



Health and Family Welfare Abstract, Apr-Jun 2018

National Documentation Centre

**National Institute of Health and Family Welfare, Baba Gangnath
Marg, Munirka, New Delhi-110067**

Contents

Subjects

Entry No.

1. Adolescent Health

2. Child Health

3. Disease

4. Family Planning

5. Maternal and Child Health

6. Women Health

Adolescent Health

1. Effectiveness of Progressive Muscle Relaxation Therapy in Reducing the Affective Symptoms in Pre-Menstrual Syndrome among the Young Adult Girls.

Shanthi Thirupathi. *Indian Journal of Continuing Nursing Education*, Vol 18, No 2, Jul-Dec 2017, Pp-92

Pre-menstrual Syndrome (PMS) is a common condition that affects a woman's emotions, physical health and behaviour during certain days of the menstrual cycle, generally just before her menses. Premenstrual Syndrome substantially reduces quality of life for many women of reproductive age, with pharmaceutical treatments having limited efficacy and substantial side effects. Physical activity has been recommended as a method of reducing menstrual symptoms severity. The Objectives of the study were to assess the pre and posttest scores of affective symptoms in PMS among young adult girls in experimental and control group, and to determine the effectiveness of progressive muscle relaxation therapy of affective symptoms in PMS. An evaluative research approach was conducted with true experimental pretest-posttest control group research design to accomplish the objective. The sample comprised of 60 young adult girls. Data were collected using modified women's quality of life rating scale and analyzed using descriptive and inferential statistics. Majority of population under the age group 18 years (36.6%) had more affective symptoms of PMS and the population under 21 years age group (10%) had less affective symptoms of PMS. Majority of population in which the age at menarche was less than 11 years (46.67%) had symptoms of PMS and those who attained menarche after 16 years (3.33%) had less affective symptoms. The posttest mean premenstrual syndrome score (38.34+₋22.03). The results showed that progressive muscle relaxation therapy had an effect to reduce premenstrual syndrome in young adult girls. Therefore it can be employed to reduce affective symptoms of premenstrual symptoms among young adult girls.

Keywords: Premenstrual Syndrome, Progressive Muscle Relaxation Therapy, Young Adult Girls, Adolescent Health

Child Health

2. Determinants of Vitamin D status in Indian school-children. Rubina Mandlik, Neha Kajale, Veena Ekbote, Vivek Patwardhan, Vaman Khadilkar, Shashi Chipplonkar, Anuradha Khadilkar. *Indian Journal of Endocrinology and metabolism*, Vol 22, No 2, Mar-Apr 2018, Pp-244-248

<http://www.ijem.in/article.asp?issn=2230-8210;year=2018;volume=22;issue=2;spage=244;epage=248;aulast=Mandlik;type=0>

Introduction: Due to the high prevalence of Vitamin D deficiency in spite of abundant sunshine and scarcity of studies investigating Vitamin D status in Indian children from rural and semirural areas, the objectives of this cross-sectional study were to: (1) assess the Vitamin D status of school-children in a semi-rural setting and (2) identify the determinants of Vitamin D status in these children. **Materials and Methods:** Data collected included anthropometric measurements (height and weight), body composition, three-one-day dietary recall method, demographic data, and sunlight exposure. Serum 25-hydroxyVitamin D (25(OH)D) was estimated by enzyme-linked immunosorbent assay (ELISA) technique. SPSS software was used for statistical analysis. **Results:** Anthropometric characteristics of the children were similar and mean serum 25(OH)D concentration was 58.5 ± 10.3 nmol/L with no significant differences between genders. Around 80% children reported sunlight exposure of 2 h or more. A majority (71%) of children were Vitamin D insufficient with serum 25(OH)D concentrations between 50 and 74.9 nmol/L. Determinants of Vitamin D identified were duration of sunlight exposure and body fat percent. Significant ($P < 0.05$) positive association of duration of sunlight exposure was observed with serum 25(OH)D concentrations, while BF% showed a negative association with serum 25(OH)D ($\beta = -0.307$; standard error = 0.1388; $P < 0.05$). **Discussion:** We have reported a high prevalence of Vitamin D insufficiency in school-children aged 6–12 years, from a semirural setting, in spite of a majority (80%) reporting >2 h of sunlight exposure. We have also demonstrated that duration of sunlight exposure and body fat percentage are the two important determinants of serum 25(OH)D concentrations in these children.

Keywords: Vitamin D Deficiency, Indian school-children, Child Health

3. Height velocity in apparently healthy north Indian school children. Aashima Dabas, Rajesh Khadgawat, Monita Gahlot, Vineet Surana, Neena Mehan, Rekha Ramot, Aparna Pareek, V Sreenivas, Raman Kumar Marwaha. *Indian Journal of Endocrinology and metabolism*, Vol 22, No 2, Mar-Apr 2018, Pp- 256-260

<http://www.ijem.in/article.asp?issn=2230-8210;year=2018;volume=22;issue=2;spage=256;epage=260;aulast=Dabas;type=0>

Objective: Linear growth is best estimated by serial anthropometric data or height velocity (HV). In the absence of recent data on growth velocity, we undertook to establish normative data in apparently healthy North Indian children. Materials and Methods: Prospective longitudinal study in a representative sample of 7710 apparently healthy children, aged 3–17 years from different regions of Delhi. Height was measured at baseline and at 12 months while pubertal examination was performed at baseline in a subset of children. Results: The data on HV and puberty were available in 5635 participants (73.08%; 2341 boys and 3294 girls) and 1553 participants (622 boys; and 931 girls), respectively. The mean peak height velocity (PHV) was 7.82 ± 2.60 cm in boys seen at 12–12.9 years and 6.63 ± 1.81 cm in girls at 10–10.9 years. Although late maturing boys had a greater HV than early or normal maturers, it did not vary with the age of pubertal maturation in girls. HV correlated with parental height in prepubertal boys, girls, and pubertal boys ($P < 0.01$) while no correlation was seen in girls. Conclusions: The study presents normal height velocities in North Indian children. A secular trend was observed in achieving PHV in both boys and girls.

