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POTENTIAL OF LEFTOVER SPACES AS PUBLIC SPACES

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Abstract

An abandoned railway, a historic bridge, an old building, an old industrial site, an ignored space under a flyover, what do these structures have in common? These “leftover” spaces are increasingly turning into attractive sites for urban planners and designers, interested in creating people friendly spaces and community amenities.

In this age of rapid urbanisation, we push the city to its maximum limits- horizontally and vertically. We are so focussed on building ourselves individually, that we tend to forget, for real progress, we need to grow as a society. Existence of public spaces in cities are the need of the hour, for healthy social interaction to take place, which in turn helps for creating of safe, sustainable and liveable cities. Though public spaces are often designed for particular activities, existence of unplanned spaces seemed to come hand in hand with the cityscape, some in the form of “leftover” spaces, including spaces under a flyover, which offer abundance of opportunities.

This paper attempts to analyse and review activities under a flyover (Indian context) initiated by the local community, to tackle the ill-effects that were/would have been created, if the space would not have had a design intervention and analyse how the activities lead to increased social interaction. By doing so, this paper aims to get an insight into what a common man thinks and wants out of a public space.

Key Words: Flyover, Social interaction, Leftover spaces

KNOWLEDGE, ATTITUDE AND PRACTICES CONCERNING ORAL HEALTH AMONG KORAGA TRIBAL COMMUNITY RESIDING IN THE UDUPI TALUK- AN ONGOING STUDY

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Background: Oral health is very important for healthy living. Risk factors for oral diseases include unhealthy diet, tobacco use, unwarranted alcohol consumption, and poor oral hygiene. This study was aimed to assess the Knowledge, Attitude and Practices concerning oral health among Koraga tribal community residing in Udupi Taluk.

Methods: The cross-sectional study was conducted amongst 70 participants in the age range of 18-65 years who belong to Koraga tribal community. A validated questionnaire of 31 questions, regarding the basic knowledge, attitude and practices toward oral health was distributed among the members who attended the dental screening camp organized at Karje Village, Udupi district. The oral hygiene status of the community members was examined using simplified oral hygiene index (OHI-S). Results were calculated on the basis of frequency and percentages using SPSS.

Results: The results show that the community members are aware about the association of tobacco and dental problem (79.62%) and tobacco and cancer (92.59%). However, awareness did not serve as a deterrence to tobacco consumption and the willingness to de-addict. They continue to consume tobacco (54%) and are unwilling to give up this habit. 66.67 % of members were aware that calculus causes bleeding gums but majority of them (62.96 %) never visited a dentist. 90.74% members of this community claim that they use toothbrush and toothpaste for cleaning the teeth and they do clean the tongue (90.74%) and rinse the mouth (92.59%) after food but we have observed a higher carries (74.07%) and lower overall hygiene status (31.48%) in this community.

Conclusion: Koraga community members in the present study have a satisfactory level of knowledge about oral health care. However, the knowledge acquired must be transferred into daily practice. This can be achieved by a change in their attitude towards oral hygiene maintenance. This study revealed that there is a great need to plan and conduct oral health promotion initiatives and treatment activities for this community so that they have healthier dentition.

Keywords- Knowledge, Oral health, Koragas, Tribal community, Attitude, Practices

EFFECT OF AQUEOUS SEED EXTRACT OF *MUCUNA PRURIENS* ON ARSENIC INDUCED TESTICULAR TOXICITY IN MICE

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Introduction: Arsenic is a heavy metal posing threat to public health. Studies have shown that arsenic intoxication results in suppression of spermatogenesis. *Mucuna pruriens* (*M. pruriens*) commonly known as Nasagunnikaayi is a leguminous plant identified for its fertility enhancing properties. The presence of alkaloids in the seeds of *M. pruriens* was found to increase the weight of testis and development of sperms.

Aim: To study the protective role of aqueous seed extract of *M. pruriens* on arsenic induced testicular impairment in albino mice.

Methodology: Thirty six albino mice were divided into six groups (n=6). Group 1 was used as control. Groups 2-6 received sodium arsenite in drinking water at the dose of 40 mg per litre. Group 3 received N-Acetyl cysteine at a dose of 300 mg/kg body weight, groups 4, 5 and 6 received different concentrations of aqueous seed extract of *M. pruriens* (500, 1000 and 2000 mg/kg body weight) respectively orally once per day. After 45 days of treatment, the animals were sacrificed. Testis and epididymis were used for biochemical estimations (MDA and GSH by kit method) and to determine the sperm parameters (sperm count and sperm morphology) respectively. Using SPSS 20.0, the uniform data was expressed in terms of mean \pm standard deviation and analysed by one way ANOVA followed by post hoc Tukey test. $P < 0.05$ was considered as statistically significant.

