



Comparison of C - Reactive Protein and Lipid Profile in Obese Poly Cystic Ovary Syndrome Women and Normal Women of the Reproductive Age Group – A Prospective Case-Controlled Trial

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Abstract: Serum (C Reactive Protein) CRP is a good predictor of vascular events and has been linked to polycystic ovarian syndrome (PCOS). The increased CRP may be an early marker of upcoming atherosclerotic diseases like coronary artery disease and stroke. To identify the disease of PCOS and its interrelation with increased CRP may work as a clue for its disease progression. The purpose of this study is to evaluate the high-sensitivity C- reactive protein, which is a characteristic of individuals with PCOS of reproductive age. The sample size for this prospective randomized study was 200 people, divided into two equal groups (with or without PCOS). This study included 100 obese women with the polycystic ovarian syndrome and 100 matched controls. These women's blood samples were tested for serum lipid profile and hsCRP.. The demographic variables were similar between the groups. Our findings revealed that patients with PCOS had high LDL and triglyceride levels. HDL levels were extremely low. This indicates a poor lipid profile in PCOS patients. (The p-value is 0.001). The hs CRP was 9.3 mg compared to 2.9 mg in the control group. According to our findings, hs CRP may provide information about the presence of the disease. As a result, more research is needed to explain the potential role of C-reactive protein in the disease incidence and progression of polycystic ovarian syndrome. Even though there are a lot of studies linking these two, we have done for Hs CRP and PCOS. The sample size is on the higher side in our study.

Keywords: Poly Cystic Ovary Syndrome, Obesity C-Reactive Protein, Body Mass Index, Lipid Profile and Dyslipidemia

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Assessment of Spirometry in Patients with Chronic Obstructive Pulmonary Disease and Its Correlation with High-Resolution Computerized Tomographic Scan Findings

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Abstract: Chronic Obstructive Pulmonary Disease (COPD) is a chronic inflammatory lung disease characterized by persistent airway inflammation. Spirometry is considered a gold standard for diagnosing COPD severity, high Resolution CT is needed for the analysis of various phenotypes of COPD and to quantify emphysema. Therefore, we conducted a study for assessment of the clinical severity of COPD using spirometry and correlating it with the High-Resolution CT finding. The present study subjects were new and previously diagnosed COPD patients who were fulfilling the inclusion criteria were enrolled in the study. The total study population is 45 patients. All the Patients who are enrolled in the study were subjected to pulmonary function test assessment and they are subjected to High Resolution Computed Tomography and the severity is correlated. Among 45 patients enrolled in the study, the majority of the patients were in the age group of more than 61 years (71.1%).13.3% of patients had mild COPD, 51.1 % moderate COPD, 26.7% severe and 8.8% very severe COPD patients with mean post-bronchodilator FEV1 (57.17) based on GOLD guidelines. In our study 44.4 % are smokers, 20 % are Ex-smokers and 35.6% are non-smokers. Out of the non-smokers, 10 were female and 6 were male patients (37.5%) and Smoking status is statistically significant in our study with a P value of 0.023. On correlating the High Resolution CT finding with the Spirometry, 35 patients had bronchial wall thickening, on comparing it with the COPD GOLD staging mild (33%), moderate (69%), severe (92%, very severe (100%). The p-value is 0.025. Emphysema was seen in 83%(n=5/6) of mild, 91% of moderate 75% of severe, and 100% of very severe patients and it correlated well with Spirometry and the p-value is 0.005, Mean lung density decreased with a decrease in Post FEV1%. The severity of emphysema and Bronchial wall thickening correlated well with the High-Resolution CT finding and they showed a positive correlation with Post FEV1.