Keywords: Linear Growth, Serial Anthropometric Data or Height Velocity, Child Health

Diseases

4. A Follow up Study of Leprosy Patients Released from Multidrug Therapy from a Tertiary Care Centre in Himachal Pradesh. A Sharma , GR Tegta , V Shanker , R Rattan. *Indian Journal of Leprosy, Vol 89, No. 4, Oct-Dec, 2017, Pp-176-189*

[http://www.ijl.org.in/2017/1%20A%20%20Sharma%20et%20al%20\(179-189\)final.pdf](http://www.ijl.org.in/2017/1%20A%20%20Sharma%20et%20al%20(179-189)final.pdf)

MDT in leprosy has been reported to clear skin lesions, reduces deformities and reaction, achieve bacillary clearance and have a very low relapse rate, nerve function impairment, disabilities and reactions may continue even after treatment. With an aim to generate data for counselling of post-RFT patients, the effect of WHO-MDT on various disease parameters like skin lesions, nerve involvement, deformities, bacterial load and the incidence of reactions and relapses has been studied. The study was conducted in the Department of Dermatology, Venereology & Leprosy, Indira Gandhi Medical College, Shimla over a period of one year with effect from July 2012 to June 2013; 45 cases (37 (82%) multibacillary and 8 (18%) paucibacillary) who had completed at least one of post-RFT follow up were included. A total of 27 patients (25 MB, 2 PB) had disability at diagnosis which shows late reporting. An increasing proportion of patients showed complete resolution of lesions with increasing time since RFT (chi squared for linear trend; p value= 0.028). Nerve thickening was seen in 43 cases, it improved in 29 (67.4%) patients, status remained the same in 12 (27.9%) and worsened in 2 (4.7%) patients. Improvement in sensory impairment was more common in patients with initial grade I disability (60.5, 9/15) as compared to those with type II disability (41.7%, 5/12), also worsening was more common in patients with initial grade II disability (41.7%, 5/12) as compared to those with grade I disability (20%, 3/15). 13 % (2/15) of patients with grade I and 25% (3/15) with grade II disability worsened, others improved or remained stationary. Bacteriological index continued to progressive decrease. Frequency of reactions also continued to decrease. Out of 55 total episodes of type 2 reactions, 12 occurred at presentation (21.8%). However, type 2 reactions were noted to occur mostly during MDT (43.6%). 12 (21.8%) episodes occurred in first 6 months and 12 (21.8%) in the last 6 months of MDT. After RFT, 10 reactional episodes (8 type 2 and 2 type 1), occurred in the first year, 6 (all type 2) in the second year after and 5 (type 2)

thereafter. This experience can be used to follow the trends, be alert about the type of problems and counsels these cases better.

Keywords: Leprosy, MDT, Tertiary care, Himachal Pradesh, Post-RFT

5. Clinical Profile of Type II Reaction in Leprosy - A Cross Sectional Study. SK Gupta , SK Singh , RD Mukhija , AK Thacker. *Indian Journal of Leprosy, Vol 89, No. 4, Oct-Dec, 2017, Pp-191-195*

[http://www.ijl.org.in/2017/2%20SK%20Gupta%20et%20al%20\(191-195\)%20final.pdf](http://www.ijl.org.in/2017/2%20SK%20Gupta%20et%20al%20(191-195)%20final.pdf)

Leprosy is a chronic granulomatous disease that primarily affects the peripheral nervous system. Cutaneous nerves are severely affected in lepra reaction and this leads to morbidity. The objective of this study was to analyse the clinical profile of Type-II reactions in leprosy. The present cross-sectional study was undertaken in 21 leprosy patients with Type-II reactions attending in and out-patient department of Dermatology & Venereology, B.R.D. Medical College, Gorakhpur, Uttar Pradesh, India from July 2005 to October 2006. Type-II reaction was more common I male. Erythema nodosum leprosum (ENL) was the presenting feature associated with high fever. Initiation of multidrug therapy was main precipitating factor for development of Type-II reaction in leprosy which was generally seen within first six month. Our study carried out during MDT era shows that profile of symptomatology as well as triggers for initiating reactions does not seem to have changed. As there could be variation in the course of these reactions due to change in bacillary load of cases diagnosed and Clofazimine being part of regular Multibacilliary regimen after MDT, periodic analysis of statistically significant number of such cases could be meaningful from therapeutic angle.

