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Contents

Editorial

Silent yet growing epidemic of viral hepatitis worldwide

The word hepatitis comes from the Ancient Greek word *hepar* meaning 'liver' and the Latin word *itis* meaning inflammation. Inflammation of the liver is hepatitis. The liver is a reddish brown, largest internal organ in the human body that weighs approximately 1.36 kg. It is divided into four lobes of different sizes and lengths, located below the diaphragm on the right in the thoracic region of the abdomen. The liver is made up of thousands of lobules, each lobule consists of many hepatocytes ie., the hepatic cells which are the basic metabolic cells of the liver. Circulation of the blood to the liver is carried out through the hepatic artery and the portal vein. The portal vein carries blood containing digested food from the small intestine, while the hepatic artery carries oxygen-rich blood from the aorta. The liver does a wide range of functions that includes detoxification of harmful substances form the blood, like alcohol; stores minor nutrients ie., vitamins like A, D, K & B12, minerals and glycogen; converts glucose to glycogen; makes certain amino acids - the building blocks of proteins thereby helps in protein synthesis; synthesizes plasma protein, hormones & urea and produces 80% of body's cholesterol. It has certain biochemicals like bile needed for digestion of the food we eat and it maintains proper levels of glucose in the blood and decomposes red blood cells.

Mostly liver gets damaged by physical injury, chemicals like alcohol & toxins and biological agents like bacterial & viral infections. Bacteria like *Helicobacter pylori* and a group of viruses called hepatitis viruses can affect liver and cause hepatitis. Hepatitis group of viruses include hepatitis A, B, C, E, X, G and delta agent. In addition, a person may get hepatitis due to genetic problem, metabolic disorder, or an immune related injury like autoimmune reactions. Obesity can also be a cause of liver damage which can lead to inflammation. As a consequence, clinically it may lead to acute or chronic liver damage. Acute hepatitis lasts under six months, while chronic hepatitis lasts longer. Hepatitis can get healed on its own with no significant consequence, or it can progress to scarring of the liver.

Deaths from viral hepatitis are caused by one of five hepatitis viruses. Hepatitis A (HAV) and Hepatitis E (HEV), spreads through person-to-person contact and contaminated food or water, are major causes of acute hepatitis, particularly in areas of the developing nations that suffer from poor hygiene. The symptoms of acute phase are mild flu, and it may include diarrhea, fatigue, loss of appetite, mild fever, muscle or joint aches, nausea, slight abdominal pain, vomiting and weight loss. The acute phase is not usually dangerous, unless it develops into the fulminant or rapidly progressing form, which can lead to death. Outcome of acute phase depends on various factors, especially the type of hepatitis. Hepatitis B virus (HBV) and hepatitis C virus (HCV) cause chronic infection that can result in liver disease and death. Chronic hepatitis may be due to Hepatitis B (HBV) or C (HCV) and are transmitted by consumption of blood & blood products. Infected blood, semen, and some other body fluids can also transmit HBV & HCV. They can also get transmitted through sexual route. HBV infected mother can transfer these viruses to her offspring. As the patient gets worse, it leads to chronic condition with the symptoms of circulation problems (only toxic/drug-induced hepatitis), dark urine, dizziness (only toxic/drug-induced hepatitis), drowsiness (only toxic/drug-induced hepatitis), enlarged spleen (only alcoholic hepatitis), headache (only toxic/drug-induced hepatitis), hives, itchy skin, light colored feces, yellow skin, whites of eyes and tongue (jaundice). Only those people who are already infected with Hepatitis B Virus can become infected with Hepatitis D. It is caused by the defective virus called delta agent or Hepatitis D Virus (HDV). Hepatitis D requires hepatitis B for replication, and co-infection with both viruses increases the risk of severe liver disease. Infection of this virus is through contact with infected blood, unprotected sex, and perforation of the skin with infected needles. The liver of a person with Hepatitis D swells & gets

inflamed. If hepatitis cannot be attributed to the viruses of Hepatitis A, B, C, D, or E, it is called Hepatitis X. In other words, hepatitis of an unknown virus is Hepatitis X. Hepatitis G is a type of hepatitis caused by the Hepatitis G Virus (HGV). Usually, there is no symptom. When there are symptoms they are mild. Though all types of viral hepatitis are associated with serious health issues, hepatitis B and C can become chronic infections that often lead to liver cirrhosis or liver cancer. Viral hepatitis are diagnosed by looking for viral specific antigen and / or antibody by serological techniques like precipitation, agglutination, enzyme linked immunosorbent assay (ELISA), immunofluresence (IF) & radio immuno assay (RIA). The viral genome can also be looked by polymerase chain reaction (PCR), random amplification of polymorphic DNA (RAPD) and restriction fragment length polymorphism (RFLP).

Viral hepatitis is a leading cause of infectious disease mortality globally, each year causing approximately 1.4 million death (1). Most of these deaths occur among the approximately 400 million persons living with chronic HBV or HCV infection who die from cirrhosis or hepatoma/liver cancer years after their infection. About 250 million people globally are affected by hepatitis C, while 300 million people are carriers of hepatitis B. In addition HAV is a leading cause of vaccine preventable death globally (1). HEV also causes significant morbidity, particularly Asia & Africa. HBV & HEV infection are important yet largely neglected causes of maternal & infant morbidity and mortality in resource-constrained settings.

There is no treatment specifically for HAV. Doctors advise the patient to abstain from alcohol and drugs during the recovery. The vast majority of patients with HAV will recover spontaneously. A patient with HBV needs to rest & interferon is given as cure. A patient with Hepatitis C is treated with pegylated interferon and ribavirin. Interferon-free treatment for hepatitis C may eventually be possible, in a clinical trial, sofosbuvir was successful in treating Hepatitis C infection. Sofosbuvir is an oral nucleotide inhibitor of HCV polymerase. So far, there is no effective treatment available either for Hepatitis D or E. If it is non-viral hepatitis, the harmful substance needs to be removed. It will be flushed out of the stomach by hyperventilation or induced vomiting. Patients with drug-induced hepatitis may be prescribed corticosteroids.

Hepatitis prevention and control begins with awareness. Hepatitis A and B can be prevented with vaccines, which are recommended for all children -- and for adults who are at high risk of contracting viral hepatitis. While no vaccine exists for hepatitis C, early detection and treatment can curb transmission, limit the disease's progression, and prevent life-threatening complications, including liver cancer. Prevention of these new viral infections and mortality from viral hepatitis are the goals of global control efforts.

Worldwide one in twelve million people are living with viral hepatitis – a disease that threatens the health of millions of people across the globe. Tragically, complications resulting from viral hepatitis claim thousands of lives every year. As a leading cause of cancer, it remains a public health challenge. Because the infection can persist for decades without symptoms. Besides, many people who are chronically infected are unaware of their infection status. Throughout the world 240 million people have chronic hepatitis B infection, and 180 million are living with hepatitis C. Its incidence is rising rapidly, with 1.1 million Indians suffering from hepatitis B, leading to 240,000 deaths each year, according to WHO figures. Millions of people in Indian haplessly encounter this reality in their lives unknowingly. According to WHO worldwide every year, 33 per cent of new cases of hepatitis B and 42 per cent of hepatitis C are caused by unsafe injections. In India, repeated out breaks of HBV & HCV are seen and the main reason is unsafe injections practices and reuses of needles. Given India's endemic risk factor it is imperative to spread awareness about to the dangers of unsafe injection practices. This needs to be supported by strict enforcement of norms. Hepatitis cases are rising in

India because of lack of knowledge on viral hepatitis. It is unfortunate as it is the second biggest preventable cause of cancer after tobacco.