Results: Sodium arsenite caused a significant decrease ($p < 0.001$) in both sperm count and antioxidant status ($p < 0.001$) of the testis and significant increase ($p < 0.001$) in abnormal architecture of spermatozoa. These abnormalities were significantly decreased in the *M. pruriens* treated groups (500 mg/kg body weight ($p < 0.01$) and 1000 mg/kg body weight ($p < 0.001$) respectively.

Conclusion: The perturbed sperm parameters and antioxidant levels of the arsenic insulted testis was attenuated by *M. pruriens*.

BEHAVIORAL STUDY OF CANCER PATIENTS: FOCUS ON SPATIAL ENVIRONMENT OF PATIENT'S ROOM

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Abstract: Hospital's environment always provides a negative effect on patients' wellbeing especially on those patients who are suffering with deadly disease like cancer. The elements of spatial environment (such as color preference, natural and artificial light, elements representing life, type of ambience, physical control etc.) and their effect on cancer patients' behavior have been studied inside patient's room where patients spent maximum time.

The data has been collected through online surveys, interviews and observations with different user groups like patients, doctors, nurses, family members, friends and architects. 87% of cancer patients staying inside hospital room stated that the room environment is boring and monotonous and need variety, sources of positive distraction, physical control and homely ambience to feel comfortable. Doctors, psychologists, nurses stated that environment plays an important role patient's behavior. However, there is lack of evidence that special effect reduce physical pain.

Keywords: cancer patients, patients' behavior in special environment, patient's room.

ANTIOXIDANT POTENTIAL OF AGELESS LIQUID IN HIGH FAT DIET INDUCED HYPERLIPIDEMIC SPRAGUE DAWLEY RATS

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Introduction: Nowadays, the huge concern is raised for the role of the dietary intake of antioxidant nutrients in the possible prevention of major diseases that affect humans worldwide. Ageless liquid is a nutritional supplement formulated by Apex Laboratories Private Limited, Tamil Nadu (India).

Aim: To investigate the antioxidant potential of Ageless liquid in high fat diet induced hyperlipidemic Sprague Dawley rats.

Methodology: A total of 30 adult male Sprague Dawley rats were divided into five groups of six rats each including normal control (1 ml/kg/day of 2% Carboxymethyl cellulose), negative control (high fat diet + 1 ml/kg/day of 2% Carboxymethyl cellulose) and positive control (high fat diet + 0.9 mg/kg/day of atorvastatin). Antioxidant activity of Ageless liquid at 9 mg/kg/day and 18 mg/kg/day (orally for 60 days) was evaluated in high fat diet induced hyperlipidemic rats. Antioxidant potential of Ageless liquid was assessed with the biochemical assay for reduced glutathione, 4-hydroxynonenal, catalase and superoxide dismutase.

Results: With the high fat diet, rats developed oxidative stress resulting in significant alteration ($p < 0.05$) of reduced glutathione, 4-hydroxynonenal, catalase and superoxide dismutase in comparison with normal control rats. There was significant increase ($p < 0.001$) in reduced glutathione, 4-hydroxynonenal, catalase and superoxide dismutase of both the test groups treated with Ageless liquid 9 mg/kg and 18 mg/kg in comparison with negative as well as positive control rats. There was significant decrease ($p < 0.001$) in 4-hydroxynonenal of both the test groups treated with Ageless liquid 9 mg/kg and 18 mg/kg when compared with both negative and positive control rats.

Conclusion: The present study revealed the antioxidant potential of Ageless liquid in high fat diet induced hyperlipidemic Sprague Dawley rats.

CARDIOPROTECTIVE EFFECT OF AGELESS LIQUID IN HIGH FAT DIET INDUCED HYPERLIPIDEMIC SPRAGUE DAWLEY RATS

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Introduction: Nowadays, the huge concern is raised for the role of the dietary intake of antioxidant nutrients in the possible prevention of major diseases that affect humans worldwide. Ageless liquid is a nutritional supplement formulated by Apex Laboratories Private Limited, Tamil Nadu (India).