Keywords: Leprosy, Erythema Nodosum Leprosum, Neuritis, MDt Era

6. Leprosy and its Periodontal Manifestations in the Anterior Maxilla. VR Kaipa , SP Reddy , N Kiran Kumar , C Srikanth , T Kaveti , SR Kosuri , M Lohit Reddy , S Lingamaneni. *Indian Journal of Leprosy, Vol 89, No. 4, Oct-Dec, 2017, Pp-197-202*

[http://www.ijl.org.in/2017/3%20VR%20Kaipa%20et%20al%20\(197-202\)%20final.pdf](http://www.ijl.org.in/2017/3%20VR%20Kaipa%20et%20al%20(197-202)%20final.pdf)

Oral health is important for all sections of society, including special groups like leprosy afflicted people. Oral manifestations in leprosy are known, however, most of these afflictions have been observed in pre-chemotherapy/ pre-MDT periods. This study has been carried out in 50 leprosy patients, admitted to Government General Hospital Leprosy Wing, Khammam, Telangana and compared with age matched healthy people. Patients within the age range of 30-60 years and diagnosed with leprosy and otherwise systemically healthy are included. The periodontal status of the maxillary anterior sextant (canine to canine) region is studied in both the groups. Clinical parameters measured were-dental plaque index of silness and Loe and periodontal disease by Ramfjord's index. PPD and CAL was measured using UNC-15 probe and all six sites per tooth were accessed. The mean plaque score measured in leprosy is 2.62, which is statistically significant ($P<0.01$) compared to that measured in control groups which is 1.73. Mean probing pocket depth in leprosy patients is much higher than that in controls and most of indoor patients included in the study belong to multibacillary forms, these may not reflect the epidemiology of these manifestations. This pilot study just highlights the problem which needs to be studied and managed at the community level.

Keywords: Oral Manifestations, Dental Plaque, Leprosy

7. Is a surgeon-performed ultrasound good enough in diagnosing thyroid malignancy? Gajarajan Mohanapriya, Maharajan Chandrasekaran. *Indian Journal of Endocrinology and metabolism, Vol 22, No 2, Mar-Apr 2018, Pp-181-184*

<http://www.ijem.in/article.asp?issn=2230-8210;year=2018;volume=22;issue=2;spage=181;epage=184;aulast=Mohanapriya;type=0>

Background: The widespread availability of ultrasonography has facilitated the evaluation of thyroid nodules, to differentiate between malignant and benign nodules and between metastatic and reactive lymph nodes. From the radiologists' suite, ultrasound has moved into the surgeon's office. **Aim:** The aim of the present study was to evaluate the relevance of surgeon-performed ultrasound (SPUS) in the diagnosis of malignancy of the thyroid. **Methods:** SPUS for 389 consecutive patients attending the outpatient department of endocrine surgery in a tertiary care institute in Chennai. The SPUS data of 350 patients who underwent total thyroidectomy were compared with the report of radiologist-performed ultrasonogram, fine-needle aspiration cytology, and histopathology examination. **Results:** SPUS ranked the maximum with a Spearman's correlation of 0.886 ($P < 0.0001$). The sensitivity and specificity of positive-predictive value and negative-predictive value of SPUS were 98.53%, 95.72%, 96.81%, and 98%, respectively. **Conclusion:** SPUS is a very useful clinical adjunct in diagnosing malignancy of the thyroid and saves the patient time and resource in visiting another consultant. A surgeon who is more familiar with the anatomy and pathophysiology of thyroid disorders triages the nodule better.

Keywords: Thyroid Malignancy, Surgeon-performed Ultrasound, Thyroid Nodules

8. Characterization of metabolic parameters in responders and nonresponders treated with canagliflozin monotherapy in drug-naive subjects with Type 2 diabetes. Eiji Kutoh, Asuka Wada, Teruma Murayama, Jyunka Hayashi. *Indian Journal of Endocrinology and metabolism*, Vol 22, No 2, Mar-Apr 2018, Pp-185-190

<http://www.ijem.in/article.asp?issn=2230-8210;year=2018;volume=22;issue=2;spage=185;epage=190;aulast=Kutoh;type=0>

Objectives: The aim of this project is to compare the effect of canagliflozin monotherapy on metabolic parameters between responders and nonresponders with this drug. This study is a prospective, unblinded, observational study. **Subjects and Methods:** Drug-naïve patients with type 2 diabetes mellitus received only 50-100 mg/day canagliflozin for 3 months (n = 39). They were divided into two groups according to the novel "A1c index" to assess glycemic efficacies; responders (n = 24) and nonresponders (n = 15). **Results:** At baseline, glycated hemoglobin (HbA1c) and fasting blood glucose (FBG) were significantly higher and homeostatic model assessment (HOMA)-B and body mass index (BMI) were significantly lower in responders. In both groups, similar, significant reductions of BMI (-1.9% with responder and -1.8% with nonresponder) and HOMA-R (-35.8% for responder and -31.5% for nonresponder) were observed. However, differences were seen with other parameters as follows: 1) responders: significant reductions of HbA1c (10.95%-8.44%), FBG (-29.6%) or free fatty acid (FFA) (-16.2%), and significant increases of HOMA-B (79.7%) were observed. 2) Nonresponders: significant reductions of serum uric acid (UA) (-8.6%) levels were seen. Significant correlations were observed between the baseline levels of serum UA and those of HOMA-B (R = 0.7259). However, this link became uncorrelated with the treatment with canagliflozin. **Conclusions:** These results suggest that (1) responders with canagliflozin have lower BMI and beta-cell function. Reductions of body weight with canagliflozin were not associated with its glycemic efficacy, (2) reduced FFA levels and enhanced insulin sensitivity/beta-cell function could be a potential mechanism of good glycemic efficacy of canagliflozin, and (3) serum UA might be involved in modulating beta-cell function during canagliflozin treatment.