Keywords: COPD, Spirometry, CT Scan, Chronic Obstructive and Correlation

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Efficacy of In-House Quality Control Material Compared to Commercially Available Quality Control for Thyroid Hormone

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Abstract: Laboratory results in clinical laboratories are being generated by automated analyzers. The constant use of commercial control materials is not economically feasible for many countries because of the non-availability or high cost of those materials. Therefore, the preparation of in-house quality control serum will be cost-effective for use in the laboratory. The commercial quality control for immunoassay is costlier and as per NABL 112 criteria, at least two levels of quality control should be run every day for a laboratory with a large sample load. To overcome this problem our study aims to evaluate the efficacy of in-house pooled serum quality control in comparison with commercial internal quality control samples in thyroid hormone tests. We prepared in-house quality control from leftover samples of subjects tested for thyroid profile after being screened for HIV, HCV, and HBsAg by pooling them together in a glass jar serum and kept in a deep freezer at -20°C. Pooled serum was aliquot into 20 vials each containing 500 µl. Every day along with commercial internal QC, one aliquot of pooled serum was analyzed for thirty days for the following parameters: TSH, FT3, FT4. After getting thirty values for each parameter, mean, standard deviation, and coefficient of variation were calculated for both IQC commercial sample and pooled serum sample.: In-house prepared quality control material performed as well as commercial quality control for thyroid profile. Therefore, prepared in-house quality control can be a good substitute for commercial quality control for thyroid profile.

Keywords: In-House Quality Control, Commercial Internal Quality Control, Pooled Serum and Thyroid Hormone.

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Research Article



Serum Vitamin D Levels in Different Phenotypes of Polycystic Ovarian Syndrome (PCOS) A Case-Control Study

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Abstract: Polycystic ovarian syndrome (PCOS) is the most common heterogeneous multisystem endocrinopathy in women of reproductive age, with an ovarian manifestation of various metabolic disturbances. Based on Rotterdam criteria, PCOS is further classified into four phenotypes. Vitamin D deficiency affects 65- 75% of PCOS patients. There is very little research on the relationship between vitamin D deficiency and PCOS phenotypes. As a result, we intended to investigate the relationship between vitamin D, PCOS, and various PCOS phenotypes. This is a case-control study where we had been 100 people in the study. A total of 50 PCOS participants were classified into phenotype A, phenotype B, phenotype C, and phenotype D using Rotterdam criteria. There were 50 participants who did not have PCOS. Serum vitamin D levels were measured in the study population. The CIDRF (Central Inter-Disciplinary Research Facility) used an ELISA kit and reader to quantify vitamins. The results obtained were further classified as deficient (20ng/ml), insufficient (21-29ng/ml), and sufficient (30ng/ml). SPSS version 17 was used to analyse the results. The mean vitamin D level among women with PCOS was 15.9 ± 9.3 , women without PCOS was 20.5 ± 9.2 , the difference between the means was statistically significant ($p=0.015$). Among the participants with PCOS Phenotype A accounted for 36%, phenotype B 26%, phenotype C 20%, phenotype D 18%. The serum vitamin D levels among different phenotypes of PCOS was not statistically significant ($p=0.978$). There was no statistically significant difference in the mean vitamin D levels, among the phenotypes of PCOS ($p = 0.978$). Vitamin D deficiency was found to be more prevalent in women with PCOS in this study. In PCOS, it is recommended to screen for and treat with vitamin D. There is no significant difference between phenotypes.

Keywords: Ovarian Disease, Polycystic, Phenotype, Vitamin D and Correlation

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Central Corneal Thickness Changes in Diabetic Retinopathy. A Prospective Observational and Correlative Study

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Abstract: Generally, there is a delay of 4 to 7 years in the diagnosis of type 2 diabetes and about 20% of patients would have already developed some micro vascular complications at the time of diagnosis. To study the central corneal thickness (CCT) variation and correlate with grades of diabetic retinopathy in an adult South Indian population. The study was conducted on 184 eyes each of T2DM patients of duration more than 5 years. 98 males (53.26%) & 86 females (46.73%) were recruited. After recording age, sex and duration of diabetes, fundus examination was done. CCT measurements were determined using Ultrasonic Pachymetry. Diabetic retinopathy was classified based on ETDRS (Early diabetic retinopathy study) and mean CCT values of each group were correlated and statistically analysed using SPSS software Version 17. Out of 184 subjects recruited, 72 patients were with no diabetic retinopathy (NDR), 107 patients were with non-proliferative diabetic retinopathy (NPDR) and 5 patients were with proliferative diabetic retinopathy (PDR). The mean CCT of no diabetic retinopathy (NDR), non-proliferative diabetic retinopathy (NPDR) and proliferative diabetic retinopathy (PDR) were found to be 526.14 μ m, 533.98 μ m and 555.20 μ m respectively. CCT was found to be thicker for diabetics with proliferative diabetic retinopathy compared to those with no retinopathy; the difference was not statistically significant ($p=0.16$). Uncontrolled diabetics ($HbA1c >7\%$) had thicker corneas compared with diabetics with good control which was statistically significant ($p=0.003$). CCT was higher in diabetics having duration > 10 years than with duration <10 years but was not statistically significant ($p=0.117$).