Aim: To investigate the cardioprotective potential of Ageless liquid in high fat diet induced hyperlipidemic Sprague Dawley rats.

Methodology: A total of 30 adult male Sprague Dawley rats were divided into five groups of six rats each including normal control (1 ml/kg/day of 2% Carboxymethyl cellulose), negative control (high fat diet + 1 ml/kg/day of 2% Carboxymethyl cellulose) and positive control (high fat diet + 0.9 mg/kg/day of atorvastatin). Cardioprotective activity of Ageless liquid at 9 mg/kg/day and 18 mg/kg/day (orally for 60 days) was evaluated in high fat diet induced hyperlipidemic rats. Cardioprotective activity was investigated with the biochemical assay of lipid profile, creatine kinase and lactate dehydrogenase.

Results: With the high fat diet, rats developed significant hyperlipidemia and cardiac biomarkers like lactate dehydrogenase and creatine kinase were significantly altered including ($p < 0.05$) in comparison with normal control rats. There was significant decrease ($p < 0.001$) in serum triglyceride, total cholesterol, LDL-cholesterol, VLDL-cholesterol, lactate dehydrogenase, creatine kinase of both the test groups treated with Ageless liquid 9 mg/kg and 18 mg/kg when compared with negative control rats. There was significant increase ($p < 0.001$) in HDL-cholesterol of both the test groups treated with Ageless liquid 9 mg/kg and 18 mg/kg in comparison with negative control rats. Treatment with Ageless liquid at the dose of 9 mg/kg and 18 mg/kg had significantly improved ($p < 0.05$) lipid profile, lactate dehydrogenase and creatine kinase when compared with positive control group.

Conclusion: The present study revealed the cardioprotective potential of Ageless liquid in high fat diet induced hyperlipidemic Sprague Dawley rats.

STUDENTS' PERSPECTIVES REGARDING EDUCATIONAL ENVIRONMENT IN AN UNDERGRADUATE MEDICAL SCHOOL

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Introduction: The five years of undergraduate Bachelor of Medicine and Bachelor of Surgery (MBBS) program at Melaka Manipal Medical College, Manipal Campus, Manipal University, Manipal, India is an academic program in twin campuses. The quality of educational environment has been identified to be crucial for effective learning. This investigation was designed to find out whether there is existence of conducive environment to help student learning.

Objective: To obtain first year medical students' perspectives about the educational environment.

Methods: Dundee Ready Education Environment Measure (DREEM) inventory was used in this study. DREEM is a pre-validated inventory used to assess educational environment. In the present study, DREEM was administered to undergraduate first year medical students of MBBS batch September 2012 having 229 students. Data were analyzed using percentage, mean and standard deviation.

Results: Students perceived a positive educational environment. The mean domain scores were Students' Perceptions of Learning, 34/48 (71%); Students' Perceptions of Teachers, 29/44 (66%); Students' Academic Self-Perception, 21/32 (66%); Students' Perceptions of Atmosphere, 32/48 (67%) and Students' Social Self Perceptions, 17/28 (61%). The mean total DREEM score was found to be 134/200 (67%).

Conclusion: The present study revealed that students perceived a positive educational environment conducive to learning.

DIGITAL HEARING AID WITH ACTIVE NOISE CANCELLATION: AN EFFICIENT ALGORITHM TO DEVELOP A DIGITAL HEARING AID SYSTEM IS IMPLEMENTED USING MATLAB.

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Abstract:

Commercial hearing aids use an approach that focuses on preventing sound waves from reaching

the eardrum using physical barriers. This causes loss of speech signal (45-50 dB), that is, extreme

difficulty in hearing words even when music is played (higher than 70 dB) or a surrounding drilling

noise.

The algorithm identifies the difference between speech signal and noise. Unwanted noises can vary in an almost infinite number of ways, but the nature of speech is syllabic. On separating

the noise from speech, active noise cancellation is employed which uses aural overlap and destructive interference to eliminate the unwanted signal.

Keywords: Noise cancellation, Algorithm, Hearing Aid

IDENTIFICATION OF SPATIAL ELEMENTS IN A TRADITIONAL SETTLEMENT

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Abstract: Traditional architecture of a region is its identity to its culture and historical background. It is influenced by different aspects of climate, availability of local materials, human behavior which leads to different built forms based on different context. Traditional typologies in the state of Assam, India are sustainable & effective during earthquakes.