Having known these facts about silent yet growing epidemic of viral hepatitis worldwide it is essential for the people to get awareness about this silent epidemic. People have to rededicate to the fight against viral hepatitis on World Hepatitis Day (28th July). Each year, World Hepatitis Day is marked to bring attention to a disease that afflicts one in twelve people worldwide. The Government needs to organize a country wide education campaign among health workers about the importance of injection safety. In addition, it is essential to raise awareness among communities hardest hit by viral hepatitis about preventing and treating viral hepatitis, organizing campaigns to prevent new infections, promoting testing and treatment, mass vaccination, enforcement of safe injection practices to shield people from these viral infections and commit to combat this disease in all its forms.

Dr.T.Thirunalasundari
Editor-in-chief, Biomedicine.

1. Lozano, R., Naghavi, M., Foreman, K., et al., "Global and regional mortality from 235 causes of death for 20m age groups in 1990 and 2010: a symptomatic analysis for the global burden of disease study 2010". Lancet. 2012; 380: 2095-2128.

President of IABMS (2008 – 2010)

Prof. Dr. D. Sakthisekaran, presently the Head of the Department of Medical Biochemistry, University of Madras, the then president (2008-2010), General Secretary (2005-2007), Editor-in-chief (2001-2003) and the Vice-President (2000) of the Indian Association of Biomedical Scientists, is a dynamic pollster having 108 research publications in both National and International journals and more than 450 Citations Indexes.

Besides being a resourceful and capable administrator he continuous discharging his selfless duty as the chairperson for Textbook writing committee for the 11th and 12th standard Biochemistry for Tamil Nadu Textbook Corporation from 2004 to till date. His accomplishments such as Academic Achievement Award-2012 bestowed by University of Madras, National Award for the Teaching Excellence conferred by the Indo-American Education Summit & Expo 2013 organized by the Indo-U.S. foundation Hyderabad and his execution of service as the member of various Boards in the universities such as Periyar University, Bharathidasan University, Pondicherry University and a range of colleges in and around Tamil Nadu add credit to his academic honor. With much acclaimed merits he has also been a Member of UGC XI Plan Committee at Punjab University, Chandigarh, and Member of the Expert Committee for Selection of Emeritus Fellowship.

He was conferred with many coveted Awards, namely "Tamil Nadu Scientist Award" TANSA 2005 from the Tamil Nadu State Council for Science and Technology, **Kissan Vikas Patra** for rendering 25 years of

Unblemished Service in the University of Madras, **Dr. Krishnamurthy Award** in recognition of the environmental toxicology (2002), and Mr. M. K. Nambiar Memorial Oration Award from the Indian Association of Biomedical Scientists (2009).

Dr. D. Sakthisekaran, an eminent alumunus of Madras University is one the most often invited visiting professors to the NPO International Laboratory of Biochemistry in Japan and Singapore. Having published 4 books (as the chairperson), 18 Articles in National and 90 Articles in International Journals, his 35 years of service to the field of Medical Biochemistry will be treasured forever. It is our privilege and honour to have him as honourary editor for the current issue of our journal.

Review Article

What of olfaction, pheromones and life?

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Abstract

The ability to smell is our oldest vertebrate sense. Traditionally the olfactory system is divided into two: a main olfactory system to detect environmental odours and an accessory (vomeronasal) olfactory system to detect pheromones. This review aims at discussing the potential roles for olfaction in survival in terms of feeding, mating and safety. A literature search was conducted for articles relating the role of olfaction to feeding, mating and safety in both human and animals. A brief review of the literature is presented for each facet of survival. Importance of olfaction has declined in human survival but research demonstrates that it plays a vital role in our lives.

Key words: Olfaction, pheromones, odours, survival.

Special Article

Microbial agents as biological weapons – A potential threat to world peace*

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***** This review represents part of the IABMS oration award – "M.K.Nambiar Memorial Oration" delivered by the author.

Abstract

The Microbes and their toxic products are implicated as potential biological weapons (BW), due to their high virulence, feasibility of production in large amount at reduced cost, rapid dissemination, belated recognition of an attack and increased rate of morbidity and mortality, compared to atomic or nuclear warfare weapons requiring highly sophisticated technology and multi-million dollar expenditures. Bioterrorism is the intentional spread of pathogenic microbes or their toxic products to human beings, animals or plants in order to incapacitate, produce disease, death or loss of crops. This can be carried out by an individual-Bioterrorist (Bio-crime), groups/organizations (Bio-terrorism) or by any nation (Bio-warfare). Bioterrorist activities started even 2000 years ago in different ways to intimidate their enemies. Though many countries have signed the protocol at International BW Conventions, still there is potential danger of bio-crime, bio-terrorism or bio-warfare by individuals, groups or nations, respectively. Only international supervision and strict guidelines can control the proliferation and intentional uses of BW weapons.

Research Papers

Precise palatal parameters – A Bull's eye report.

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Abstract

Introduction: Identification of BITE MARKS has always been challenging to the forensic personal. Rugae are amongst the best protected morphologically individualizing soft tissue structures in the body, which are preserved after death and yet, accessible during life. It is known that due to their special features, both Cheiloscopy and Rugoscopy can be used successfully in human identification. Establishing a person's identity can be a very difficult process. Dental, finger print and DNA comparisons are probably the most common technique used in this context, allows fast and secure identification processes. As they cannot be used always, sometimes it is necessary to apply different and less known techniques and that is the reason for undertaking this study.

Aim: This study was taken up to identify the lateral rugal point as a stable point among the study group and thereby determine the distances between the LRP and points on the middle of medial surface of 1st permanent canine, pre molar and molar. The study also aimed to measure the distance of these points from the pterygoid fovea (clinically).

Materials & Method: A total of 40 cleft casts and 40 normal casts were procured from MADC, Chennai. The distance of LRP &MRP from the median palatal plane (MPP) was determined by to be stable at 1cm & 0.3 cm respectively.

Results: The distance of LRP &MRP from the median palatal plane (MPP) was determined to be stable at 1cm & 0.3 cm respectively. The stability of these values showed that these points can be used as stable landmarks in Rugoscopy.

Discussion: Planes in this study can be directly produced on the dental casts; this offers an advantage over radio graphically derived planes as the latter may be subjected to rotational error and magnification problems. The precise palatal parameters included in this study will be cost-effective and easy to reproduce, thereby will be of immense help for the evaluation of Bite-mark evidence by a forensic odontologist and a dental surgeon as a cost-effective clinical and research tool.

Key words: Rugoscopy, palatal parameters cleft palate, neural tube defects.

To compare and evaluate the efficacy and safety of drotaverine, valethamate bromide and the combination of both the drugs.