Key Words: Type 2 Diabetes Mellitus, Grades of Diabetic Retinopathy, Central Corneal Thickness, $HbA1c$ and Ultrasound Pachymetry.

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Research Article



Effect of Suryanamaskar Practices with and Without Yoga Nidra On Stress Among High School Students- A Randomized Controlled Trial

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Abstract: Stress is the dynamic connection that exists between an individual and environment where a stimulus (whatever it is) disrupts a person's homeostasis, causing him or her to react to the circumstances with all resources available. The purpose of this study was to determine the effect of suryanamaskar practises with and without yoganidra on stress levels in high school students. It was hypothesised that the influences of suryanamaskar practises with and without yoga nidra would cause significant differences in stress levels among high school students. To achieve the study's goal, 45 high school students from various schools near Kandigai, Chennai, with ages ranging from 12 to 15 years old, were chosen and divided into two experimental and control groups of 15 students each. Suryanamaskar practices with yoga nidra were performed by Experimental Group I, and Suryanamaskar practices without yoga nidra were performed by Experimental Group II for a period of 6 weeks, for an hour in the morning. The control group was not exposed to any specific training but they participated in the regular activities. Before and after the training, three groups were given pre- and post-tests. The Everly and Girnando Questionnaire was used to assess stress. The data collected from the three groups prior to and after the training period were statistically analysed using Analysis of Covariance (ANCOVA) to determine the significant difference and tested at the 0.05 level of significance. The study's findings revealed that suryanamaskar with and without yoga nidra reduced stress significantly. Suryanamaskar combined with Yoga Nidra is more effective than Suryanamaskar alone.

Keywords: Students, Stress, Yoga, Suryanamaskar

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Influence of Left Ventricular Morphology and Functions in The Accuracy of Non-Invasive Blood Pressure NIBP Recording Compared to Intra-Arterial Pressure IAP - A Correlative Study

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Abstract: Non-invasive blood pressure measurement with a brachial cuff sphygmomanometer is an important assessment tool in the diagnosis and management of hypertension and disturbed hemodynamic status. However, when compared to intra-arterial BP, the accuracy of BP measured by non-invasive methods remains questionable. The study attempted to estimate the difference in blood pressure measured by the two methods, as well as analyse the impact of left ventricular morphology and functions on the magnitude of the BP difference recorded by invasive and non-invasive methods. Methods: The subjects were patients undergoing diagnostic coronary angiography for the evaluation of chest pain. The morphology and functions of the left ventricle were determined as part of the routine pre procedural screening. NIBP and IAP were measured twice during the CAG at the radial and aortic levels. Non-invasive BP was measured using a brachial cuff of mercury sphygmomanometer by the auscultatory method. Results of our study revealed that in non-invasive BP both the systolic and the diastolic pressures were higher than their corresponding recordings obtained by invasive methods. The ECHO-derived left ventricular hypertrophy and left ventricular diastolic function correlated positively with the systolic and diastolic pressure differences respectively. Conclusion: Hence we suggest evaluation of the above parameters by echocardiography after obtaining a high BP by non-invasive methods can be done before the commencement of anti-hypertensive drugs A pre-treatment echo will give a clue on the differences.

Keywords: Blood Pressure, Accuracy Non-Invasive, Invasive Pressure, Echocardiography and Left Ventricular Function

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Randomized Control Trial of Functional Outcome between Instrumented Posterior Lumbar Interbody Fusion and Posterolateral Fusion in Degenerative and Isthmic Adult Spondylolisthesis.