A brief study of architectural typology is made to derive a methodology for identifying spatial elements existing in a traditional settlement. Assam has its own vibrant artistic heritage and being a multi linguistic, multi culture & multi ethnic society it has a strong cultural influence based on which traditional settlement develop.

A small hamlet settlement in the outskirts of a major urban area is identified through random sampling to make a detail study and conclusions are derived from the findings of the same. In the present time the value of traditional form of architecture has been lost but at the same time can be seen in a few rural & urban areas.

Spatial elements at three levels namely the hamlet, the neighborhood and the building is identified and redefined to suit the present context with the required modification to keep the traditional identity of an Assamese settlement.

Keywords: *assam type ; chandrapur ; ikra house ; Kamrup ; neighbourhood ; traditional ; typology*

COMPUTERIZED IMAGE ANALYSIS AS A TOOL TO QUANTIFY CELL IRREGULARITIES IN STRESSED ERYTHROCYTES

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Background: The erythrocyte is the simplest of all human cells but endowed with the pivotal role of carrying oxygen from lungs to tissue for metabolism. If there is a decrease in its number or if they are defective, oxygen carrying capacity of blood is hampered, resulting in anemia. Normal human red cells are removed from circulation by 120 days but sometimes, a stressed RBC, due to disease or disorder, undergoes a premature death, in which case, the defective red cell is cleared from the blood stream earlier. A stressed red cell shows various morphological variations, of which 'cell irregularities' is common. The existing current gold standard methodologies for morphological analysis of erythrocytes, which although are most accurate and reliable, are also time-consuming, expensive and needs extensive sample fixing procedures. Also, if the investigator is insufficiently trained in microscopic studies, there are high chances of inaccurate results.

Hence, there is a need to develop a robust system capable of detecting stressed cells with minimal requirement of trained personnel.

Objectives:

1. To capture and investigate images of live erythrocytes exposed to hyperosmotic stress with NaCl.
2. To compare cell irregularities of live erythrocytes exposed to hyperosmotic stress with NaCl to erythrocytes in normal Ringer.

Materials and methods:

2 ml anti-coagulated blood samples were extracted from healthy volunteers (n=17) after their informed consent. Whole blood is centrifuged and washed three times in phosphate-buffered

saline and the plasma and buffy coat were carefully aspirated out after each of the three washes. Red cells (from a drop of blood sample) are suspended in normal Ringer (125mM NaCl, 5 mM KCl, 1 mM CaCl₂, 1 mM MgCl₂, 32 mM HEPES, 5 mM Glucose; pH= 7.4) and hyperosmotic NaCl (325mM).

Multiple photomicrographic images are acquired of the diluted blood sample on a glass slide under a 100X oil immersion objective.

Images of red cells are processed and analyzed by an in-house-developed customized computer software, designed for color quantification, in School of Information Sciences, MU (Prasad K et al; 2012).

With this software, cell irregularities that are seen 2-dimensionally, peripheral to the cell as well as on their center are measured and quantified. Peripheral irregularities are termed '*dents*' and the central irregularities are termed '*coarseness*' of the RBC center.

Results:

There was significant differentiation between the healthy and stressed RBCs in terms of cell irregularities (coarseness and dents), which was precisely picked up by the computer software. Also, this method has shown very high sensitivity and can be used as an effective investigative tool.

Conclusion:

The computerized image analysis tool designed is robust, efficient, quick and cost-effective to differentiate stressed and healthy RBCs based on cell irregularities in real-time and can be used as a potential tool in laboratory diagnostics.

PUBLIC AQUARIUMS AS APPROPRIATE FOR MARINE CONSERVATION.

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Abstract: Public Aquarium have been designed and constructed since the past century. Today Marine degradation is of tremendous concern public aquariums has potential contribution towards marine conservation. The study mainly focuses on feature, characteristic, activity & working of a public aquarium that has potential contribution towards marine conservation. Public Aquarium has immense physical, mental and social impact on an observer including researchers, education & conservation. Non formal education to visitors, schools, undergraduates has become one of the main mission of public aquarium. Aquarium displays focuses on the role of organisms in ecosystems to better encourage public understanding and support for aquatic conservation. The current scenario of public aquarium in India studied with the help of case studies is analyzed to identify issues of their underutilization and poor contribution to marine conservation. A comparison is made with the recent trends in Public Aquarium with case studies from other countries which have achieved success in Public Aquarium. A systems approach is essential if the aquarium image is based more on understanding and conserving aquatic life and less on public relations and exploitation of wild species. It is found that there is dearth of third generation public aquarium in India having bionic design and are often seen to be working as an isolated public amenity. Public aquarium designed in collaboration with educational institutions, research organization and other companies should be integral part of complementing structure like urban parks, community spaces, library, restaurants, hotels malls etc.