R. Srujana, N. Shailaja, Lingegowda Krishna, Namrata Kulkarni, Prabhleen Kaur and B. Shyamasundara Bhat.

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Abstract

Introduction: Various drugs have been used to facilitate the process of cervical dilatation and reduce the duration of labour and thereby feto maternal complications. Drotaverine and valethamate bromide are the most commonly used drugs in day to day practice. Drotaverine, a benzylisoquinolone derivative, is an analogue of papaverine with smooth muscle relaxant properties.

Aim: To compare and evaluate the efficacy and safety of drotaverine, valethamate bromide & both in acceleration of first stage of labour at term gestation.

Materials and Methods: Clinical study was conducted in PESIMR, Kuppam from Febuary 2011 to January 2012 over 150 selected uncomplicated primi and second gravidae with term pregnancy in established labor, at 3 or 4 cm cervical dilatation with adequate uterine contraction. In group I, 50 cases were given intramuscular drotaverine injection, 40 mg every 2 hours up to a maximum of 3 injections till full dilatation. In group II 50 cases received intravenous valethamate bromide 8 mg every half an hour up to a maximum of 5 injections till full dilatation. In group III 50 cases were given injection drotaverine 40 mg IM every 2 hours up to a maximum of 3 injections till 6 cm cervical dilatation and valethamate bromide 8 mg IV every half an hour up to maximum of 5 injections from 6 cm cervical dilatation till full dilatation. Those subjects who required caesarean or instrumental vaginal delivery were excluded from the study. Duration of first stage of labor, cervical dilatation rate, injection delivery interval, side effect if any and neonatal outcome were noted.

Results: The groups were statistically matched as far as age, gravidity and gestational age. Overall injection to full dilatation interval was significantly shorter in group I (194.64±97.86) in contrast to group II (241.38±128.05) and group III (390.18±89.98) ($P<0.05$). Over all mean cervical dilatation rate was significantly higher in group I (5.16±1.33 cm/hr) as against group II (4.68±0.91cm/hr) and group III (3.48±0.91 cm/hr) ($P<0.001$). Minor adverse effects like maternal tachycardia, dry mouth, vomiting, PPH and cervical tears and neonatal morbidities were noted in all the three groups, the difference in the side effects between three groups was statistically not significant.

Conclusion: Drotaverine is superior cervical dilatation agent as compared to valethamate bromide and the combination of drotaverine and valethamate bromide. Its timely administration helps in smooth and faster progress of labour by virtue of faster cervical dilatation with minimal side effects.

Key words: Drotaverine, valethamate bromide, maternal outcome, fetal outcome.

Dyslipidaemia and oxidative stress in apparently healthy late adolescent and young adult passive smokers.

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Abstract

Introduction: Passive smoking, second hand smoking or environmental tobacco smoking is considered to be equally or more hazardous than active smoking. Due to direct and indirect stimulation of sympathetic system it leads to dyslipidaemia or affects heart directly. The different chemicals present in side-stream of smoke are either oxidants themselves or may lead to generation of free radicals that ultimately gives rise to cardiovascular disorders.

Aim: A case-control study was taken up with the objective to learn about oxidative stress and the extent of cardiovascular risk in the passive smokers.

Methodology: 50 apparently healthy passive smokers and 50 non-smokers in the age group 16 to 25 years were chosen and their routine investigations, lipid profile, serum uric acid and oxidative stress marker MDA (Malondialdehyde) were assayed to see the correlation between passive smoking, oxidative stress and cardiovascular risk factors.

Result: In passive smokers total cholesterol and MDA were high & statistically significantly ($p< 0.001$). MDA was found statistically significantly correlated to TC ($r=0.33$; $p< 0.01$), LDL-C ($r=0.35$; $p< 0.01$), Non - HDL-C ($r= 0.3$; $p<0.01$). Also MDA was found to be positively correlated to SBP, DBP and respiratory rate that were statistically significant. Passive smoking was found to be strongly associated with hypercholesterolaemia (OR= 17.2; $p< 0.001$, CI= 95%) and oxidative stress (OR= 38.5; $p< 0.001$, CI= 95%). Duration of exposure to smoking is significantly associated with oxidative stress marker MDA (OR= 17.93, $p<0.0001$; CI= 95%).

Conclusion: Passive smokers have a potential risk to develop oxidative stress and dyslipidaemia which may lead to cardiovascular disorders in the long run.

Key words: Cardiovascular disorders, dyslipidaemia, oxidative stress, passive smoking, sympathetic stimulation.

Effect of peak expiratory flow rate in different postures

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Abstract

Introduction: The peak expiratory flow rate varies according to age, sex, height and body weight. Gravity and various postures also influence the lung function. The authors prefer PEFR values in various postures.
Aim: The present study intends to examine the effect of PEFR in different body postures.
Materials and Methods: This study was carried out using PEF meter on 50 volunteers having no previous history of lung diseases aged from 15-45 years placing them on various postures like standing, sitting, sitting on chair with back rest vertical, sitting on chair with back rest 45º, supine, prone and side lying. Subjects were asked to perform forceful expiration through the mouth piece of peak flow meter which is been tightly sealed. Procedure was repeated thrice best reading was recorded and analyzed statistically using SPSS software.
Results: Lung volume (FEV1 or PEF) differs in various postures against gravity. Maximum lung volume was observed in the standing position ($p < 0.01$). Decreased lung volume was observed in the prone position. All variables found to be statistically significant.
Conclusion: The present study indicates the values of PEFR was more in standing position when compared to other postures .
Key words: COPD - Chronic Obstructive Pulmonary Disease, PEFR - Peak Expiratory Flow Rate, PEF – Pocket Peak Flow.

Antioxidant and antibacterial activity of methanolic extract of *Ixora coccinea* L. root against methicillin resistant *Staphylococcus aureus* (MRSA)

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Abstract

Introduction: Multiple drug resistance (MDR) among bacterial pathogens is a global problem. Methicillin resistant *Staphylococcus aureus* (MRSA) is a prominent pathogen with special ability for drug resistance and scientists are in search of effective drugs against these bacteria. *Ixora coccinea* belongs to the family Rubiaceae and its root is a common ingredient in different Ayurvedic formulations.

Aim: This study was carried out to investigate the antimicrobial potential of the methanolic extract of the root of *I. coccinea against multiple clinical isolates of* MRSA and to evaluate the antioxidant activity.

Materials and Methods: Antibiotic sensitivity to twenty one isolates of *S. aureus* was assayed by Kirby Bauer disc diffusion method. Antimicrobial activity of the root extract was evaluated by agar well diffusion method. Antioxidant potential was evaluated by DPPH (1,1diphenyl-2-picrylhydrazyl) assay.

Results: Twelve among the 21 isolates of *S. aureus* checked were found to be MRSA. All the isolates were MDR. All the isolates were sensitive to vancomycin the present drug of choice against *S. aureus.* Methanolic root extract exhibited *in-vitro* antibacterial activity against all isolates irrespective of their resistance to antibiotics. The minimum inhibitory concentration (MIC) of the extract was found to be 800 µg/ml. This extract showed dose dependant antioxidant activity in DPPH scavenging assay (IC_{50} value of 0.3 mg/ml). The qualitative phytochemical analysis showed the presence of phenol, alkaloids, tannins and flavanoids in this extract.