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Abstract: Spondylolisthesis is a spinal condition that affects the lumbosacral vertebrae. This disease causes one of the lower vertebrae to slip forward onto the bone directly beneath it. It's a painful condition but treatable in most cases. Although spondylolisthesis can be asymptomatic, patients with degenerative and isthmic spondylolisthesis typically present with low back pain, neurologic symptoms, and/or radicular symptoms. The surgical treatment of spondylolisthesis is indicated for cases of neurogenic claudication, intractable radicular pain, severe low-back pain, presence of neurological symptoms, failure of conservative management, radiological instability, progressive worsening of the listheses, Meyerding grade III and IV listhesis, and spondylosis. The ideal surgical treatment remains controversial. We have compared the functional outcome following instrumented posterior lumbar interbody fusion and posterolateral fusion for adult spondylolisthesis in our study. The prospective study was conducted in the Department of Orthopaedics. A total of 30 patients who satisfied both the inclusion and exclusion criteria and gave informed consent were recruited for the study from January to December 2019. The patients were randomized into two groups. Of 30 patients, Group 1 (n=18) underwent Posterior lumbar interbody fusion and Group 2 (n=12) underwent Posterolateral fusion. Random number generators were used for allotting the patients to the specified group. Using Oswestry Disability Index, Japanese Orthopaedic Association Score and Visual Analog Score were used for pre-operative and post-operative functional scoring. The mean age among those who received PLIF was 53.67 years and among those who received PLF was 55.17 years. Spondylolisthesis at L4-L5 comprised 66.7% among those who received PLIF and 58.3 % among those who received PLF. Neurological deficit was present in 66.7% of the participants who had received PLIF and 100% of the participants who have received PLF. Concerning those who had received PLIF as treatment, 11 patients had excellent and 7 patients had better outcome in PLIF group, 7 patients had excellent and 5 patient had better outcome in PLF group.. The mean JOAS pre-intervention score was 6.66 and 6.40 for PLIF and PLF groups, respectively. In the 6th month mean JOAS score of the PLIF group was 11.16 and that of the PLF group was 10.16. The pre-intervention mean VAS score was 6.44 and 6.50 for PLIF and PLF groups, respectively. In both, the groups over the follow-up period mean VAS score had shown a decreasing trend. Our study did not show any significant difference in functional outcome between both groups, however there seems to better short term (3 months) and mid-term (6 months) pain relief in PLIF group when compared to PLF group. Long term follow-up studies along with radiological outcome may help in establishing superiority between both procedures.

Keywords: Posterolateral Instrumented Fusion, Posterolateral Fusion, Degenerative, Isthmic, Spondylolisthesis.

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Coping Strategies Adopted By First Year Medical Students and Their Academic Outcomes

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Abstract: Medical students tend to experience greater overall psychological distress when compared to the levels of distress observed in the general population. A careful analysis of the coping behaviors and their associations with personality factors etc., in the light of their biological basis, may offer important clues for successful interventions in order to yield fruitful academic outcomes. The fundamental aim was to evaluate the associations between the choice of coping strategies and the Big Five Personality traits among academic high- and low-achievers, and average students who have recently been exposed to the medical curriculum. The other three aims were to evaluate the relationship between the employment of coping strategies and psych morbidity among the above group; to explore the gender-based differences among the above student category; to assess the variations in the associations of adaptive/maladaptive coping with relationship to personality and other factors in the light of higher biological control mechanisms. The voluntary participants of the study include one hundred and forty-two first year medical students (68 males, 74 females) from a private University in Puducherry state, South India. The self-rating anxiety scale and self-rating depression scales were found out. The personality traits were elucidated using the NEO-FFI (NEO Five Factor Inventory), which was administered to all the participants. Those with T-scores above 50 were classified as having elevation in the concerned personality trait. After evaluating the scores of the various personality traits. The average marks secured by the students in four consecutive academic examinations was entered. Correlations between the coping strategies and the above mentioned factors among low- achievers revealed a) a small negative association between TOC and Neuroticism ($p<0.05$); b) a small positive correlation between EOC and anxiety scores ($p<0.05$); c) a negative association between TOC and anxiety and depression ($p<0.05$); and d) a negative association between AOC-SD and depression scores ($p<0.05$) were noted. . Studies concerning the link between coping strategies, personality and psychopathology may help in identifying certain risk and resilience factors that could influence the impact of stressful academic training for individual students.

