and 9 days (range 4-30 days), respectively. In 92% cases, union was achieved with an average duration of 20.34 weeks (range 12-24 weeks) except two cases of delayed union which were managed with plate removal with bone grafting and cast application. Two patients had union with valgus angulation less than 5°. No cases of nonunion were found. There were four superficial and two deep post operative wound infection. All infections healed with extended period of intravenous antibiotics besides repeated debridement for deep infection. Implants were removed in six patients among whom four had malleolar skin irritation and pain due to prominent hardware and two had deep infection.

CONCLUSION

MIPO with distal tibial anatomical plate is an effective treatment method in terms of union time and complications rate for distal tibia fracture. Malleolar skin irritation is common problem because of prominent hardware.

A Study of Chronic Spontaneous Urticaria in Paediatric Age Group at a Tertiary Care Centre of South Rajasthan

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INTRODUCTION

Prevalence of chronic spontaneous urticaria (CSU) in children is not greater than 0.1% to 0.3%. The aim of this study was to collect data regarding CSU among the paediatric population.

METHODS

This study was conducted on 119 children of age 0-18 years having urticaria with or without angioedema lasting for more than 6 weeks. All the patients were subjected to total urticaria severity score (TUSS). Besides routine blood investigations, total eosinophil count (TEC), Serum IgE, antinuclear antibody (ANA), anti-thyroid peroxidase antibody (Anti-TPO), anti-thyroglobulin antibody (Anti-TGA), microscopic investigation of stool for parasites, and autologous serum skin test (ASST) were done.

RESULTS

Out of 119 children (males : female ratio 56:63), maximum belonged to 7- 10 years age. The mean duration of illness was 7.68±8.9 months. The most common manifestation was wheal (73.1%) followed by wheal and angioedema (23.5%), and angioedema alone (3.4%). Aggravating factors were reported in 19 (15.96%) children, most common being food allergen (11.76%) followed by inhalant allergen (2.52%) and infections (1.68%). Among CSU patients, 14 (11.76%) also had inducible urticaria. Atopic diathesis was present in 32 (26.89%) patients. A statistically significant difference was found in TUSS between females (39.68%) and males (14.29%) (p value <0.05). Positive ASST was seen in 23 (19.33%). The severity of TUSS had statistically significant relation to positivity of ASST (p value <0.05).

CONCLUSION

Etiology of CSU remained elusive in most of the children despite detailed investigations.

Electrocardiographic Changes in Cases of Acute Organophosphates Compound (OPC) Poisoning

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INTRODUCTION

Cardiac manifestations often accompany poisoning with organophosphorus compounds (OPC) including, hypotension, hypertension, sinus bradycardia, sinus tachycardia, and cardiac arrest. These complications are potentially preventable, if recognized early and treated adequately. The aim of this study was to study electrocardiographic changes, clinical patterns and correlate ECG changes with outcome.

METHODS

This was a prospective descriptive study which was conducted after taking an informed consent from patients or their relatives on 112 patients of acute OPC poisoning.

RESULTS

The outcome of study was that 20.53% of patients (23 of 112) died and 79.46% survived (89 of 112). Though 76.46% patients survived, about 65.16% of survivors fell under mild grading whereas though total deaths were only 20.53%, about 56.52% of deceased fell under severe grading. Among the ECG changes observed overall, QTc prolongation tops the list with 68 cases (60.7%) followed by ST elevation (21.4%), T inversion (16.9%), extra systole (12.5%), low voltage complexes (11.6%), PR prolongation (3.5%), and AF (1.7%) with 24,19,14,13,4, and 2 cases, respectively.

CONCLUSION

QTc prolongation, ST elevation, T inversion, and extrasystole were significantly associated with OP poisoning. Among survivors, QTc prolongation, T inversion, low voltage complexes, and extrasystole were significantly associated with the prolonged duration of hospital stay. Among the death cases, QTc prolongation, ventricular tachycardia, low voltage complexes, and extrasystole were significantly associated.

Effect of Preoperative Ketamine Nebulization on Attenuation of Incidence and Severity of Post-operative Sore Throat, Hoarseness of Voice, and Cough in General Anaesthesia: A Randomized Double-Blind Study

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INTRODUCTION

Post-operative sore throat (POST), hoarseness of voice, and cough occurs in 21.65% of patients. Ketamine, used earlier as gargle for reducing POST, has limitations. The aim of this study was to evaluate if nebulized Ketamine reduces incidence and severity of POST, hoarseness of voice, and cough.

METHODS

In this prospective, randomized, double blind study, a total of 100 ASA class I and II patients were enrolled and randomly allocated into 2 groups- group K (n=50) nebulized with Ketamine 50 mg with 4 ml NS and group S (n=50) nebulized with 5 ml normal saline 15 minutes prior to intubation. Assessment of sore throat, hoarseness of voice, and cough was done just after extubation (0 hour) and 2, 4, 6, 12, 24 hours post-operatively. Hemodynamic parameters were noted at pre- and post- nebulization and just after intubation.