Keywords: Type 2 Diabetes, Canagliflozin Monotherapy

9. Association of androgenetic alopecia with metabolic syndrome: A case-control study on 100 patients in a tertiary care hospital in South India. KC Dharam Kumar, Yadalla Hari Kishan Kumar, Vivekananda Neladimmanahally. *Indian Journal of Endocrinology and metabolism*, Vol 22, No 2, Mar-Apr 2018, Pp-196-199

<http://www.ijem.in/showcaptcha.asp?RedirectUrl=article&issn=2230-8210;year=2018;volume=22;issue=2;spage=196;epage=199;aulast=Dharam;type=0>

Background: Androgenetic alopecia (AGA) is the most common cause of hair loss. Although it is a medically benign condition, it can have a significant psychosocial impact on patients. “Metabolic syndrome” (MetS) is a collection of clinical signs that focus on cardiovascular and diabetes-related parameters. Despite the high burden of AGA and MetS in India, specific data on the participants are relatively sparse. **Aim of the Study:** The aim of is to study the association of AGA with MetS and its parameters. **Materials and Methods:** A case-control study was undertaken in a tertiary care hospital from December 2015 to November 2016 with 100 cases and controls in the age group of 20–50 years. Diagnosis of MetS was based on the National Cholesterol Education Program Adult Treatment Panel III. Independent t-test was used as a test of significance. Categorical data were assessed using Chi-square test of significance. $P < 0.05$ was considered to be significant. **Results:** MetS was seen in 53% of cases and 17% of controls ($P = 0.001$). The mean serum triglyceride level ($P = 0.015$, $P < 0.05$), mean systolic blood pressure ($P = 0.003$, $P < 0.05$), high-density lipoprotein levels in males ($P < 0.001$), and waist circumference in males ($P = 0.022$, $P < 0.05$) were statistically significant in patients with androgenetic alopecia when compared to healthy controls. **Conclusion:** A higher prevalence of MetS was noted in androgenic alopecia. Early screening for MetS is beneficial in patients with androgenic alopecia.

Keywords: Androgenetic Alopecia, Metabolic Syndrome

10. Association between glycemc gap and adverse outcomes in Critically Ill patients with diabetes. Sandeep Donagaon, Mala Dharmalingam. *Indian Journal of Endocrinology and metabolism*, Vol 22, No 2, Mar-Apr 2018, Pp-208-211

<http://www.ijem.in/article.asp?issn=2230-8210;year=2018;volume=22;issue=2;spage=208;epage=211;aulast=Donagaon;type=0>

Objectives: Glycemic excursions are commonly seen in patients admitted to the Intensive Care Unit (ICU) and are related to adverse outcomes. Glycemic gap is a

marker of this excursion in patients with diabetes. It can be used to predict adverse outcomes in patients with diabetes admitted to the ICU. It is calculated by subtracting A1C-derived average glucose (ADAG) = $([28.7 \times \text{HbA1c}] - 46.7)$ from plasma glucose at admission. Objective of this study was to correlate glycemic gap and adverse outcomes in patients with type 2 diabetes mellitus (DM) admitted to the ICU. Materials and Methods: We conducted an ambispective study to include patients with type 2 DM admitted to the ICUs from July 2015 to June 2016. The following adverse outcomes were recorded: Multiorgan dysfunction syndrome (MODS), acute respiratory distress syndrome (ARDS), shock, upper gastrointestinal (UGI) bleed, acute kidney injury (AKI), and acute respiratory failure (ARF). Results: A total of 200 patients were enrolled, with a mean age \pm standard deviation of 62 ± 11.24 years, and 64.5% were males. The median (interquartile range) duration of hospital stay and ICU stay were 8 (6-12) days and 4 (3-7) days, respectively. The most common primary diagnosis was cardiovascular (39.5%) followed by neurological (16.5%), infection at diagnosis (16.5%), respiratory (14%), gastrointestinal (7.5%), and others (6%). A higher glycemic gap was associated with occurrence of MODS ($P < 0.01$), ARDS ($P = 0.026$), shock ($P = 0.043$), UGI bleed ($P = 0.013$), AKI ($P = 0.01$), and ARF ($P < 0.01$). Glycemic gap cutoffs of 43.31, 45.26, and 39.12 were found to be discriminatory for predicting ICU mortality (area under the receiver operating characteristic [AUROC]=0.631, $P = 0.05$), MODS (AUROC = 0.725, $P < 0.001$), and ARF (AUROC = 0.714, $P < 0.001$). Conclusion: This study showed that higher glycemic gap levels were associated with an increased risk of MODS, ARDS, shock, UGI bleed, AKI, and ARF. Glycemic gap is a tool that can be used to determine prognosis in patients with diabetes admitted to the ICU.