Key words: Students, Medical, Psychology, Stress, Coping, Academics

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Evaluation of Liver Function Tests in Normal Pregnancy-An Observational Epidemiological Study-Kumbakonam Urban Rural Epidemiological Study-KURES 10

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Abstract: Early interpretation of liver function tests (LFTs) can result in timely management and it may decrease the incidence of complications in both the mother and the foetus. Normal LFTs don't always imply a normal liver. A number of drawbacks can occur when interpreting basic blood LFTs. Abnormal Liver Function Tests (LFTs) in pregnancy must be properly interpreted to avoid diagnostic pitfalls. we did a routine testing in 498 asymptomatic antenatal mothers in the third trimester. Ninety-seven percentage of mothers had normal bilirubin while 93 % had normal enzyme levels. The other abnormal values were also within 1 to 1.5 % above the normal. No mother had any symptoms. Only two patients had gallstones whose LFTs were normal. Two mothers had tattoo marks while the other two were HbSAg positive. All the 498 mothers had an uneventful progress towards delivery. Cross consultation done on a few cases with abnormal values were non-contributory. Pregnancy-related disorders are the most common reason for unusual liver function tests during pregnancy, especially in the third trimester. We omitted such cases to support our hypotheses of avoiding undue testing. The most prevalent is pre-eclampsia-related disorder. This is the first such study on a huge sample size. We suggest a routine testing of LFTs is not needed in otherwise healthy antenatal mothers.

Keywords: Pregnancy, liver, laboratory, test and Epidemiological

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Effectiveness of Kegel Exercise Combined With Utkatasana on Symptoms Associated With Stress Urinary Incontinence On Middle Aged Women

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Abstract; Millions of women are affected by Stress Urinary Incontinence (SUI). Here stress urinary incontinence refers to physical pressure rather than mental stress. SUI is one of the most common types of urinary incontinence. Kegel exercise and Utkatasana treats SUI symptoms by reinforcing weakened pelvic floor muscle and improving elasticity. But there was no evidence found that Kegel exercise combined with Utkatasana on symptoms associated with stress incontinence. so, the purpose of the study is to find out the effects of Kegel exercise and Kegel exercise combined with Utkatasana for symptoms associated with Stress Urinary Incontinence. This is a quasi-experimental study, 20 samples diagnosed with stress urinary incontinence referred from the department of urology of a tertiary care institution, aged between 25-50 years, who were willing were included in this study. Subjects having gynecological problems, neurological disorders, diabetes mellitus were excluded from this study. The subjects were evaluated and accessed before the beginning of the exercise session using unipolar scale questionnaire. Samples were divided into two groups A and B, Group A subjects received Kegel exercise alone and Group B subjects received Kegel exercise along with Utkatasana for a period of 3 months. The Pre and Post values were documented by using a unipolar scale questionnaire. Data are interpreted with the help of an Incontinence quality of life questionnaire (schurch). The data was analyzed under 3 domains namely Avoidance and Limiting Behaviour(ALB), Psycho-Social Impacts(PSI), and Social Embarrassment (SE). The data obtained from both Group A & Group B were documented and analyzed. Based on the statistical analysis it is found that the subjects in Group B showed marked improvement in Avoidance and Limiting Behaviour (ALB), Psycho-Social Impacts (PSI), and Social Embarrassment(SE) than those from the subjects of Group A Statistics were estimated for all 22 items and for the 3 domains of the I-QOL.: According to the results Kegel exercise combined with Utkatasana was found to be an effective treatment than the Kegel treatment alone for symptoms associated with SUI.

Keywords: Urinary Incontinence, Stress, Pelvic Floor Muscle Training, Asanas., Kegel Exercise . Strengthen

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Effects of Various Degrees of Semi-Recumbent Positioning in Prevention of Ventilator-Associated Pneumonia