Conclusion: These results suggest that *I. coccinea* has antioxidant as well as antibacterial properties offering effective protection from free radicals and drug resistant *S. aureus*. Also irrespective of the drug resistance in MRSA, the extract is equally effective against multiple isolates underscoring the presence of anti-staphylococcal principle.

Key words: antioxidant, anti-staphylococcal, DPPH, *Ixora coccinea*, methanolic extract, MRSA.

Seroprevalence of leptospirosis among patients with acute febrile illness - A prospective study.

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Abstract

Introduction: Leptospirosis is a well known worldwide zoonotic disease caused by a spirochaete of the genus Leptospira. In India, leptospirosis is still an underreported disease in some regions, probably due to the lack of diagnostic facilities and also lack of awareness of the disease among physicians. In Karnataka, only few studies reported Leptospirosis and there is no extensive study of human leptospirosis in this coastal region of Karnataka.

Aim: The study aims to see the seroprevalence of leptospirosis among patients visiting a tertiary hospital, presenting with acute fever including clinical manifestations of leptospirosis.

Materials and Methods: A total of 121 serum samples were collected from patients with acute fever including those fulfilling the criteria of clinical diagnosis of leptospirosis. The study period was from August 2011 to July 2012. Inclusion criteria included more than three of the following symptoms - fever with headache, myalgia, jaundice, conjunctival suffusion and muscle tenderness or subconjunctival haemorrhage, chorioretinitis, oliguria, pulmonary haemorrhage, pedal edema and uveitis. All the sera were tested for Leptospiral IgM antibodies by two genus specific tests, Leptocheck-WB and Serion Verion ELISA. Blood culture, Widal test, HBsAg, anti HIV and anti HCV detection and antigen and antibody of Dengue virus were also conducted.

Results: Out of 112, 18 (16%) were positive for Leptospira by both Leptocheck-WB and Serion Verion ELISA. All the convalescent sera were positive by these tests. The male –female ratio was 7:2. Out of the outstanding 94 sera, 5 was positive for malaria parasite, 4 for Salmonella and 2 cases each of Hepatitis B and Dengue respectively. Two cases recorded had co-infection with *Plasmodium vivax* infection. In this study, leptospirosis was more prevalent among daily wage workers (38.8%) followed by farmers (16.8%).

Conclusion: Leptospirosis is a seasonal zoonotic disease which is not uncommon in patients visiting a tertiary hospital. As clinical symptoms simulate other diseases such as enteric fever, viral fever including dengue and hepatitis, it may be under diagnosed. As this study included a small sample size, larger epidemiological study should be carried out to know the actual prevalence. Patients presenting with fever of more than 3 days should be screened for Leptospirosis especially during and following monsoons.

Key words: genus specific tests, Leptospirosis, seroprevalence, zoonotic disease.

Treatment of class II furcation defects - combination of allograft vs combination of xenograft - A 12 month clinical and radiological comparison.

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Abstract

Introduction: Furcation involvement is one of the important clinical features of chronic periodontitis. It represents a challenging scenario for periodontal therapy. Class II furcation involvement warrants the use of regenerative technique.

Aim: The purpose of this study was to clinically and radiographically compare the efficacy of combination of allograft material with combination of xenograft material in the treatment of mandibular Class II furcation defects.

Materials and Methods: A total of 20 sites with Class II furcation defects were treated, with Demineralized Freeze Dried Bone Allograft (DFDBA) + Amniotic Membrane (AM) and Bio Oss + Collagen Membrane (CM). Plaque index (PI), gingival index (GI), pocket depth reduction (PDR), relative attachment level (RAL) and linear radiographic measurements using RVG were recorded at baseline, 6 and 12 months postoperatively.

Results: At 12 months after therapy, PDR of 5.1 mm ± 0.59 & 4.75 mm ± 0.09 and RAL gain of 5.5 mm + 0.50 & 5.44 mm ± 0.09 was observed with both DFDBA+AM group & Bio Oss + CM group respectively. Bone fill of 2.08 mm ± 0.68 & percentage gain of 82.6% for the DFDBA + AM group and; 2.28 mm ± 0.49 & 87.3% respectively for Bio Oss + CM was observed.

Conclusions: Within the limits of the present study, it can be concluded that at 12 months, both therapies resulted in significant PDR and RAL gains, and significant improvement was seen in bone fill with both the materials, however, there was no significant difference between both.

Key words: Regenerative periodontal therapy; Furcation defects; Bovine-derived xenograft; DFDBA; Amniotic membrane; Collagen membrane.

Paraoxonase-1 activity in non-smoking and smoking healthy male blood donors.

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Abstract

Introduction: Human serum PON1 is an antioxidant enzyme associated with HDL-type complexes where it plays a key role in neutralizing oxidized lipids. It also protects the HDL particle from oxidation and preserves its integrity. Its levels have been reported to alter in a variety of diseases involving oxidative stress including smoking.

Aim: The association between PON1 activity, HDL and oxidized LDL (oxLDL) levels in smoking and nonsmoking blood donors is studied here.

Materials and Methods: 80 healthy blood donors aged 25-45 years were grouped as non-smokers (Group I) and smokers (Group II). Blood pressure (BP), weight, height, waist circumference (WC) and hip circumference (HC) were noted. Body mass index (BMI) and waist hip ratio (WHR) were calculated. PON1, HDL, oxLDL were estimated in the serum.

Results: Both groups had comparable BMI, WC, HC, WHR and diastolic blood pressure (DBP). There was significant decrease in systolic blood pressure (SBP; $p<0.05$), PON1 and HDL ($p < 0.01$) and an increase in oxLDL ($p < 0.01$) in Group II.

Conclusion: Smoking lowers SBP and also causes a profound decrease in PON1 and HDL levels with associated increase in oxLDL levels which can be attributed to the oxidative stress induced by smoking.

Key words: Blood donors, HDL, oxidized LDL, paroxanase-1, smokers.

Effect of chronic smoking on sympatho - vagal balance

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Abstract

Introduction: Cigarette smoking has an unfavourable influence on autonomic balance and increases the risk for autonomic dysfunction. The autonomic nervous system maintains the internal homeostasis of cardiovascular, thermoregulatory, gastrointestinal, genitourinary, exocrine and pupillary functions. Therefore, the features of autonomic disorders have a wide spectrum.

Aim: The aim of the study is to see the evidence that cigarette smoking is injurious to health in general and Autonomic nervous system in particular.

Materials and Methods: Autonomic reactivity was evaluated in 50 smokers and compared to age and sex matched controls (non smokers). The autonomic function tests were conducted by using cardiowin system (Pc based 12 channel simultaneous digital ECG), Sphygmomanometer (Diamond), Littmann Stethoscope, Mouth piece and Hand grip dynamometer. The autonomic reactivity was evaluated by: 1. Deep breathing test, 2. Valsalva manoeuvre, 3. Hand grip test, 4. Cold pressor test, 5. Heart rate response to standing. SPSS software version '11' was used for statistical analysis, student 'T' test was used between smokers and non smokers.