Keywords: Glycemic Excursions, Glycemic Gap, Diabetes, Type 2 Diabetes Mellitus

11. Subclinical hypothyroidism and cardiac risk: Lessons from a South Indian population study. Sashi Niranjana Nair, Harish Kumar, Manoj Raveendran, V Usha Menon. *Indian Journal of Endocrinology and metabolism*, Vol 22, No 2, Mar-Apr 2018, Pp-217-222

<http://www.ijem.in/article.asp?issn=2230-8210;year=2018;volume=22;issue=2;spage=217;epage=222;aulast=Nair;type=0>

Introduction: The benefits of treating subclinical hypothyroidism are currently under debate, prevention of adverse cardiac events purporting to be one of the main benefits. The effect of subclinical hypothyroidism on the cardiovascular health of the Indian sub-population is largely unknown. This study was designed to examine these effects and to help guide treatment of this disorder. **Methods:** A cross-sectional adult population survey was carried out in urban coastal area of central Kerala. 986 volunteers underwent complete biochemical and physical examinations, 110 were found to have subclinical hypothyroidism (8.9%). The ten-year risk of an adverse cardiac event was calculated using the Framingham score algorithm. Eligible subclinical hypothyroid subjects (N = 110) and a randomly selected, age and gender matched control group (N = 220) were compared. **Results:** This population was found to have high baseline levels of diabetes 19.5%, hypercholesterolemia 57.2% and systolic hypertension 24.6%. No association was found between subclinical hypothyroid status or rising TSH and Framingham 10-year risk. While no difference between groups was noted with respect to lipid profile, a rising TSH was found to be significantly correlated with mild worsening of the lipid profile. A significant positive correlation was found between skinfold thickness and TSH. **Conclusions:** Subclinical hypothyroidism is not a contributing factor to elevated Framingham risk in this population, and while a mild effect was observed on the lipid profile, its effect is unlikely to be clinically relevant. We hypothesize that in this population a genetic component may be responsible for the uniquely high rates of metabolic syndrome and other endocrine diseases.

Keywords: Subclinical Hypothyroidism, Cardiac Risk, Indian Sub-population

12. Osteogenesis Imperfecta : A Case Report. Priscilla Roselyn Sam. *Indian Journal of Continuing Nursing Education, Vol 18, No 2, Jul-Dec 2017, Pp-26*

Osteogenesis Imperfecta is a commonly inherited connective tissue disorder caused by mutations of COLIA 1 and 2, Cartilage Associated Protein (CRTAP) and also

Leucine Proline Enriched Proteoglycan 1 genes. It is found to primarily affect the bones and increase bone fragility due to decreased bone mass and results in short stature. It is also found to be a systemic disorder as it results in dentinogenesis, hearing loss, restrictive pulmonary disease, scoliosis, and ocular complications. It is classified based on clinical, radiological and genetic features. There are both conservatives and surgical options available for its management. A team approach is needed to take care of these children as they have recurrent fractures, bowing deformities and also systemic complications. This article will help one to know of the kind of expertise that is needed to look after the needs of these children.

Keywords: Osteogenesis Imperfecta, Gene Mutations, Increased Bone Fragility, Management

13. Acute Respiratory Distress Syndrome: A Case Presentation. Angel Rajakumari.
Indian Journal of Continuing Nursing Education, Vol 18, No 2, Jul-Dec 2017, Pp-32

Acute Respiratory Distress Syndrome (ARDS) is a major condition in an Intensive Care Unit. It was previously known as non-cardiogenic pulmonary edema. It is caused by various conditions due to damage to the lung, but the main reason is sepsis. It damages the alveolar capillary membrane that leads to interstitial and alveolar edema, diffuse alveolar damage, refractory hypoxemia and ventilation perfusion mismatch. The common clinical manifestation is dyspnea with diffuse infiltration in chest X-ray. The management of ARDS includes setting low tidal volume, high Positive End Expiratory Pressure (PEEP) and low plateau pressure. Prone positioning will improve perfusion to the patient and thereby increase PaO₂/FiO₂ ratio. The recent trend of High Frequency Oscillation Ventilation (HFOV) is used to manage ARDS.

Keywords: Acute Respiratory Distress Syndrome, Acute Lung Injury, Dyspnea, Ventilation

14. Relationship between Sleep Quality and Glycaemic Control among Subjects with Type 2 Diabetes Mellitus. Abijah Princy, Valliamal Babu, Sheela Durai, Hesarghatta S. Asha, Antonisami Belavendra. *Indian Journal of Continuing Nursing Education, Vol 18, No 2, Jul-Dec 2017, Pp-39*

Sleep disturbance has evolved as an unrecognised health issue among the diabetic patients. Information on sleep quality in Type 2 Diabetes in relation to the glycaemic control is limited and is rarely explored. This study was designed to assess the relationship between sleep quality and glycaemic control among subjects with Type 2 Diabetes Mellitus attending the Endocrinology Outpatient Department of a tertiary care centre in South India. A non-experimental descriptive design was undertaken. A total of 500 Type 2 Diabetic subjects (male-242, female-258) aged between 20-70 years were selected based on total enumeration sampling technique. Sleep quality was assessed using Pittsburg Sleep Quality Index (PSQI) and glycaemic control was estimated using HbA1C levels obtained within the past six months. Descriptive and inferential non parametric statistics such as frequency distribution, median, range, Speramen rank's correlation, Mann Whitney U test, Kruskal Wallis test and Chi square tests were used to analyse the data. Among the subjects 63.6 % had poor sleep quality (PSQL>5) and 74.6% of them had poor glycaemic control (HbA1c >7%). The median HbA1c of poor quality sleepers was 8.25% in comparison with good quality sleepers (Median HbA1c-7.80%). Low positive correlation existed between sleep and poor glycaemic control ($r_s=.09$, $p=.036$). Majority of type 2 Diabetic have poor sleep quality and poor glycaemic control. Progressive increase in HbA1c existed as the sleep quality worsened. This warrants further exploration into the details of the relationship between sleep quality and glycaemic control.