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Abstract: Ventilator-associated pneumonia (VAP) is one of the common complications occurring in patients predominantly in intensive care units. It is a respiratory tract infection that develops in patients who are intubated for more than 48 hours to 72 hours. It is commonly caused by *pseudomonas aeruginosa*. If the infection occurs within the first 48 to 72 hours, it is called “early-onset” and if after 72 hours is termed as “late-onset”¹. Even though there are innumerable methods to decrease the infection and its associated morbidity we wanted to examine whether any changes in position were effective in its reduction. The experimental study was conducted on 30 samples collected in a consecutive manner. The study was performed in the Intensive care unit of a medical college hospital for a period of 2 months. The study included both male and female patients between 18 – 55 years who underwent mechanical ventilation for >48 hrs. Following inclusion criteria, patients were screened and randomly divided into 3 equal groups, Group A (35-degree recumbency), Group B (40-degree recumbency), and Group C (45-degree recumbency). The degree was measured by a protractor which was confirmed with available protractor software. The pre and the post (Clinical Pulmonary Infection Scores) CPIS scores were noted. The demographic variables were similar between the groups. There was a significant reduction of scores in Group B and C than A (p value <0.001) there were no major side effects. There were no dropouts. We conclude that both 40-degree and 45-degree recumbency significantly decrease CPIS scores than 35 degrees. Even though Group C is better than group B it’s statistically insignificant.

Keywords: Intensive Care Unit, Ventilator, Pneumonia, Physiotherapy and Position Semirecumbency

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Prevalence of Periodontal Disease Among Coal Mine Workers in Tamilnadu

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Abstract: Coal miners are predisposed to poor oral hygiene and the resulting dental diseases. we planned to investigate the factors that contribute to the prevalence and severity of periodontal disease among Tamil Nadu coal mine workers. 1500 coal mine workers over the age of 18 were enrolled. A proforma was used to record information about socioeconomic status and habits, followed by a clinical examination that included periodontal parameters such as probing pocket depth (PPD), clinical attachment level (CAL), number of missing teeth, and periodontal screening and recording index (PSR). The study population was divided into three age groups. On analyzing the influence of age on the periodontal health, of the participants, PPD, PSR, and the number of missing teeth were found to be higher in the age group of 51-60 years and CAL was found to be higher in the age group of 41-50 years. Also, the periodontal health of the subjects was influenced by their tobacco usage. The PPD and PSR was found to be higher among past smokers than current users of smokeless tobacco. The number of missing teeth was found to be higher among current users of the smokeless form and clinical attachment level was found to be higher among current users of both forms of tobacco. Our findings indicate that periodontal disease was more prevalent among coal mine workers in Tamil Nadu than in the general population. This highlights the importance of including oral health education and tobacco cessation programs to educate workers on the importance of periodontal health and treatment.

Keywords: Dental, Hygiene, Workers, Coalmines and Smoking

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A Study to Assess Dermatoglyphic Characterization and Salivary Ph in Early Childhood Caries

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Abstract: Dental caries detection at an early stage by applying dermatoglyphics and assessing the salivary pH levels can facilitate the initiation of preventive measures at a younger age. However, there are little data available to substantiate the utility of dermatoglyphics and salivary pH in studying the genetic basis of dental caries. Therefore, the present study was aimed to assess the correlation between dermatoglyphic patterns and salivary pH in children with and without Early Childhood Caries (ECC). This cross-sectional study was carried out in 156 children of randomly selected schools in Puducherry in the age group of 3-5 years. Children with decayed, extracted and filled (defs) score of = 5 for group 1 (children with ECC) and defs score of 0 for group 2 (children without ECC) were considered for the study. Their fingerprint patterns and salivary pH were recorded and analysed using Chi-square test and Spearman correlation tests. In children without ECC group, loop frequency 10 and 7 was the most observed category whereas in subjects with ECC group, whorl frequency 7 and 8 was the most observed category. Significant proportion of whorls was seen more in both males and females in ECC group ($p<0.0001$). The mean salivary pH of subjects with ECC was 6.35 ± 0.38 which was statistically significant ($p<0.0001$). Dermatoglyphic pattern and salivary pH can be used as predictive tool for diagnosis of ECC as there exists a definite variation in dermatoglyphic patterns and salivary pH in children with ECC and caries-free group. There are various methods to diagnose ECC but so far, there is no method to predict ECC using a dermatoglyphic pattern, salivary pH and ECC that may further facilitate initiation of preventive measures to avoid the progression of ECC at a younger age.

Keywords: Dental Caries, Dermatoglyphics, Salivary PH, Loop and Whorl

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Effectiveness of Different Distraction Techniques in The Management of Anxiety in Differently Abled Pediatric Dental Patients - A Randomized Comparative Clinical Study.