Results: The results showed, a decrease in E:I ratio values in smokers compared to non smokers ($P < 0.01$). Valsalva ratio values were significantly decreased ($P < 0.0001$) in smokers. On cold pressor test, there was a significant fall ($P < 0.0001$) in blood pressure in smokers. In HR response to standing, 30:15 ratio values were significantly lower ($P < 0.0001$) in smokers. On hand grip test, SBP and DBP difference values were high in smokers and HR difference values were low in smokers.

Conclusion: The results obtained indicate towards decreased base line levels of vagal cardiac nerve activity and vagally mediated arterial baroreceptor cardiac reflex responses, increased sympathetic vasomotor activity and decreased muscle sympathetic nerve activity in smokers.

Key words: Autonomic function tests, Cigarette smoking, Muscle sympathetic nerve activity Sympathetic vasomotor activity, Vagal cardiac nerve activity.

Prevalence and type of hypertension among the single issues of primary hypertensive parents: A cross sectional study in a semi urban area of West Bengal. India.

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Abstract

Introduction: Essential or primary hypertension is known to run in families but the data on percentage and predominant type of hypertension in young adult who are the single issues of their primary hypertensive parents are lacking, particularly in India

Aim: So the present study was designed to throw light into this area.

Materials and Method: This study was conducted among 290 age and sex-matched young adults (150 males, 140 females), who were the singles issues of their primary hypertensive parents. Using a tight protocol, their blood pressures were meticulously monitored, tabulated and analyzed statistically.

Results: Significant number (164 out of 290) (56.55%) of these young people are found to have essential hypertension and majority were found to suffer from diastolic hypertension. There is no gender specificity in this regard.

Conclusion: Essential hypertension obviously runs in families and starts affecting the offsprings at their early age of life.

Key words: Essential / Primary hypertension, genetic factor, endothelium, haemodynamics, neural factor.

Effects of functional and balance training on quality of life among community dwelling older adults.

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Abstract

Introduction: The effectiveness of exercise interventions in older people with milder levels of balance dysfunction remains largely unexplored. There is scarce evidence on the effects of exercise interventions designed to prevent falls on the quality of life in older adults.

Aim: The aim of this study was to compare functional training and balance training in their influence on quality of life among older adults with mild to moderate fall risk.

Materials and Methods: Community dwelling individuals over 65 years of age with balance dysfunction were randomly allocated into functional and balance training interventions for 24 weeks. Quality of life was measured with the WHOQOL- BREF instrument before and after the intervention. Statistical analysis was done by using Student's unpaired "t" test.

Results: A total of 116 older adults (82 female, 34 male, mean age of 67.31 ± 3.06 years) completed the study, with 58 subjects in each group. WHOQOL-BREF score changes for the functional training group were 22.71±8.77on the physical domain, 19.59±9.90 on the psychological domain and 2.57±5.31 on the social domain and 22.28±7.76 on the environmental domain. For the balance training group, score changes were 8.21±7.30on the physical domain, 9.95±6.72on the psychological domain and 1.93±5.67 on the social domain and 10.50±6.67 on the environmental domain. While both interventions were beneficial, functional training led to greater improvement in quality of life among community dwelling older adults.

Key words: Quality of life, functional training, balance training, falls, older adults.

A Study on association of hypothyroidism with lipid peroxidation and dyslipidemia.

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Abstract

Introduction: Hypothyroidism is one of the secondary causes of cardiovascular diseases, which increases the risk for atherosclerosis by basically altering the lipid profile.

Aim: The objective of the study was to evaluate the association between degree of dyslipidaemia, lipid peroxidation and cardiovascular risk in newly diagnosed hypothyroid patients.

Materials and Methods: 85 hypothyroids and 41 euthyroids patients were subjected to thyroid function tests and lipid profile analysis by standard methods. Malondialdehyde (MDA) was analyzed as a marker of Oxidative Stress (OS) in all subjects.

Results: Dyslipidaemia was observed in all the hypothyroid cases significantly except for subclinical hypothyroids, especially for TC and LDL-C ($p<0.001$). Increased oxidative stress was observed in all subclinical hypothyroids (SHT) as well in severe hypothyroids, whereas it was low in mild and moderate hypothyroids. Risk of hypothyroids going into OS was statistically significant (OR 121.8; 95% C.I. $p< 0.0001$). TSH had significant positive correlation with all lipid parameters (except for HDL-C), lipid ratios and MDA.

Conclusion: Hypothyroidism leads to hyperlipidaemia enhancing risk for cardiovascular diseases, the connecting link being oxidative stress. Early diagnosis of subclinical hypothyroid patients, inclusion of antioxidants, measures to control dyslipidaemia, monitoring of patients for their OS status should be considered in the management of hypothyroidism.

Key words: Hypothyroidism, subclinical hypothyroidism, oxidative stress, dyslipidaemia.

Effect of Sudarshan Kriya yoga practise on lipid profile and lipid peroxidation in normal individuals.

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Abstract

Introduction: Sudarshan Kriya Yoga is a breathing technique introduced by Poojya Guruji Sri Sri Ravishakar, Founder of Ved Vignan Maha Vidya Peeth, Bangalore.

Aim: In this study 46 normal participants of basic course conducted by Ved Vignan Maha Vidya Peeth were selected for evaluation. Their lipid profile & MDA levels were analysed before the start of Sudarshan Kriya Yoga practice & consecutively at 7th day & 45th day after their practicing Sudarshan Kriya Yoga daily.

Results: There was a statistically significant fall in levels of serum total cholesterol, LDL cholesterol, MDA & increase in HDL cholesterol levels after practicing Sudarshan Kriya Yoga. The participants who had higher range of serum lipid profile & MDA before SKP showed a highly significant fall in the levels of serum total cholesterol, LDL cholesterol & MDA levels after 45 days of SKYP. No significant changes were observed in serum triglyceride &VLDL level.

Conclusion: These observations suggest that SKYP can be a tool for the prevention of a deranged Lipid profile& hypertension which is a major risk factor for Atherosclerosis.

Key words: SKYP, Sudarshan Kriya yoga practice, MDA, melanoldialdehyde.

A comparative diagnostic evaluation of abnormal uterine bleeding by hysteroscopy and transvaginal sonography.

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Abstract

Introduction: Abnormal uterine bleeding (AUB) is a common gynecological symptom of the women attending gynecological outpatient department and constitute 30-70%. Anything that can significantly improve the accuracy of diagnosing the cause of bleeding can reduce the frequency of hysterectomy as a cure.

Aim: The aim of the study is to evaluate the diagnostic efficacy of hysteroscopy versus transvaginal sonography in abnormal uterine bleeding and correlate with histopathological examination and the purpose of this study is to develop a cost minimization analysis from a societal prospective, by using transvaginal sonography in Abnormal Uterine Bleeding.

Methods: A Descriptive analytic prospective study was conducted in People Education Society Institute of Medical Sciences and Research (PES-IMSR) Hospital, Kuppam, over a period of two years. A total of 100 women were recruited for the study after taking consent from the gynecology outpatient department who were presented with abnormal uterine bleeding.