Keywords: Sleep Quality, Glycaemic Control, Type 2 Diabetes Mellitus

15. Determinants of Tuberculosis Noncompliance among Pulmonary Tuberculosis. Manu Bala, J K Sodhi, Kapil Sharma. *Indian Journal of Continuing Nursing Education, Vol 18, No 2, Jul-Dec 2017, Pp-51*

Tuberculosis remains a major public health problem worldwide. According to WHO, one third of the world's population is infected by latent Tuberculosis. There is an alarming increase in incidence of multi drug resistant Tuberculosis patients in Ludhiana district. The main reason for this is noncompliance of patients to therapy. Qualitative study provides deeper insight into exploration of factors responsible for noncompliance. The aim of this study was to explore the determinants of treatment noncompliance among Pulmonary Tuberculosis patients registered under Revised National Tuberculosis Control Programme, Ludhiana, Punjab. Sample of thirty five patients with Pulmonary Tuberculosis with treatment noncompliance, attending DOTS clinics, under Revised National Tuberculosis Control Programme, Ludhiana, Punjab were included by purposive sampling technique till saturation of data was obtained. The results of findings depicted six themes namely psychological effects, physical problems, psycho social problems, role of health professionals, financial burden and health system related factors. The study concluded that there were various determinants for treatment noncompliance. It can be recommended that the counselling session and regular follow up are needed to reduce the noncompliance and improve the quality of patient life.

Keywords: Pulmonary Tuberculosis, Noncompliance, Determinants, Qualitative Study

16. Breast Cancer. Shalini Chandran, A S Kumar, A R Jacob, etc. *Indian Journal of Continuing Nursing Education, Vol 18, No 2, Jul-Dec 2017, Pp-64*

Breast cancer is one of the most feared illnesses and a major health problem for women. Many women believe that their risk for breast cancer is greater than their risk for any other type of illness. Greater knowledge of breast cancer will lead to early detection which is associated with higher long-term survival rates. This article gives an overview about breast cancer and its management. A case report is presented and the nursing care has been discussed in detail.

Keywords: Breast Cancer, Women Health, Major Health Problem

Family Planning

17. Traditional and Modern Contraceptive Method Use in the Philippines: Trends and Determinants 2003–2013. Maria Paz Marquez, Maria Midea Kabamalan, Elma Laguna. *Studies in Family Planning*, Vol 49, No.2, Jun 2018, Pp-95

<https://onlinelibrary.wiley.com/doi/abs/10.1111/sifp.12051>

This study examines recent levels, patterns, and determinants of traditional contraceptive method use, based on pooled data from the 2003, 2008, and 2013 Philippines Demographic and Health Surveys. Most contraceptive users in the Philippines rely on modern methods, but over the past ten years traditional method use has continued to account for about a third of all contraceptive use. Results show women in 2003 and 2008 were more likely to use periodic abstinence (rhythm) over modern methods compared with women in 2013, while withdrawal rather than modern methods was preferred more by women in 2013 than in 2003. The characteristics of women who use traditional methods have changed little over the past decade. Knowing the characteristics of traditional contraceptive method users can help establish policies and programs that promote more effective contraceptive use, including encouraging users of traditional contraceptive methods to switch to the more effective modern methods.

Keywords: Family Planning, Demographic and Health Surveys, Contraceptive Use

18. Effect of Deploying Trained Community Based Reproductive Health Nurses (CORN) on Long-Acting Reversible Contraception (LARC) Use in Rural Ethiopia: A Cluster Randomized Community Trial. Taddese Alemu Zerfu, Henok Taddese Ayele, Tariku Nigatu Bogale. *Studies in Family Planning*, Vol 49, No 2, Jun 2018, Pp-115

<https://onlinelibrary.wiley.com/doi/abs/10.1111/sifp.12054>

To investigate the effect of innovative means to distribute LARC on contraceptive use, we implemented a three arm, parallel groups, cluster randomized community trial design. The intervention consisted of placing trained community-based reproductive health nurses (CORN) within health centers or health posts. The nurses provided counseling to encourage women to use LARC and distributed all contraceptive methods. A total of 282 villages were randomly selected and assigned to a control arm (n = 94) or 1 of 2 treatment arms (n = 94 each). The treatment groups differed by where the new service providers were deployed, health post or health center. We calculated difference-in-difference (DID) estimates to assess program impacts on LARC use. After nine months of intervention, the use of LARC methods increased significantly by 72.3 percent, while the use of short acting methods declined by 19.6 percent. The proportion of women using LARC methods increased by 45.9 percent and 45.7 percent in the health post and health center based intervention arms, respectively. Compared to the control group, the DID estimates indicate that the use of LARC methods increased by 11.3 and 12.3 percentage points in the health post and health center based intervention arms. Given the low use of LARC methods in similar settings, deployment of contextually trained nurses at the grassroots level could substantially increase utilization of these methods.