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Abstract: Anxiety and fear have become the most significant problem for normal children and differently-abled children at the dental operatory. Various techniques in distraction such as audio, and visual are employed for the behavior management of children. The study aimed to evaluate the effectiveness of four different techniques in anxiety management in differently abled dental pediatric patients. The study included 120 children, randomly assorted into four groups i.e consisting of 30 children in each. Each of these groups was subjected to different distraction techniques, like audio distraction, audio-visual distraction, video distraction and tell-show-do techniques. The parameters assessed were systolic and diastolic blood pressure (SBP and DBP), pulse rate (PR) and oxygen saturation (SPO2) levels. Variables were compared before, during and after the dental procedure using Kruskal-Wallis test. Post-hoc analysis and Bonferroni tests were used to determine the statistical significance in inter-group comparison. SBP was insignificant statistically intra-group at before-after time points. However, SBP during-after treatment showed statistical significance in intergroup ($p=0.02$). SBP in audio-visual distraction was statistically significant when compared with video distraction group. There was no statistically significant difference observed in the DBP and PR for intra and intergroup, however, SPO2 levels at all-time points in intergroup were statistically significant ($p<0.001$). Audio-visual distraction proved to be effective as a part of the behavior management technique followed by audio distraction. These non-pharmacological behavior management techniques provided a peaceful dental environment for differently abled children, who have anxiety and fear.

Keywords: Audio-Visual Distraction, Behavior Management, Differently Abled Children, Dental Fear, Dental Anxiety, Pediatric Dental Practice.

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Evaluation of Adjunctive Low Level Laser Therapy in Postoperative Management of Pain, Swelling, Trismus Following Surgical Removal of Impacted Mandibular Third Molars

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Abstract: Our aim is to evaluate the effectiveness of Low Level Laser Therapy (LLLT) in the control of postoperative pain, swelling, and trismus associated with the surgical removal of impacted mandibular third molars. This study was carried out as a single centre, prospective study with a sample size of 30 patients to evaluate the effectiveness of LLLT following surgical removal of impacted third molars. Patients were randomly divided into two groups of 15 each. Group 1 (Study /LLLT group) consisted of patients undergoing LLLT and with the use of postoperative analgesics and antibiotics. Group 2 (Control) included patients who were administered postoperative analgesics and antibiotics without the concurrent use of LLLT. The predictor variable was the LLLT application following mandibular third molar impaction surgery. The outcome variables namely pain, swelling, and trismus were evaluated on the day of surgery and 1st, 3rd, and 7th postoperative days (POD). Results: The pain was highest on POD 1 and gradually reduced by POD 7 in the study group when compared to the control group. Swelling showed a steep increase on POD 1 and thereafter a gradual reduction was observed on POD 7, when compared to the control group, the study group showed a significant decrease in swelling. Mouth opening was the lowest on POD 1 and gradually increased by POD 7 in the study group than in the control group. Conclusion: The results of the study suggest that the application of LLLT to impacted mandibular third molar sockets helps eliminate/or reduce postoperative pain, swelling, and trismus.

Keywords: Low Level LASER Therapy, Third Molar Extraction, Adjunctive Therapy, Pain, Swelling and Trismus.

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Rejuvenating The Shunned Art of Diagnostic Nasal Endoscopy Using Angled Endoscopes- A Descriptive Study

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Abstract: Nasal endoscopy is a minimally invasive, routine outpatient diagnostic procedure. With 0 degree scope being used as the first and often only endoscope in diagnostic nasal endoscopy, this study will explicate use of angled scopes to identify anatomical variants and common disease pointers. A Cross-sectional descriptive study involving 756 subjects, between age group of 12-80 years with chronic nasal complaints. All subjects underwent diagnostic nasal endoscopy with 0-, 30- & 70-degree endoscopes. Common anatomical variants along with disease markers were identified. Anatomical variants embedded in lateral wall of nose such as accessory maxillary ostium (AMO) & medialized uncinate (MU), were seen better on 30 & 70 degree scopes (AMO -12% & 12.8% respectively & MU -7.6 and 8.1% of study population respectively), when compared to 0 degree scopes (AMO-5.6% & MU-7 %). Disease pointers projected a general trend of being better visualized on angled scopes of 30 & 70 degree endoscopes. It included discharging meati (27.9 % & 26.3% subjects on 30 & 70 degree vs 25 % subjects on 0 degree), polyposis (20.2 & 19.6% on 30 & 70 degree vs 13% on 0), eschar (6.1% & 5.7% on 30 & 70 degree vs 4.5% on 0), CSF rhinorrhoea (1.3% & 2.1% on 30 & 70 degree vs 0.5% on 0). With inclusion of angled scopes in routine nasal endoscopies, one gains capability to diagnose early disease processes, mucosal changes and learn intra nasal anatomy better. The angulation of lenses provides a better field of vision with appropriate magnification and illumination.