Result: Sensitivity of hysteroscopy was 98.48%, specificity was 85.29%, positive predictive value and negative predictive value were 92.85% and 96.66% respectively. Sensitivity of transvaginal sonography was 98.43%, specificity was 33.33%, and positive predictive value and negative predictive value were 72.41% and 72.41% respectively.

Conclusion: This study concluded that hysteroscopy had high specificity and equal sensitivity in comparison with TVS and high negative predictive value than TVS in detection of abnormal uterine pathology. TVS can be used as routine first step diagnostic technique but hysteroscopy followed by histopathology should be considered as gold standard for evaluation of abnormal vaginal bleeding.

Keywords: Abnormal uterine bleeding (AUB), hysteroscopy, transvaginal sonography (TVS).

Managing gallstones in association with dilated common bile duct – An observational study regarding safety and efficacy of side-to-side choledochoduodenostomy. study regarding safety and efficacy of side-to-side choledochoduodenostomy.

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Abstract

Introduction: With the widespread rise of obesity, more number of patients are presenting with gallstones and/or stones in the common bile duct (CBD). The most common cause of obstructive jaundice and cholangitis is choledocholithiasis which has significant morbidity. Traditionally, open cholecystectomy and CBD exploration was the treatment of choice.

Aim: This study aimed to evaluate the safety, efficacy and advantages of another procedure, side-to-side choledochoduodenostomy (CDD), in the management of choledocholithiasis.

Materials and Methods: The study cases were selected from among those who presented with signs and symptoms of CBD obstruction to the Surgical OPD of Darbhanga Medical College and Hospital, Laheriasarai, Bihar. The patients were treated by cholecystectomy followed by side-to-side choledochoduodenostomy. Postoperative follow up was continued after discharge also. The patients were categorised as per the length of their follow-up period and were reported to have excellent/good/fair/poor outcome based on the presence or absence of postoperative sequelae.

Results: There was nil procedure related mortality. 45% of the patients had complications but recovered well with conservative treatment. 75.6% of patients were discharged by the tenth postoperative day. 78.8% patients had an excellent outcome and only 3% had a poor outcome.

Conclusion: Hence, side-to-side choledochoduodenostomy is a simple, safe and effective procedure for internal drainage of bile in cases of common bile duct obstruction due to choledocholithiasis.

Key words: Choledocholithiasis, common bile duct (CBD) obstruction, side-to-side choledochoduodenostomy (CDD).

Assessment of malnutrition in adolescents - A cross sectional school based study in Bhubaneswar of Orissa.

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Abstract

Introduction: Adolescence is the period of transition from childhood to adulthood characterized by marked acceleration in growth. This period is known to be a second chance for growth or catch-up growth for those children who have experienced a nutritional deficit in their early life.

Aim: Assessment of malnutrition among adolescent students in a High school, of Bhubaneswar by calculation of individual body mass index (BMI).

Materials and Methods: This was a school based descriptive epidemiological study done among adolescent students. Conducted in a high school near our Urban Health Centre area, Acharya-vihar, Bhubaneswar. Anthropometric measurements of students from class-VIII to X were recorded.

Results: 339 students aged between 10 and 19 years were involved in this study, of which 170 were boys and 169 were girls. Results showed undernourishment was 76.1% in study population according to BMI calculation. Thinness was present in 80% boys and 72.1% girls. Comparision of BMI between boys and girls shows undernourishment was found more among boys than girls ,but it was not significant statistically (X^2=2.3,P>0.05). The mean BMI was found to be more among boys than girls, but statistically significant only in the age group from 12yrs to 15yrs.

Key words: Body mass index, percentage, chi-square test, Student's t-test.

Association of adiposity with cardiovascular reactivity in Maharashtrian Indian adolescents - A gender based study.

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Abstract

Introduction: Studies have reported that both gender and adiposity influence cardiovascular reactivity amongst adolescents. However, not much is known about the effect of gender on the association of adiposity with cardiovascular reactivity.

Aim: The current study was conducted to learn how gender affects the association of adiposity with cardiovascular reactivity in the Marathi Indian adolescents so as to develop preventive strategies for the local population.

Material and Methods: A cross-sectional study was conducted on 428 (Girls-173, Boys- 255) Marathi Indian adolescents of age group 16-19 years. Adiposity was assessed in terms of Body Mass Index (BMI), Body Fat Percentage (BF %), Fat Mass (FM), Fat Mass Index (FMI) and Waist Circumference (WC). Percentage Rise in Pulse Rate (% RPR) and Percentage Rise in Diastolic Blood Pressure (% RDBP) during Isometric Handgrip Test were used to assess the cardiovascular reactivity to acute sympathetic stress. Pearson's correlation coefficient was determined to find the association of adiposity with cardiovascular reactivity.

Results: Boys were found to have a significantly larger WC, higher physical fitness and greater % RDBP in comparison to girls while girls had a significantly higher BF% and FMI in comparison to boys. In both boys and girls, BMI, BF%, FMI and WC showed significant positive association with % RDBP with stronger correlationship found in girls. Girls also showed a significant negative correlationship between physical fitness and vascular reactivity.

Conclusion: It could thus be concluded that gender affected the association of adiposity with vascular reactivity in Marathi Indian adolescent girls tend to have a larger correlationship between adiposity and vascular reactivity than boys which is most likely due to lower physical fitness.

Key words: gender total adiposity, visceral adiposity, cardiovascular reactivity, physical fitness.

Mycological profile of "Dermatomycoses" in patients attending tertiary care hospital in South India.

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Abstract

Introduction: Dermatomycoses are infections of skin, hair and nail caused by both dermatophytic and non dermatophytic fungi. Worldwide it is prevalent. Definitive diagnosis of dermatomycoses before initiating specific therapy may be very effective in reducing the infection rate.

Aim: The present study was undertaken with an aim to identify the etiological agents of dermatomycoses.

Materials and Methods: Clinical specimens such as skin, hair and nail were collected & subjected to Potassium Hydroxide (KOH) wet mount and inoculated on to the Sabouraud's Dextrose Agar (SDA) with and without antibiotics and Dermatophyte Test Medium (DTM). The results were noted.

Results: Hair was less affected 4.87% (10/205 samples), when compared to skin 51.21% (105/205 samples) and nail 43.90% (90/205 samples). Of the 205 specimens, the KOH wet mount positive includes 49/205 (23.90%) and the culture positive includes 44/205 (21.46%). The most common fungal etiology was *Trichophyton rubrum* 31.81% (14/44 isolates).

Conclusions: This study findings suggest that both KOH wet mount and culture are essential to identify the etiological agent for proper treatment.

Key words: Dermatomycoses, non dermatophytic fungi, onychomycosis, *Trichophyton rubrum*, potassium hydroxide wet mount.

Comparison of serum and salivary iron and vitamin C levels in healthy and chronic periodontitis subjects – A biochemical study.

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Abstract

Introduction: Although bacterial plaque is the primary initiating factor for periodontitis, the host plays a major role in resisting infection. Vitamin C and iron are some of the relatively few nutrients examined in relation to periodontal disease.

