

# Indian Journal of Obstetrics and Gynecology

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**Indian Journal of Obstetrics and Gynecology (IJOG) (pISSN: 2321-1636; eISSN: 2455-5339)** publish original, peer-reviewed work in all areas of obstetrics and gynecology, including Obstetrics, Midwifery, Maternal medicine, Fetal medicine, Gynecological urology, Gynecological oncology, Gynecological endocrinology, Infertility, Reproductive medicine, Genitourinary medicine, Sexual medicine, Prenatal diagnosis, Perinatology, Cytopathology, General gynecology, Community gynecology, Family planning, Epidemiology, Reproductive ethics, Research into medical education, Menopause, Operative gynecology. The journal publish original study, reviews, case reports, letters to Editor, short communication, journals scan, conference calendars in all issues.

**Readership:** Obstetricians, Gynecologists, pediatricians, and neonatologists.

**Indexing and Abstracting Information:** Index Copernicus, Poland; ProQuest, USA; Genamics JournalSeek.

**Subscription rates worldwide:** Individuals (annual) - Contact us; Institutional (annual, Print+Online)- INR9000/USD643. Single issue INR2250/\$160.75. Payment methods: By Demand Draft/cheque should be in the name of **Red Flower Publication Pvt. Ltd.** payable at Delhi. By online: <http://rfppl.co.in/subscribe.php?mid=7>, Bank Transfer/TT: **Bank name:** Bank of India, **IFSC Code:** BKID0006043, **Swift Code:** BKIDINBBDOS, **Account Name:** Red Flower Publication Pvt. Ltd., Account Number: 604320110000467, Branch: Mayur Vihar Phase-I, Delhi - 110 091 (India) or you can log on to [www.rfppl.co.in](http://www.rfppl.co.in).

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**Printed at** Mayank Offset Process, 794/95 Guru Ram Dass Nagar Extn, Laxmi Nagar, Delhi - 110092.



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## Indian Journal of Obstetrics and Gynecology [IJOG]

ISSN:  
2321-1636, 2455-5339

**ICV 2015: 72.87**

Area: [Technical science](#)

Print version: yes

Electronic version: yes

**No historical ratings**

**Special Issue on:**

**1<sup>st</sup> YUVA KSOGA 2017**

*Theme*

# **Essential Obstetrics & Everyday Gynecology**

**On 2<sup>nd</sup> and 3<sup>rd</sup> September 2017**

## **Guest Editors**

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# INDIAN JOURNAL OF OBSTETRICS AND GYNECOLOGY

July - September 2017  
Volume 5 Number 3 (Supplement)

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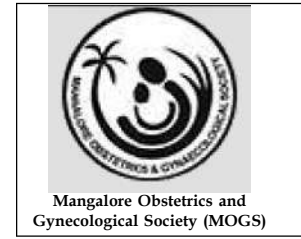
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## Foreward

### From The Desk of the President, MOGS.....



**Dr Prema D'Cunha**

President

Mangalore Obstetrics and Gynecological Society

**Y**uva is an ancient word which means young. Yuva is also used to denote cadet or a vigorous person. My heart swells with pride as Mangalore – the city of youth and dynamism – welcomes the FIRST EVER YUVA KSOGA 2017, with arms wide open.

The YUVA KSOGA 2017 was conceived with the intention to provide a platform to the young gynaecologists of the state, to share and express their scientific views. In the spirit of youth, the highlight of this YUVA KSOGA is that 80 percent of the faculty, are aged less than 40 years.

Our theme for the year 2017 - “Essential Obstetrics and Every day Gynecology”

The star attractions of the YUVA KSOGA 2017 are the live laparoscopy surgical workshop on endometriosis and Simulation workshop in Critical Care in Obstetrics as well as Playing it Smart-a much needed workshop to find success in obtaining funded research.

We have also been honoured and privileged to be affiliated with the prestigious INDIAN JOURNAL OF OBSTETRICS AND GYNECOLOGY – our scientific publication partner.

“The interaction of knowledge and skill with experience, is the key to learning – John Dewey”

We hope and pray that the guests, faculty and delegates of our maiden venture YUVASOGA 2017, will relish this academic feast of knowledge, skills and experience.

**Dr Prema D'Cunha**





## Message

### From The Desk of the President, KSOGA 2017.....



**Dr Vidya Bhat**

President

Karnataka State Obstetric and Gynecology Association  
(KSOGA)

“Be inspired and let the Youth navigate new trends in knowledge”

**T**he YUVA KSOGA 2017, has paved a way for our young obstetricians and gynecologists to be inspired. On Behalf of the Karnataka state Obstetrics and Gynecology Association, I applaud the efforts of the president and the members of the Mangalore Obstetrics and Gynecological Society and the KSOGA, in organising the FIRST EVER YUVA KSOGA 2017 and making this farfetched dream, turn into a beautiful reality.