Keywords: Endoscope, Diagnostic Nasal Endoscopy, Angled Endoscopes, Anatomical Variants and Disease Markers

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Identification of *Scardovia Wiggiae* in Children Between Severe Early Childhood Caries and Caries-Free Children – A Polymerised Chain Reaction -Based Study

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Abstract: Dental caries is the most common microbial disease of oral cavity, affecting 60 – 90% of children worldwide. Early Childhood Caries (ECC) is a major health problem in developing countries. These lesions are destructive and can affect the development of permanent successors. Although *Streptococcus mutans* is the primary cause of ECC, some studies support the view that caries can develop in the absence of mutans streptococci. *Scardovia wiggiae*, a gram-positive anaerobe was recently found to be associated with Early Childhood Caries in the presence and absence of *Streptococcus mutans*. The aims were to investigate the cariogenic potential of *S. wiggiae*, in ECC. The study was intended to compare the presence of *S. wiggiae*, in the saliva samples of caries-free children and children with severe ECC, thereby determine this new acidogenic species noxiousness as a pathogen in Early Childhood Caries. Saliva samples were collected from 40 children, age ranging between three to six years. The sample thus collected at room temperature was then subjected to DNA extraction and Polymerase Chain Reaction (PCR) analysis to evaluate the presence of *S. wiggiae*. Numerical parameters were tested for significance using Fisher's Exact Test and the statistical analysis using Epi Info software. The tested samples revealed almost equal proportion of *Scardovia wiggiae* in caries-free group and severe ECC group. *S. wiggiae* was isolated and detected in both the study and the control groups. Statistical significance was not pronounced claiming the falsehood of the association between Early childhood caries and *Scardovia wiggiae*.

Keywords: Early Childhood Caries, *Scardovia Wiggiae* and Polymerase Chain Reaction.

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Identification and Quantification of *Staphylococcus Aureus* in Saliva at Different Time Intervals Among Dental Personnel Wearing Surgical Masks During Sars Cov2- A Prospective Observational Study

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Abstract: Our world combats the rapid spread of Covid 19 by wearing face masks which have become the norm. But it's effect on oral microbiome is yet to be studied. *Staphylococcus aureus* is the leading cause of bacterial co-infection in Covid-19-affected patients worsening their prognosis. Dislodgement of this bacterium from the oral cavity is said to cause many systemic diseases. As dentists are more prone to an aerosolic environment and a potential source of cross-contamination, we intended to identify and quantify *S. aureus* in the saliva of dental personnel wearing surgical masks. Unstimulated whole saliva samples of 120 healthy dental professionals wearing surgical masks were cultured for *S. aureus* growth in Mannitol Salt Agar medium for 48 hours at 37°C. After 1 hour and 6 hours of mask usage, the number of colony-forming units counted. After 1 hour and 6 hours of mask usage, 56% and 52.5% demonstrated growth of *S. aureus* respectively. There was a statistically significant mean reduction of 1.61×10^3 colony forming units after 6 hours of mask usage. There is a reduction in the prevalence and number of colony-forming units of *S. aureus* in the unstimulated saliva of healthy dental professionals after 1 hour and 6 hours of surgical mask use. As a result, mask use not only controls the spread of Covid but may also aid in reducing the source and spread of *S. aureus* cross infection, lowering the risk of morbidity and mortality in diseased patients.

Keywords: Covid, Face Mask, Saliva, Dentist, Bacteria and *Staphylococcus Aureus*

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