Keywords: *Aquarium; design; environmental education; marine conservation; Public Aquarium.*

LAKE AN ESSENTIAL URBAN FEATURE: CASE OF HEBBAL LAKE, BANGALORE, INDIA.

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Abstract:

Lakes are important piece of urban ecological system. In spite of the fact that moderately little in size, lakes perform critical natural, social and financial capacities, extending from being a source of drinking water, recharging groundwater, acting as sponges to control flooding, supporting biodiversity and providing livelihoods. Water in lakes is an effectively accessible source of water for the necessities of numerous areas of economy, for example, agriculture, domestic and industrial. These water bodies, whether man-made or natural, fresh water or saline play an extreme vital part in keeping up ecological manageability especially in urban environments particularly in today's connection when the urban areas are confronting the difficulties of spontaneous rapid urbanization. This study analyses how lakes are a part of urban scenario its relationship with the built environment around it. Lakes have sustained in urban areas and also urban areas have sustained by lakes by adapting various needs and necessities they are exposed to. In this context Bangalore has been blessed with many lakes, but due to harmful human exercises the lakes count has come down, and Hebbal lake, one of the largest lake of Bangalore is facing similar threat. Tracing its translation from past till present recommendations for the future can be made to develop its edge condition towards a public place that strives to enact a new experience where fragments of places are connected in new ways through a commercial space. The idea of a commercial space as a place maker of commercial and entertainment is challenged as the place doesn't entertain recreation but as to make more open to public and to overcome current problems of the lakefront and to achieve a vibrant public place.

Keywords: Lakes; Limnology of lakes; Urban lakes; Lakes of Bangalore; Hebbal lake

GERIATRIC DENTISTRY CARING THE OLD BY EDUCATING THE YOUNG- AN INTERDISCIPLINARY PROJECT

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Introduction: Improvement in health status has resulted in an increase in number of elderly population. This demographic shift enhances the need for better geriatric dental care. Lack of knowledge and negative attitude towards elderly can create serious problems in the delivery of dental health care to older population.

Aim: To improve the oral health of elderly in India by improving the theoretical knowledge and clinical skills of dental undergraduate students

Objectives:

1. To develop a geriatric knowledge assessment tool.
2. To assess attitude and knowledge of dental students towards geriatric patients.
3. To improve knowledge (theoretical & clinical) of students about geriatric dentistry.
4. To design 'Geriatric Dental Care Module' for dental students.

Methodology: A cross sectional questionnaire study was conducted among 3rd year dental undergraduate students. UCLA Geriatric Attitude Scale was used to investigate attitudes of students toward elderly. A Knowledge Questionnaire (developed by MCODES, Manipal and KMC, Manipal) was used to assess the knowledge of students toward elderly. Analysis was done using SPSS-16.

Results: 26% were male and 74 % were female participants. Mean total attitude score for males was 3.41 ± 0.45 as compared to females: 3.55 ± 0.46 . Overall mean UCLA attitudes score was 3.51 ± 0.46 . Total mean knowledge score was 11.54 ± 2.56 . Only 48% of total responses were correct. A comparison between knowledge of males (11.6 ± 2.66) and females (11.5 ± 2.567) showed no statistical difference. 96% of the students were willing to have geriatric dentistry in undergraduate dental curriculum.

Conclusion: Students had a relatively positive attitude toward geriatric population but knowledge has to be increased. Future interventions should focus on improving the educational process by incorporation of a geriatric dentistry in the dental curriculum in India.

DIETARY CHOLINE AND DHA SUPPLEMENTATION IMPROVES DENDRITIC ARBORIZATION (CA1 HIPPOCAMPAL NEURONS) IN RODENT MODEL OF VASCULAR DEMENTIA (VD)

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Introduction:

Choline and DHA are neuronal membrane phospholipid precursors and their role in neurogenesis and neuroplasticity during fetal brain development is well established. Studies have reported that dietary supplementation of choline, DHA and Uridine for 4 weeks readily increases PC concentration in brain. The functional disability of VD in geriatric population is associated with dendritic and neuronal cell loss.