Keywords: Community Based Reproductive Health Nurses, Long-Acting Reversible Contraception, Contraceptive Use, Family Planning

19. The Stability Paradox: Why Expansion of Women's Education Has Not Delayed Early Union Formation or Childbearing in Latin America. Albert Esteve, Elizabeth Florez-Paredes. *Studies in Family Planning*, Vol 49, No.2, Jun 2018, Pp- 127

<https://onlinelibrary.wiley.com/doi/abs/10.1111/sifp.12055>

Despite substantial improvements in women's education, the age at which Latin American women marry (cohabit) or become mothers for the first time has barely decreased over the past four decades. We refer to this as the “stability paradox.” We examine the relationship between years of schooling and transitions to first union or child, analyzing retrospective information from 50 cohorts of women born between 1940 and 1989 in 12 Latin American countries. Absolute and relative measures of schooling are compared. Data is drawn from 38 Demographic Health Surveys (DHS) conducted between 1986 and 2012 in these countries. Results show that expected postponement in family transitions due to educational expansion was offset by a rise in union formation and childbearing within strata of absolute education, but stayed approximately constant within strata of relative education. The relative measure of education retains the stratifying power of education but neutralizes any effect attached to a specific number of years of schooling and the learning skills associated with them. This is consistent with the idea that access to education in Latin America reproduces existing patterns of socioeconomic advantage, rather than creating a more equitable distribution of learning opportunities and outcomes.

Keywords: Stability Paradox, Early Union Formation, Childbearing, Latin America

20. Measuring Women's Covert Use of Modern Contraception in Cross-Sectional Surveys. Ifta Choiriyah, Stan Becker. *Studies in Family Planning*, Vol 49, No 2, Jun 2018, Pp-143

<https://onlinelibrary.wiley.com/doi/abs/10.1111/sifp.12053>

A proportion of women in couples use contraception without their partners' knowledge. There are two principal ways to measure this covert use in cross-sectional surveys like the Demographic and Health Surveys (DHS). First is a direct question, “Does your husband/partner know that you are using a method of family planning?” Second is an indirect method: the reports of both partners to the question on contraceptive use are matched, and if the woman reports a modern contraceptive method and the male partner reports nonuse, her use is considered covert. For 21

DHS surveys for which both estimates could be made, there are large discrepancies between the two. We found that a proxy variable—responses to the question, “Would you say that using contraception is mainly your decision, mainly your husband's/partner's decision, or did you both decide together?”—has high sensitivity and specificity for classifying those in the open category for both methods and those in the covert category for both methods. Recommendations are that the direct question be reinstated in the DHS and that the indirect method not be used by itself but in conjunction with the decision-making variable.

Keywords: Contraception, Family Planning, Demographic and Health Surveys

Maternal and Child Health

21. Fetal skeletal size and growth are relevant biometric markers in Vitamin D deficient mothers: A North East India prospective cohort study. Dipti Sarma, Uma K Saikia, Darvin V Das. *Indian Journal of Endocrinology and metabolism*, Vol 22, No 2, Mar-Apr 2018, Pp-212-2016

<http://www.ijem.in/article.asp?issn=2230-8210;year=2018;volume=22;issue=2;spage=212;epage=216;aurlast=Sarma;type=0>

Context: The neonatal skeletal outcomes due to maternal Vitamin D deficiency. Aims: The aim of this study is to assess the serum 25 hydroxy Vitamin D (25[OH]D) status in pregnant women and correlate with cord blood 25(OH)D levels, femur length at 34 weeks gestation, and neonatal anthropometry (birth weight, birth length, and head circumference). Settings and Design: This was prospective cohort study. Subjects and Methods: This study was carried out in 250 healthy primigravida between 18 and 40 years of age in the third trimester of gestation attending the Obstetrics and Gynaecology Department of Gauhati Medical College, Guwahati from December 2012 to December 2015. Dietary assessment of calcium and Vitamin D intake, sunlight exposure among the pregnant mothers and fetal femur length measurements were done. The neonates were followed up at birth for biometric assessment and the estimation of cord 25(OH)D. Statistical Analysis Used: Chi-square test and Pearson correlation were carried out to see the association and correlation between different variables. Statistical significance was set at the 0.05 level. Results: We found low Vitamin D levels (60%) in the majority of pregnant mothers and newborns (62.4%). The mean Vitamin D levels were 17.51 ± 2.24 ng/ml and 14.51 ± 1.8 ng/ml among the low Vitamin D maternal subjects and their new born, respectively. There was a significant association of maternal Vitamin D levels with sun exposure, dietary intake of Vitamin D, serum calcium, serum alkaline phosphatase levels, and serum parathyroid hormone in subjects with low Vitamin D. Fetal femur length and birth length were significantly shorter in mothers with low Vitamin D ($P < 0.01$). Conclusions: Maternal hypovitaminosis D was associated with adverse skeletal outcome in neonates.

Keywords: Vitamin D Deficiency, Maternal and Child Health, Fetal Skeletal Size

Women Health

22. Assessment of cardiovascular risk in natural and surgical menopause. S Zafar Abbas, Vijayata Sangawan, Asim Das, Anil Kumar Pandey. *Indian Journal of Endocrinology and metabolism*, Vol 22, No 2, Mar-Apr 2018, Pp-223-228

<http://www.ijem.in/article.asp?issn=2230-8210;year=2018;volume=22;issue=2;spage=223;epage=228;aulast=Abbas;type=0>

Background: Menopause is associated with increased cardiovascular disease (CVD) risk. Arterial stiffness, a biomarker of vascular aging, increases the risk for CVD. **Aims and Objectives:** The study was aimed to determine whether menopause is associated with arterial stiffness amongst natural and surgical menopausal women. **Materials and Methods:** We conducted a cross-sectional study amongst natural postmenopausal women, with Surgical menopause and Premenopausal. Arterial stiffness was measured by Periscopy TM. Large artery stiffness may be an important mechanism by which hysterectomy increases the risk of cardiovascular disease in postmenopausal women. **Results:** Carotid femoral pulse wave velocity (cfPWV) and Brachial Ankle Pulse wave velocity (baPWV) were significantly higher in surgical and natural menopause compared to women with Premenopausal group.