RESULTS

There was significant decrease in incidence and severity of POST, hoarseness of voice, and cough in group K in comparison to group S. The overall incidence of POST, hoarseness of voice, and cough was 20%, 20%, and 6% in group K and 48%, 88%, and 40% in group S, respectively. There was no statistical significance in hemodynamic parameters like mean HR, mean BP, and mean SpO₂ at different time intervals in both groups.

CONCLUSION

Pre-operative nebulized Ketamine reduces both the incidence and severity of post-operative sore throat, hoarseness of voice, and post-operative cough after general anaesthesia with endotracheal intubation.

A Clinico-Mycolological Study to Identify the Species Causing Dermatophytoses in a Tertiary Care Centre of North West Rajasthan

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INTRODUCTION

The aim of this study was to evaluate the prevalence rate of dermatophytic infection, to assess the clinicoepidemiological profile of dermatophytic infection, to identify the species of fungi, and to compare the clinical diagnosis with potassium hydroxide (KOH) smear positivity and culture positivity.

METHODS

A descriptive type of observational study was conducted and 400 clinically suspected untreated cases of dermatophytoses were included in the study.

RESULTS

Maximum (29%) patients presented with more than one entity of clinicomorphological variants of dermatophyte infection, followed by 26.75% patients with *T corporis*, 14.5% patients with *T cruris*, 10.75% patients with *T faciei*, 7% with onychomycosis, and 6.50% patients presented with *T manuum*. The association between gender and clinical type of dermatophyte infection was found statistically significant. The association between age and clinical type of dermatophyte infection, KOH mount and clinical type of dermatophyte infection, and culture result and clinical type of dermatophyte infection was found statistically insignificant. Growth was seen in 321 cases. *T mentagrophytes* was the most common isolate which was grown in 150 (46.72%) cases, followed by *T rubrum* in 111 (34.58%), *T verrucosum* and *E floccosum* in 16 (4.98%), *T tonsurans* in 12 (3.74%), *M gypseum* in 10 (3.12%), and *M audouinii* in 6 (1.87%).

CONCLUSION

T corporis is the commonest clinical type. In Trichophyton species, *T rubrum* and *T mentagrophyte* are the most common aetiological agents and males are more frequently affected.

A Study of Clinical Spectrum and Electrocardiographic Changes in Patients of Scorpion Sting: A Hospital Based Study

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INTRODUCTION

Scorpion sting is an acute life-threatening condition accounting for nearly 6.48% of annual ICU admissions and much more out-patient visits. Symptomology and severity of envenomation varies greatly. The aim of this study was to assess the clinical spectrum and various electro-cardiographic changes in patients of scorpion sting.

METHODS

This was a prospective clinical study on a total of 80 cases of scorpion envenomation who were studied for various clinical manifestations and ECG changes. Patients were examined frequently at admission, 1 hour, 6 hour, 12 hour, 24 hour, and 48 hours after the admission and further examination was done.

RESULTS

Out of 80 cases, 45 were males and 35 females with mean age of 38 years. Most of the patients (93.75%) reached within 24 hours. Patients in grade-2 (12.5%), grade-3 (65%), and grade-4 (22.5%) were observed. Pain was present in 96.25% patients, tachycardia in 43.75%, profuse sweating in 33.75%, excess salivation in 10%, pulmonary oedema in 8.75%, and hypotension in 7.5%. ECG changes were present in 65% in which sinus tachycardia (43.75%) was most common. Other ECG changes were observed like T wave abnormality (37.5%), ST changes (18.75%), and bundle branch block with varying degrees of heart block. Three patients had died.

CONCLUSION

Severe cardiopulmonary manifestations like myocarditis, pulmonary oedema, and severe hypotension may lead to death in scorpion sting, if not given proper hospital care in time.

A Study of Diabetes Induced Liver Damage by Using APR Index and FIB-4 Score

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INTRODUCTION

Diabetes mellitus is a non-communicable disease that occurs in both developed and developing countries. This metabolic disease affects all systems in the body, including the liver. Fibroscan is well validated and non-invasive method for assessment of liver fibrosis but diagnostic yield is limited by obesity and it is not available at all centers. Therefore, the aim of this study was to use noninvasive and accessible markers to see the liver damage in diabetes mellitus.

METHODS

A cross sectional study was conducted on 108 patients. APRI (aspartate aminotransferase to platelet ratio index), FIB-4 (fibrosis-4) score, and Fibroscan were done in all patients.