With first of its kind affiliation, the scientific papers in this journal supplement of the Indian Journal of Obstetrics and Gynecology – are an example of how the youth can stretch their minds and how their creativity and innovativeness knows no bounds.

So let's soak in Essential obstetrics and Everyday gynecology.

Wishing YUVA KSOGA 2017 only success.

**Dr Vidya Bhat**

## A Study on the Variations in Vocal Parameter Measures in Women with Polycystic Ovarian Syndrome

### Jacqueline B. Fernandes

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### Joylene D'Almeida

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### Enayath Nisha and Renita Maben

Interns, Department of Audiology and Speech Language Pathology, Father Muller College of Speech and Hearing, Mangalore, Karnataka, India.

### Abstract

Polycystic ovary syndrome (PCOS), is a very common endocrine or metabolic abnormality affecting 6–8% of women of reproductive age worldwide.

The diagnosis of PCOS depends on a specific criterion, reviewed and updated by a subgroup of the National Institute of Health and more recently by a task force of the Androgen Excess and PCOS Society. Which includes: (1) oligo and/or an ovulation, (2) clinical and/or biochemical signs of hyperandrogenism, and (3) polycystic ovaries.

Deepening of the voice and/or other vocal symptoms have not been investigated in patients with PCOS based on the current literature. An elevated testosterone level invariably results in deepening of the voice. The purpose of this study was to look at the prevalence and pattern of acoustic changes in patients with Polycystic Ovary Syndrome (PCOS).

*Method:* A total of 60 patients in the age range of 19

to 42 years with PCOS diagnosed on the basis of three criteria: the presence of irregular menstrual cycles, hyperandrogenism and an ultrasound diagnosis of polycystic ovaries, were included in the study. Acoustic voice analysis was carried out on each of these patients. Parameters assessed in the voice analysis of these patients were Frequency (F0), Jitter, Shimmer, and Harmonics to Noise Ratio (HNR).

*Results:* A significant decrease in the mean fundamental frequency and increase in the harmonic to noise ratio, was noted in individuals with PCOS. When compared within age groups, middle age female subjects with PCOS showed a higher significance of voice changes, in comparison to young female subjects diagnosed with PCOS.

*Conclusion:* Physicians should be aware of vocal changes in PCOS especially in hirsute subjects with PCOS and hence must more often suggest a voice therapy initiative, that can reduce damaging voice changes from becoming a permanent alteration.

## Prospective Study of Conventional Papsmears Taken for Cervical Cancer Screening, to Determine the Strategy of Cervical Cancer Control in our City

### Aria Raina

Postgraduate, Department of Obstetrics and Gynecology, A.J Institute of Medical Sciences and Research Centre, Mangalore, Karnataka, India.

### Kavitha D' Souza

Professor and Head of Department, Department of Obstetrics and Gynecology, A.J Institute of Medical Sciences and Research Centre, Mangalore, Karnataka, India.

### Abstract

The study was conducted to find out target age group in which screening efforts can be concentrated for early detection as well as reduction in incidence of cervical cancer and to determine the distribution of papsmear reports in our city.

A prospective study was conducted in 1000

patients A.J Hospital Mangalore, patients with age group 21 to 65 were screened from October 2015 to May 2017 excluding pregnant women and clinically detected cervical, uterine or ovarian lesions.

Slides were reported according to The Bethesda system 2001 by our pathology department.

Out of 1000 patients 40 patients had pre malignant lesions prevalent in the age group of 30 to 50 years.

## Maternal Attachment & Post Partum Depression in a General Hospital Setting

### Archana Vikram

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### Prateeksha V. Shetty

Lecturer in Clinical Psychology, Dept of Psychiatry, Yenepoya Medical College Hospital, Mangalore, Karnataka, India.

### Abstract

**B**rief Introduction: Postpartum Depression is characterized by a depressed mood, excessive anxiety, insomnia, changes in weight and in severe cases suicidal ideation. Onset is generally within 12 weeks post childbirth. Mothers afflicted with PPD become less responsive to infant needs, are less available to them and find mothering an exasperating task. They might develop negative cognitions of being an unfit mother and hence may withdraw themselves from childcare.

*Objectives of the Study:* 1. To assess the incidence of Post Partum Depression in a Post Natal ward at a General Hospital setting. 2. To study the factors associated with Post Partum Depression in a Post Natal ward at a General Hospital setting. 3. To study the relationship between Post Natal Maternal Attachment and Post Partum Depression.

*Methodology:* The present study is a hospital based cross-sectional study. The sample consist of

post partum women at the Post Natal ward, Department of Obstetrics-Gynaecology, Yenepoya Medical College Hospital, Mangalore. A total of 200 patients above the age of 18 years were recruited for the study. Self report measures-Edinburgh Postnatal Depression Scale (EPDS) and The Postpartum Maternal Attachment Scale, were used. The data is analyzed using descriptive statistics. For measuring relationship & association between risk factors and Post Partum Depression, t test is used.