Aim: To explore the efficacy of choline and DHA as dietary supplements in enhancing dendritic plasticity in rodent model of VD.

Materials and Methods: 10 months male wistar rats were divided randomly into 4 groups (n=6) as normal control (NC), Bilateral common carotid artery occlusion (BCCAO) induced chronic cerebral hypo perfused vascular dementia rats, sham BCCAO rats and post BCCAO choline+DHA supplemented rats. Immediately after BCCAO surgery, normal saline and choline chloride (4mmol/kg Bwt)+DHA (300mg/kgBwt) was orally fed for BCCAO and post BCCAO choline+DHA rats respectively. After 32 days the rat groups were euthanized and their brains were stained for the quantification of neuronal arborization in ischemic susceptible CA1 hippocampal neurons.

Results:

The number of branching points in basal dendrites of CA1 neurons were significantly ($p<0.01$) reduced in VD rats compared to NC and Sham BCCAO rats. Contrarily there was a significant increase in basal dendritic branching points in choline+DHA supplemented rats compared to saline supplemented VD rats.

Conclusion:

FDA approved Choline +DHA can be supplemented to improve neuronal arborization and neuroplasticity in case of VD of geriatric population.

AN INNOVATIVE APPROACH FOR SERIAL INJECTION IN MARGINAL VEIN AND BLOOD COLLECTION FROM AURICULAR ARTERY IN NEW ZEALAND WHITE RABBIT (*ORYCTOLAGUS CUNICULUS*)

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Background: New Zealand white Rabbit (*Oryctolagus cuniculus*) is used as an animal model for physiological and metabolite studies. However methods with precise information for injections of anesthesia, hormone, metabolites and drugs for experimental studies in rabbit marginal vein and serial blood sample collection from rabbit auricular artery is poorly available in current literature.

Objective: To establish a systematic procedure for serial blood collection in New Zealand white rabbits

Materials and methods: Approximately 10 minutes before commencement of the experiment, rabbits (n=35) were given ketamine hydrochloride anesthetic injection (25mg/kg body weight) through the marginal vein of the ear. The skin at the site of sample collection and injection was prepared by shaving the area on both ears and wiping it with alcohol swab. Once prepared, a 26 GA (BD Neoflon) intravenous cannula was inserted into the marginal vein of the ear and secured with an adhesive plaster. This was used for injection of Evan's blue dye and ketamine hydrochloride into the vascular system. In the other ear, a 24 GA (BD Neoflon) intravenous cannula was placed in the auricular/central artery and secured with an adhesive plaster. This was used for withdrawing blood.

Results: The blood volume of New Zealand white rabbits was estimated using this procedure, by injection of Evan's blue dye into the marginal vein and serial blood samples were obtained from the auricular artery to estimate the concentration of the dye. It has been observed that the mean blood volume values using this procedure (65.76 ml/kg) falls within the normal physiological range (45-70 ml/kg) in New Zealand white rabbits.

Conclusion: The novel method described here has been standardised and found to be reliable. Since the samples obtained using this method is less susceptible to hemolysis, we recommend this for serial injection and blood collection in rabbits.

GENDER WISE COMPARISON OF LEARNING CAPABILITIES OF MMMC STUDENTS

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Background: Males and females both, share a lot in common and also have stark differences between them physiologically, psychologically, genetically, and many more. Clearly these variations account for the different capabilities each gender or individual possesses, perhaps even learning capacities.

Objective: The study was conducted to explore the learning capabilities of the male and female students of Melaka Manipal Medical College.

Methodology: It was a cross-sectional questionnaire survey. Data was collected by administering a questionnaire to the study sample (n=150). The items in the questionnaire sought details such as methods employed to learn a subject, preferred method of learning, learning strategies and challenges faced etc. The questions were grouped under five categories namely; listening skills, creativity, critical thinking skills, problem solving skills and learning diagnosis. Gender wise difference in the relation between students' learning ability and academic performance was explored.