Aim: The objective of this study was to investigate the salivary and serum levels of vitamin C and iron in periodontitis and normal healthy subjects.

Materials and Methods: 50 subjects with age of 25-60 years with teeth ≥ 20 present in the oral cavity were enrolled in the observational case-control study, in which group I included 25 healthy subjects and group II included 25 subjects with periodontitis. Periodontitis was diagnosed on the basis of criteria given by Russell A.L.

Results: The results of periodontitis subjects showed a statistically significant decrease in levels of iron and vitamin C in both serum and saliva when compared to healthy subjects ($p<0.001$).

Interpretation and conclusion: Since the concentration of Vitamin C and Iron in serum and saliva between healthy controls and periodontitis subjects is HS, saliva can be used as diagnostic marker instead of serum. This can serve as a non invasive diagnostic tool for detection of periodontitis.

Key words: Iron, Periodontitis, Risk factors, Vitamin C.

Adverse effects of anti-tuberculosis treatment under directly observed treatment short course (DOTS) on liver function test - A hospital based study.

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Abstract

Introduction: Tuberculosis is a chronic bacterial infection caused by *M. tuberculosis.* Directly Observed Treatment, Short Course (DOTS) was introduced in India in 1993. In spite of implementation of DOTS, it is still a major health concern.

Aims: The present study was taken up to study the adverse effects of anti-tuberculosis drugs in Direct Observed Treatment - Short Course (DOTS) chemotherapy on liver function test.

Material and Methods: The study included 102 (one hundred and two) already diagnosed TB patients. Diagnosis of pulmonary TB was made by sputum examination for AFB, chest X-ray, Mantoux test, FNAC, etc. Other forms of TB were diagnosed with appropriate examination depending on the site of occurrence. Patients were then classified according to their sputum result, treatment history and site of occurrence of disease and ATT was administered according to the DOTS drug regimen.

Results: Males were found to be more commonly affected by tuberculosis than female (76.47% against 23.53%). Higher incidence of TB was found in the age group of 31-40 years (27.45%). Majority of TB cases (57.84%) were with the body weight ≤ 50 Kg and abnormal liver function test was found to be more in Category I patients.

Conclusion: The present study shows that tuberculosis was more prevalent in the age group 31-40 years (27.45%) and among the males. Liver function test was found to be abnormal in the majority of category I patients. There was significant association of different categories of treatment with abnormal serum billirubin, alkaline phosphatase, SGOT and SGPT.

Key words: ATT, DOTS, liver function test, SGOT, SGPT, ALP

Evaluation of proinflammatory cytokines in breast cancer.

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Abstract

Introduction: Proinflammatory cytokines promote cancer progression.

Aim: The present study was aimed to evaluate the role of two proinflammatory cytokines namely, Interleukin 6 (IL-6) and Tumor Necrosis Factor- α (TNF- α) in breast cancer patients.

Materials and Methods: This study comprises of 75 breast cancer patients and 25 healthy subjects. They were categorized into three groups, based on the disease stage, age and menopausal status. Serum concentrations of IL-6 and TNF- α were estimated by quantitative sandwich ELISA method.

Results: Significantly elevated concentrations of IL-6 and TNF- α were observed in breast cancer patients when compared with healthy subjects. Furthermore, elevated concentrations were seen with advancement of disease. No association has been found with age and menopausal status.

Conclusion: This clearly indicates their positive role in breast cancer progression.

Key words: Proinflammatory cytokines, Interleukin 6, Tumor Necrosis Factor- α.

Role of waist-to-height ratio on percent recovery heart rate in young adult males of Bijapur, Karnataka (India).

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Abstract

Introduction: Obesity is a rapidly growing health problem across the globe. Elevated body mass index (BMI) is a well-established etiological factor of cardiovascular diseases.

Aim: This study was designed to evaluate the influence of body mass index and waist to height ratio which are known predictors of cardiovascular diseases, with % recovery heart rate in male adult subjects of Bijapur, Karnataka, India.

Methods: 52 adult males belonging to mean age group of 24.16 ± 8.12 was selected as subjects from the general population of north Karnataka, randomly for this study. The BMI, W/Ht and WHR were calculated. Subjects performed submaximal exercise test by using cycle ergometer. Heart rate and blood pressure were measured before exercise (pre-exercise), immediately after exercise (peak-exercise) and 2 minutes after cessation of exercise (post-exercise) and percent recovery of heart rate was calculated.

Results: There was a statistically significant positive correlation between BMI, waist hip ratio, waist to height ratio with mean arterial pressure, and a significant negative correlation was found between waist to height ratio and percent recovery heart rate.

Conclusions: This study concludes that WHtR may be considered as an important anthropometrical tool which correlates with cardiovascular fitness among young male adults of Bijapur. This anthropometrical parameter may also be used to evaluate metabolic syndrome or insulin resistance diabetic status of an individual.

Key words: Heart rate recovery, mean arterial blood pressure, BMI, waist to hip ratio, waist to height ratio.

Study of lung function tests in type II Diabetes Mellitus in west Bengal.

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Abstract

Introduction: Prevalence of Diabetes Mellitus (DM) is increasing gradually particularly in India. DM leads to secondary pathophysiological changes including those of respiratory system. Biochemical changes result in impaired collagen and elastin cross-linkages leading to reduced strength and elasticity of connective tissues. In the lungs it leads to thickened alveolar and capillary lamina leading to reduced pulmonary elastic recoil and lung volumes affecting ventilation.

Aim: Current study was done to evaluate various lung function tests subclinical pulmonary dysfunction in cases of DM at an early stage for prompt intervention to reduce morbidity and mortality.

Materials and Methods: Sixty diabetic patients and sixty non-diabetic subjects were selected as cases and controls and studied at RG Kar Medical College for FVC-PP, FEV1-PP, FEV1/FVC-PP, PEFR-PP, DLCO, DL/VA, FEF-PP.

Results: All except FEV1/FVC-PP showed significant reduction in patients with DM.

Key words: Lung Function Test, FVC, FEV1/FVC-PP, PEFR-PP, DLCO-PP.

Lipid peroxidation, dyslipidemia and glycated hemoglobin in controlled and uncontrolled type 2 diabetes mellitus

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Abstract

Introduction: Dyslipidemia associated with lipid peroxidation has always been an area of major concern in the field of diabetes mellitus. The present study was undertaken to evaluate and correlate serum MDA, lipid profile and glycated hemoglobin in type 2 diabetes patients who were grouped as controlled (group I) and uncontrolled type 2 DM (group II). Glycated hemoglobin value of > 9.0% was taken as uncontrolled type 2 DM.

Materials and Methods: A total of 150 patients were studied which included 50 controlled type 2 DM, 50 uncontrolled type 2 DM and 50 normal individuals from April 2011 to March 2012. All the tests were performed using Biosystems A-15 fully automated analyser.

Results: The results were expressed as mean ± SD using ANOVA and student 't' test. Statistical analysis showed that there was an increase in lipid peroxidation (MDA) and increased levels of lipid parameters (TC, LDL-C, VLDL-C, Non HDL-C and TG) except HDL-C which showed decreased levels in diabetic patients when compared to controls. This was more pronounced in patients with uncontrolled type 2 DM (HbA_{1c} > 9.0%).