*Results:* In the EPDS postpartum evaluation of depression levels, 6 women (2.5%) showed scores above the cutoff point of 13. The mean age of the study group was 20-30yr. Most of the participants were stay-at-home mothers (n = 174, 87%). Most of the pregnancies were unplanned (62%).

*Conclusion:* The prevalence rate of PPD in a general hospital setting is 2.5%, this study identifies PPD as an important issue in women's reproductive health. The relationship between insecure attachment style and PPD symptoms, which has been previously shown in western studies, has been confirmed.

## A Review of Maternal and Fetal Outcome in Patients with Gestational Diabetes Mellitus

**Purnima S. Wattal**

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Assistant Professor, Department of Obstetrics & Gynaecology, MLN Medical College, Allahabad, Uttar Pradesh, India.

### Abstract

**Introduction:** Gestational diabetes mellitus is defined as carbohydrate intolerance of varying degree of severity with onset or first recognition during pregnancy.

**Screening:** For detection and diagnosis of gestational diabetes mellitus, ACOG recommends universal screening but has two step procedure. ADA & IADPSG recommend both fasting blood sugar and 1 hr & 2 hr plasma glucose level and that too in high risk group.

DIPSI guidelines recommends universal screening for gestational diabetes mellitus

According to DIPSI guidelines, 2hrs plasma glucose value >140 mg/dl were considered as gestational diabetes mellitus

**Aims and Objectives:** To asses maternal and fetal outcome in patients documented with GDM

**Material and Methods:** The study was conducted on

64 patients with GDM according to DIPSI criteria . Venous blood samples drawn at 2 hours interval for estimating blood glucose. The blood glucose was calculated by glucose oxidase peroxidase method.

Patients were managed with dietary modifications and insulin and maternal complications during pregnancy were noted. Mode of termination of pregnancy , indication of caesarean sections in these patients, fetal outcome and NICU admissions were noted.

**Inclusion Criteria:** Antenatal patients attending antenatal clinic and diagnosed with GDM.

**Exclusion Criteria:** Pre-existing medical disorders

**Observations:** Diabetes associated maternal complications were noted in 34 patients (53.12% ). Pregnancy terminated by caesarean section in 29 patients (45.31% ). 3 patients had intrauterine foetal demise (4.68 % ) and 12 babies had NICU admissions

**Conclusion:** GDM does increase the morbidity of the mother and the fetus and hence timely intervention is the rule.

## Comparative Study of Pap Smear Versus Visual Inspection with Acetic Acid (VIA) and Lugol's Iodine (VILI) in Screening of Cervical Cancer

**Swetha O.N.**

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**Sneha Rajiv**

Senior Resident, Dept. of Obstetrics & Gynaecology, A.J. Institute of Medical Sciences and Research Centre, Mangaluru, Karnataka, India.

### Abstract

**Aims and Objectives:** To compare VIA and VILI with Pap smear examination, to establish VIA and VILI as an alternate method for cervical cancer screening. And to establish the diagnostic accuracy of VIA and VILI directed biopsy in abnormal Pap smears and VIA, VILI positive lesions.

**Methods:** It is a Prospective study of 250 Women who meet inclusion criteria, in the age group of 21-65years. All underwent PAP smear, VIA and VILI examination. Cervical biopsy taken from cases positive for any of the three tests and

histopathological evaluation done. Sensitivity, specificity, PPV, NPV calculated for each test and compared.

**Results:** Among 250 patients, 17 were positive for PAP smear, 37 were positive for VIA, 31 were positive for VILI. Total of 46 biopsies were taken, among them 19 were positive on histopathological examination. Four cases were missed by PAP smear, 5 cases were missed by VIA and 6 cases were missed by VILI examination.

**Conclusion:** VIA and VILI can be used as an alternative to PAP smear examination in the screening of cervical cancer in a low resource setting.

## Knowledge of Breastfeeding amongst Women in Two Generation

### Sithara

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### Shipra

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### Abstract

**Introduction:** The motherhood is one of the most precious moments in a woman's life. A woman's decision to breastfeed could be affected by many demographic factors including maternal age, marital status, education, race, socioeconomic status, cultural factors, gravidity or parity, number of children at home, occupation, and social support. Protecting, promoting, and supporting breastfeeding, as the goal of the Centers for Disease Control and Prevention, are the key strategies for improving the health of mothers and their children.

**Methods:** Hence we conducted a cross-sectional questionnaire study to assess the knowledge of pregnant ladies and their mothers or mother in laws regarding in their pregnancy; recruited from those attended the OBG department of KS HEGDE medical

college/ Rural health center, karkala. 50 consenting pregnant ladies who visited with their mothers/ mothers in-law were chosen in the study. The questionnaire contains 15 items related to awareness and six items related to practices regarding breastfeeding. The score was given of 1 for the right answers and 0 for the wrong answered.