Results: Female students (45%) were found to have better listening skills in comparison to male students (31%). In the creativity category too, female students (47%) performed better when compared to male students (33%). In the critical thinking/analytical skills category, performance of both male (42%) and female students (41%) were almost similar. However male students (23%) demonstrated better problem solving skills when compared to female students (15%). In the learning diagnosis category, both male and female students performed equally (41% each).

Conclusion: Female students excelled in the categories of creative thinking and listening skills. Male students excelled in the categories of problem solving. Both were equally effective in critical thinking/analytical skill and learning diagnosis categories.

RETROSPECTIVE EVALUATION OF CARDIOVASCULAR DISEASE IN PATIENTS WITH HYPERTENSION IN RELATION TO THEIR AGE AND GENDER

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Background: High blood pressure or hypertension, is a constant rise in blood pressure and is considered to be an important cardiovascular risk factor. It has been observed that as age advances, the risk of developing hypertension and cardiovascular disease is also high. There are limited studies in south Indian population with respect to this.

Objectives: Objectives of this study was to investigate the occurrence of cardiovascular diseases in patients having hypertension by retrospective evaluation. To investigate the relation between gender, age and hypertension and to inter-relate these factors with cardiovascular diseases.

Methodology: Medical records of the patients from the past 5 years was collected randomly from the medical records section of T.M.A.Pai hospital, Udupi. Ethical committee clearance was obtained prior to the study. A total of 170 medical records of the patients were reviewed. All the relevant clinical and laboratory data was recorded in a detailed proforma. Record of patients having hypertension and cardiovascular disease was then segregated and analysed. It was then correlated to their age and gender.

Results: Out of 170, 50 patients had hypertension. Among these, 19 patients had cardiovascular disease. When we correlated hypertension with age, we observed that patients in the age group of 51-60 years are more prone to hypertension (36%). Among the patients with hypertension and cardiovascular disease, most of them were females and where in the age group of 61-70 years, while in males the highest rate of occurrence was seen in the age group of 51-60 years. Correlation coefficient (r) was 0.62 which indicates a moderate positive linear relationship between hypertension and cardiovascular disease.

Conclusion: The present study revealed a correlation between hypertension and cardiovascular disease which means that hypertension is a major risk factor for cardiovascular disease.

COMPARISON OF HEMOCUE METHOD AND SAHLI'S ACID HEMATIN METHOD FOR HEMOGLOBIN ESTIMATION

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Abstract: Hemoglobin level below 12g/dL (normal range 12-18g/dL) reflects anemia. There are many methods used to estimate hemoglobin level. The present study was an attempt to compare the efficiency of HemoCue method with that of Sahli's acid hematin method for estimation of hemoglobin. Comparison of the haemoglobin level in a population with respect to their gender and BMI was also considered. A sample comprising of 50 volunteers from Year 1 and Year 2 MBBS students of Melaka Manipal Medical College, Manipal were included for the study. Informed consent was taken from students who volunteered to be subjects of the study. A few drops of students' blood was obtained for HemoCue's method and for Sahli's acid hematin method. Results obtained from both the methods were recorded and analyzed. Haemoglobin concentrations in the Sahli's and Hemocue method were compared using "Bland Altman technique". The study results showed that majority (76%) of the male and female students had normal range (12-18 g/dL) of hemoglobin levels by both the methods. The Bland-Altman plot showed that 78% of the haemoglobin concentrations using the Sahli's and Hemocue method were within acceptable limit ($\pm 4g\%$). In this study, a difference of less than 4g% haemoglobin concentrations by the two methods is taken as an acceptable difference. The study showed that hemoglobin level has no effect in an individual BMI. Individual with high hemoglobin have low BMI and vice versa. Sahli's method has been known for several limitations including subjective bias due to visual comparison. However, we would like to conclude that the estimation of hemoglobin by Hemocue method is more simple and accurate when compared to Sahli's Acid Hematin method. This could be due to the inbuilt errors of Sahli's method.

Keywords: Hemoglobin, Sahli's method, HemoCue's method and anemia.

A STUDY TO DETERMINE THE EXISTING INFECTION CONTROL MEASURES IN THE LABOR THEATRE (LT) IN A SELECTED TERTIARY CARE HOSPITAL OF UDUPI DISTRICT, KARNATAKA

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Introduction:

Birthing is a wonderful process and the terrain in which a woman is supposed to give birth should be like a sanctum, a place the mother and baby both feel safe. It's the prime responsibility of a health care worker to make sure that the environment that is under their control is made safe and free of infections that are relatively spread by them.