Discussion: Poor glycemic control and dyslipidemia are associated with increased lipid peroxidation which is implicated in development or worsening of diabetic complications. This study demonstrates a close relationship between lipid peroxidation, dyslipidemia and glycated hemoglobin. The production of reactive oxygen species have been directly related to hyperglycemia and dyslipidemia. This indicates the etiological role of oxidative stress and dyslipidemia with increased HbA_{1c} levels in uncontrolled type 2 DM.

Conclusion: Increase in lipid peroxidation product MDA associated with the weak antioxidant defense probably serves as an important etiological factor for the pathogenesis of both macrovascular and microvascular complications in uncontrolled type 2 DM.

Key words: Lipid peroxidation, Dyslipidemia, Glycated hemoglobin.

Comparative study on distribution of ABO blood group system in carcinoma oesophagus and normal population.

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Abstract

Introduction: According to cancer registries, in India carcinoma oesophagus is the second most common cancer among males and fourth most common cancer among females.

Aim: The aim of the study was to find the relationship and pattern of ABO blood groups in carcinoma oesophagus, so as to assess the utility of ABO blood group as one of the preclinical markers in high risk patients.

Material and Methods: It is a retrospective hospital based, case control study. The data on age, sex & ABO blood group of 205 (males=113 and females=92) cases (carcinoma oesophagus) and controls were collected from blood bank & hematology laboratory attending cancer hospital, Hubli, during the period June 2011 to May 2012. Statistical analysis was assessed by Chi-square test using SPSS 16.

Results: The pattern of ABO blood group in control is O >A>B>AB .The pattern of ABO blood group in carcinoma oesophagus is B>O>A>AB. Significant variation was seen in the distribution of ABO blood groups between the total cases and controls (p value<0.05) and particularly in males (p value<0.05). Significant variation was not observed in females.

Conclusion: Carcinoma oesophagus is more prevalent in males with Blood group B.

Key words: ABO blood groups, cancer, oesophageal cancer.

Case Reports

An unusual case of poorly differentiated neuroendocrine carcinoma of rectum in a young lady - A case report.

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Abstract

Small-cell carcinoma (SCC) of the rectum is an uncommon pathologic finding, and its precise incidence is unknown. Its incidence is less than 0.2 percent among all colorectal cancers. This study presents a case of a 27year old woman with small-cell carcinoma of the rectum. She had bleeding per rectum for 5 days and mucus diarrhea since last one year. Colonoscopy showed infiltrative lesion and biopsy was taken & histology was performed. Histopathology revealed monotonous small round cell islands set in desmoplastic stroma, provisional differential diagnosis of non Hodgkin's lymphoma or small cell carcinoma were kept morphologically. Finally immunohistochemistry hitted the rare unusual diagnosis

Key words: Neuroendocrine carcinoma, small cell carcinoma, Hodgkin's lymphoma, rectum, young lady.

Guillain-Barre Syndrome – A case report

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Abstract

Guillain-Barre Syndrome (GBS) is a rare life threatening disorder in which immune system attack over the peripheral nervous system leading to acute polyneuropathy. Worldwide, the annual incidence is about 0.6–4 occurrences per 100,000 people. The weakness gradually spreads towards upper part of the body. This leads towards paralysis. Recovery may take place either after few weeks or after few years. This can be diagnosed by careful medical history & complete physical examination of the patient. Electromyography (EMG) & nerve conduction velocity (NCV) studies are more suitable for accurate diagnosis. The authors discussed a very rare case of GBS occurring in a 4 years old child. On clinical examination pediatrician found left leg paralysis with loss of proprioception (position sense) & complete loss of deep tendon reflexes. He also found loss of touch, pain & temperature sensations only over the lower extremities. The NCV study showed prolonged distal latencies with slower conduction velocity in lower limbs. The conduction block was noted in left sided lower limb. The block was not seen in right sided leg. F wave was found absent. Intravenous immunoglobulin with prompt supportive care makes majority of cases recovers.

Key words: Guillain-Barre Syndrome, NCV study.

Duodenal diverticulum – A case report.

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Abstract

The duodenum is the second most common site for gastrointestinal diverticulum after colon. The author report here, a case of solitary duodenal diverticulum, arising from its second part in a 65 year old male cadaver during routine dissection of abdomen in the department of Anatomy, Rajarajeswari Medical College and Hospital, Bangalore. The diverticulum in the present case was a thin out pouch, measuring 3.3.cms in length and extending into the lower part of the head of pancreas with the major duodenal papilla opening at the lower left margin of the diverticulum and it was of periampullary type. There were no signs of previous insults like ulceration, inflammation or scarring in or around the diverticulum. The presence of duodenal diverticulum explained anatomically in this case report gains importance compared to the available literature investigated radiologically and adds to the existing knowledge about such diverticula, thereby facilitating early detection and surgical intervention if needed.

Key words: Duodenal diverticula, major duodenal papilla, pancreatic duct, bile duct.

Elevated lactate dehydrogenase in pyrexia of unknown origin – A case report.

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Abstract

A case of a female patient who came with the history of fever with chills for two weeks duration and was extensively evaluated for the cause of fever. All other causes of fever were excluded. The patient had elevated level of Lactate dehydrogenase (LDH) upto 966 IU/L. On CT and biopsy of the enlarged lymph nodes, patient was found to have hilar lymphadenopathy with reactive lymphadenitis, which could have been the cause for her symptoms. The cause of the elevated LDH remains to be evaluated.

Key words: Lactate dehydrogenase, Hilar lymphadenopathy.

A chronic inflammatory gingival growth– A case report

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Abstract

Gingival growth can be classified as inflammatory and non inflammatory. The common inflammatory gingival growth are traumatic fibroma, pyogenic granuloma, fibrous epulis which are all associated with local factors such as plaque and calculus, which acts as the main stimulant, provoking such growth . Non inflammatory gingival growth though not very common can occur in few cases mimicking an inflammatory growth, which need to be evaluated properly as gingiva accounts for the most common site for oral soft tissue metastasis. This article reports a case of a chronic inflammatory gingival growth of one year duration in a 33 year old female patient.

Key words: Pyogenic Granuloma, inflammatory growth, gingival growth, benign growth

Influence of stress and depression in the outcome of Periodontal therapy - A case report.

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Abstract

Periodontal diseases are opportunistic infections caused by specific periopathogenic microorganisms and their metabolic products. They lead to a characteristic inflammatory reaction of the gingiva, which subsequently destroys periodontal structures. In addition imbalances in the immune system caused by environmental factors such as physical or mental stress leading to breakdown in the equilibrium which is present between tissue destruction and repair thereby resulting in tissue damage. Stress can be best understood as part of a complex and dynamic system of transaction between individuals and their environment. The purpose of this paper is to critically evaluate the evidence for an association between stress & periodontal therapy and assessing the mechanism by which stress may affect the periodontal disease.

Key words: Stress, depression, periodontal diseases, risk factor, coping behaviour.

Letters to the Editor

Scrofuloderma presenting as chronic non-healing neck ulcer

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