Keywords: Menopause, Cardiovascular Disease, Women Health

23. Lean mass and disease activity are the best predictors of bone mineral loss in the premenopausal women with rheumatoid arthritis. Meha Sharma, Urmila Dhakad, Anupam Wakhlu, Danveer Bhadu, Deep Dutta, Siddharth K Das. *Indian Journal of Endocrinology and metabolism*, Vol 22, No 2, Mar-Apr 2018, Pp-236-243

<http://www.ijem.in/article.asp?issn=2230-8210;year=2018;volume=22;issue=2;spage=236;epage=243;aulast=Sharma;type=0>

Background and Objectives: Factors determining bone mineral (BM) loss in rheumatoid arthritis (RA) are not well known. This study aimed to determine the occurrence and predictors of BM loss in the young premenopausal women with RA. **Methods:** Ninety-six females with RA and 90 matched controls underwent clinical, biochemical, BM density (BMD), and body composition assessments. RA disease activity was assessed using disease activity score-28 (DAS-28) and hand X-ray. **Results:** In the young premenopausal females with RA having median symptom and treatment duration of 30 (18–60) and 4 (2–12) months, respectively, with moderate disease activity (DAS-28, 4.88 ± 1.17), occurrence of osteoporosis and osteopenia was 7.29% and 25% at spine, 6.25% and 32.29% at hip, and 17.7% and 56.25% at wrist, respectively (significantly higher than controls). RA patients had lower BMD at total femur, lumbar spine (LS), radius total, and radius ultra-distal. Total lean mass (LM) and BM content were significantly lower in RA ($P = 0.022$ and <0.001 , respectively). In RA, BMD at majority of sites (LS, neck of femur, greater trochanter, radius total, and radius 33%) had the strongest positive correlation with LM followed by body fat percent. RA patients with most severe disease had lowest BMD at different sites and lowest LM. Stepwise linear regression revealed LM followed by DAS-28 to be best predictors of BMD. RA patients receiving glucocorticoids did not have significantly different BMDs from patients not taking glucocorticoids. **Interpretation and Conclusion:** BM loss is a significant problem in the young premenopausal women with recent-onset RA. LM and disease severity were the best predictors of BMD.

Keywords: Premenopausal Women, Rheumatoid Arthritis, Women Health

24. Relation of bone mineral density with homocysteine and cathepsin K levels in postmenopausal women. Madhukar Mittal, Rajeev Verma, Arvind Mishra, Ajay Singh, Vivek Kumar, KK Sawlani, M Kaleem Ahmad, Pratishtha Mishra, Rishika Gaur. *Indian Journal of Endocrinology and metabolism*, Vol 22, No 2, Mar-Apr 2018, Pp-261-266

Background: Homocysteine (HCY) interferes with collagen cross-linking in bones and stimulates osteoclast activity. The activated osteoclasts secrete cathepsin K (CathK), a cysteine protease, in eminent quantity during bone resorption. Hyperhomocysteinemia may effect bone mineral density (BMD) through CathK. We, therefore, examined the relation between HCY and BMD along with CathK, 25-hydroxyvit-D (25[OH]D), intact parathyroid hormone (iPTH), and Vitamin B12.

Materials and Methods: We recruited a total of 93 postmenopausal women between the age group of 45–60 years, attending the Endocrinology outpatient department at King George's Medical University, Lucknow. BMD was done by DXA scan using Hologic QDR1000 system. Based on the WHO criteria, patients were segregated into three groups as follows; normal bone mass, osteopenia, and osteoporosis. All women underwent routine biochemical laboratory parameters, HCY, Vitamin B12, and CathK levels.

Results: Among 93 postmenopausal women, 56% (52) had osteoporosis. Nineteen percent (18) had normal BMD (mean age, 53.22 ± 8.5 years) and 23 (25%) had osteopenia (mean age 52.86 ± 6.67 years). The mean age in the osteoporetic group was 56.2 ± 6.9 years. The median (interquartile range) levels of HCY in the three groups were $14.5 \mu\text{mol/L}$ (12.2–24.7), $15.05 \mu\text{mol/L}$ (12.1–19.9) and $13.2 \mu\text{mol/L}$ (10.3–17.0), respectively. CathK levels were similar in three groups 7.6 ng/ml (7.0–80.5), 8.3 ng/ml (7.3–8.5), and 8.6 ng/ml (7.2–8.9). Both HCY and CathK were found positively associated with serum phosphorus ($r = 0.584$, $P < 2.01$ and $r = 0.249$, $P < 0.05$, respectively). Levels of HCY positively correlate with PTH ($r = 0.303$, $P < 0.01$) and inversely with Vitamin B12 ($r = -0.248$, $P < 0.05$). No significant association was seen between CathK level and 25(OH) D, iPTH, serum calcium.

Conclusion: Low bone mass by DXA is a significant problem in postmenopausal females. HCY and CathK do not reliably correlate with bone loss in postmenopausal women although phosphorus metabolism may play a role.

Keywords: Homocysteine, Postmenopausal Women, Cathepsin K, Women Health