In the present scenario there is antimicrobial resistance due to unsparing use of antibiotics which is making the mothers and the newborns resistant to antibiotics, hence more susceptible to infection. In Delhi, a cohort study on 88636 neonates was conducted. It was found that early onset sepsis was common in two thirds of cases. The study showed that with an increased focus on institutionalising births in India, the quality of care and infection control in health care institutions must receive much attention. (Laxminarayan & Bhutta, 2016)

Objectives:

The objectives of the study is to determine the existing infection control measures followed by the health care workers by using Infection Control Assessment Tool (ICAT)

Materials and Methods:

An intensive interview with the health care workers responsible for the infection control measures existing in the Labor theatre of Kasturba Hospital Manipal will be conducted.

The interview will be conducted with modules that are related to infection control measures of labor theatre in the standardized infection control assessment tool which is developed by the Systems for improved access to pharmaceuticals and services and submitted to the US Agency for International Development.

Results and discussion:

The Institution research committee clearance is awaited, study will be conducted after that. The results will be communicated at the earliest.

ASSOCIATION OF BODY COMPOSITION PARAMETERS WITH HUMAN CONSTITUTION TYPES OF INDIAN TRADITIONAL MEDICINE (PRAKRITI) – A PROSPECTIVE STUDY.

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Background: The constitution types of Indian traditional medicine are described in terms of three forces called doshas namely vata, pitta and kapha which governs the physiology of motion, of metabolism and of structure respectively. One's constitutional type is determined on the basis of the physical, physiological, and psychological features and this constitution, in turn, determines the predisposition to diseases, management and lifestyle regimen of an individual. Earlier study states a correlation between HLA-DRB1 types with the specific prakriti and also many biochemical, genetic, and molecular studies have been performed to relate various features of an individual to prakriti. Another study reported biochemical profiles, hematological parameters and gene expression patterns relating different Prakritis to cardiovascular diseases.

Objectives:

The present study was carried out in an attempt to see whether constitution types of Ayurveda are same or different among prakritis in terms of body composition parameters.

Materials and Methods:

This prospective study was conducted among 97 young healthy adult subjects in the age group of 19±24 years. A detailed medical history was collected and made to fill in a validated questionnaire from Ayurvedic department for classify the subjects into different types of prakritis. Before start of the test procedure, the subjects were also assessed by an Ayurvedic physician to classify prakritis. The body composition parameters were recorded from BodyStat 1500 MDD equipment and the data was analyzed using one way ANOVA test of SPSS version 22 to see variation among three different groups of prakritis.

Results: There was unequal distribution among different types of prakritis found where in vata people were dominating the other two types. The mean total body weight was significantly higher ($P<0.05$) among the kapha type of prakriti compared to vata and pitta prakritis. The mean fat percentage and the BMI was more in kapha prakriti where as these parameters were comparatively lesser in vata and pitta prakritis. The vata prakritis showed a higher lean

percentage than the other two types. The mean lean percentage among pitta and kapha did not show much variations.

Conclusion: The human constitution types of Indian traditional medicine (prakriti) do show variations in different body composition parameters. This could probably explain the nature of classification of Ayurvedic Prakritis into vata, pitta and kapha which holds well with respect to various parameters body composition.

FACTORS PROMOTING COMPLIANCE TO ANTI-RETROVIRAL THERAPY AMONG PATIENTS RECEIVING ART

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Background: Sustained adherence to Anti-retroviral Therapy is essential for optimal treatment outcome among patients with HIV/AIDS. Addressing issues with poor medication compliance and identifying facilitators can go a long way in improving the quality of life of these patients. This study was hence, planned with the objective of identifying the reasons for missing the medication and factors promoting compliance among patients on ART.

Methods: Using a cross sectional design, 320 HIV positive individuals on ART were interviewed from a district hospital in Udupi using a semi-structured questionnaire. Adherence to ART >95% of the prescribed medication was used as the cut off for determining the treatment adherence.

Results: The most common reason for missing doses was being busy with other things (57.1%). Incorporation of taking medicines into routine life, presence of family support for taking medicines and use of reminder techniques were quoted as the important reasons for promoting compliance among the participants.

Conclusion: Identification of facilitators for medication and addressing the reasons for non-compliance is essential for treatment success among patients on ART.

Keywords: anti-retroviral therapy, compliance, missing doses