RESULTS

Sensitivity of APRI score was 92% while specificity was 70%, PPV was 73.44% and NPV was 90.91. Sensitivity of FIB4 score was 93.62%, specificity was 68.85, PPV was 69.84, and NPV was 93.33. As seen by above data, APRI values can be used as screening test for liver fibrosis.

CONCLUSION

APRI and FIB-4 in combination adequately predicted patients with significant fibrosis or cirrhosis (positive predictive value 91.5%).

A Comparative Study of Functional and Radiological Outcome of Open Pedicle Screw versus Minimally Invasive Pedicle Screw Fixation in Thoracolumbar Spinal Injuries

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INTRODUCTION

Documented treatment of spine fractures includes closed treatment and manipulation to correct the sustained deformity. This study was aimed to compare and analyse the functional and radiological outcome of open pedicle screw vs minimally invasive percutaneous pedicle screw fixation done in thoraco-lumbar spinal injuries.

METHODS

This study was conducted with a minimum follow-up of 6 months. Thirty patients admitted through hospital, with unstable thoraco-lumbar spinal fractures with incomplete spinal cord injury were selected and divided randomly into 2 groups of 15 each. One group was treated with open pedicle screw fixation and other was treated with minimally invasive pedicle screw fixation.

RESULTS

In the present study, 10 patients in minimally invasive pedicle screw group (group A) and 10 patients in open pedicle screw group (group B) showed excellent outcome. Two patients in group A and one patient in group B showed good outcome. One patient in group A and two patients in group B showed fair outcome and two patients in both groups showed poor results.

CONCLUSION

Effect of minimally invasive percutaneous pedicle screw fixation is similar to that of a traditional open pedicle screw in treating thoraco-lumbar spinal fracture with the advantage of small trauma, less bleeding, rapid post-operative recovery, light pain, better aesthetic effect, and fewer complications like superficial infections and post-op ileus in the former.

Prognostic Value of Serum Phosphorus Levels in Patients with Diabetic Ketoacidosis

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INTRODUCTION

Diabetic ketoacidosis (DKA) is characterised by hyperglycemia, ketonemia, ketonuria, and high anion gap metabolic acidosis along with number of metabolic derangements. Phosphorus depletion is common in diabetic ketoacidosis. This study was undertaken to find out mainly the prognostic value of serum phosphorus levels in diabetic ketoacidosis patients to determine the severity and outcome.

METHODS

It was a hospital-based case control observational study in which 100 patients of diabetic ketoacidosis were enrolled as cases and 100 healthy age and sex matched individuals were enrolled as controls.

RESULTS

The maximum numbers of patients were found in the age group of 41-70 years (59%). DKA had multiple precipitating factors among them, 80 patients had poor patients' compliance and 43 had infections. Serum phosphorus levels were performed at time of admission, on day 3, and at discharge. Outcome measures including drowsiness at the time of admission, duration of diabetic ketosis, and duration of hospital stay were significantly higher in hypophosphatemic than euphosphatemic patients. There was statistically significant negative correlation between HbA1c levels and serum phosphorus levels.

CONCLUSION

Higher blood sugar value at the time of admission was associated with low serum phosphorus value in diabetic ketoacidosis and low serum phosphorus levels were associated with poor mental status at admission, prolonged duration of diabetic ketosis, and prolonged hospital stay.

A Study on Early Outcome and Adverse Drug Reactions of Second Line Antiretroviral Therapy Regimen in HIV Positive Patients in SMS Hospital, Jaipur

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INTRODUCTION

A major cause to first line antiretroviral therapy (ART) failure has been multi-drug resistance in treatment-experienced *human immune deficiency virus (HIV)* patients necessitating a switch to second line therapy. The aim of this study was to study the early outcome and adverse drug reactions, and to assess the clinical, virological, and immunological effectiveness after one year in the patients with first line antiretroviral failure switched to second line antiretroviral therapy.

METHODS

A prospective, observational study was carried out on *HIV* positive patients switched on second line ART. Demographic details, symptoms, adverse drug reactions (ADRs), second line ART regimens, CD4 count, and plasma viral load (PVL) were recorded in a pre-structured proforma. Patients were followed-up at 6 months and at 12 months. Qualitative data was presented as percentage of proportion.

RESULTS

The present study included a total of 97 PLHIV who were put on 2nd line ART regimen comprising of Tenofovir, Lamivudine, and Atazanavir boosted with Ritonavir (TL/ATV/r) and Zidovudine, Lamivudine, and Atazanavir boosted with Ritonavir (ZL/ATV/r). A significant immune reconstitution with increase in mean CD4 count and viral suppression rate 90.7 was observed.

CONCLUSION

Early treatment outcome with second line ART was good with 90.7% success rate in treatment experienced *HIV* patients. Indirect hyperbilirubinemia and dyslipidemia were the common ADRs observed.