**Results:** In our study we concluded that most of the first generation was not aware of the breast feeding techniques, and the second generation was not aware of the type of baby feed. Most of them were of the opinion that honey is to be given to the new born to boost immunity.

**Conclusion:** Hence the need for counseling and educating all pregnant women and their family regarding the correct breast feeding techniques and awareness regarding the importance of only breast milk in the 1<sup>st</sup> 6 months of life.

## Day 3 Dressing Versus Direct Suture Removal on Day 7 on Wound Healing and Maternal Morbidity in Patients Undergoing LSCS

### Ratna Bulusu

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### Abstract

The aim of this study was to find out the incidence and patient morbidity with associated risk factors of surgical site infection among cesarean section cases in whom direct suture removal was done on day 7 as compared to cases where dressing done on day 3.

A prospective, descriptive study conducted at MVJMC and RH. Patients who underwent surgical procedure for delivery during study period were included in the study. The patients undergoing LSCS were randomly selected into Group A of 50 cases where direct suture removal was done on day 7 and Group B of 50 cases where dressing was done on day 3. Other factors like primary CS, Repeat CS, other comorbidities were also taken into consideration.

All data of various groups were tabulated and statistically analysed using suitable statistical tests (Student's t test). P value < 0.05 will be considered to be moderately significant & p value < 0.01 as strongly significant.

This Study concluded that

- Secondary LSCS has higher chance of wound infection compared to primary LSCS which was pstatistically significant.
- In secondary LSCS, change of dressing was associated with more infection compared to intact dressing which was statistically significant
- When suture material silk was used, change of dressing was associated with more wound infection as compared to intact dressing which was statistically significant



## Correlation of Cytology and Histopathology in the Diagnosis of Cervical Lesions

### Ayshath Safoorah

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### Abstract

**B**ackground: Cervical cancer is the second most common type of cancer among women as per WHO, accounting for about 1,90,000 deaths annually. Conventional cervical cytology by pap smear is the most widely used cervical cancer screening test in the world. *Aims and objectives:* To find out efficacy of pap smear cytology in screening of cervical lesions and to correlate with histopathology, and to evaluate other factors associated with premalignant and malignant cervical lesions. *Materials and Methods:* This is a prospective clinical study, conducted on 130 women attending the gynaecology OPD of Father Muller Medical college hospital, who underwent pap smear and cervical biopsy for various reasons.

*Results:* The mean age was 45.8±10.77 years, and maximum number of patients (43%) belonged to age 40-50 years. 26.9% belonged to post menopausal age group. 55.4% were multiparous with 3 or more children and were found to be at increased risk of precancerous and cancerous lesion of the cervix, though statistically not significant.

Most of the patients presented with white discharge per vaginum (38.5%).

The sensitivity, specificity, positive predictive value and negative predictive value of pap smear in detecting premalignant and malignant lesions of the cervix was 72.40%, 88.10%, 63.60% and 91.80% respectively. *Conclusion:* Pap smear was found to be an effective tool in detecting early cervical lesions and screening of carcinoma cervix.

## A Comparative Study of Fasting Lipid Profile among Women with Normotensive Pregnancy and Hypertensive Disorder of Pregnancy - Prospective Study

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### Abstract

**B**ackground: Pregnancy is well known to be associated with various physiological and metabolic changes including lipid metabolism. Dyslipidemia of pregnancy diagnosed in early pregnancy needs to be followed up to recognise and minimise complications of pregnancy. We conducted a comparative study among third trimester normotensive women and women with hypertensive disorder of pregnancy, measuring their fasting lipid profile. *Materials and Methods:* The study included 68 pregnant women all in third trimester with hypertensive disorder of pregnancy, and 68 women matched for parity, gestational age and period of gestation during 6 months period of visit to our hospital. Blood sample was collected during fasting and the lipid profile was calculated and compared. Women with hypertensive disorder of pregnancy were further evaluated for complications of preeclampsia and managed accordingly. A total of 68 women were

included in the study. 34 women were hypertensive among whom 14 had preeclampsia, 2 had eclampsia, 8 had oligohydramnios and 14 women had intrauterine growth restriction. Mean triglyceride level among women with hypertensive disorder of pregnancy was found to be Total cholesterol -189 mg/dl, triglycerides was 210 mg/dl, HDL - 46 mg/dl, LDL - 115 mg/dl, VLDL - 46 mg/dl. The mean fasting lipid profile of normotensive women were Total cholesterol - 124MG/DL, triglycerides -150mg/dl, HDL - 32 mg/dl, LDL- 140 mg/dl, VLDL - 25 mg/dl. Out of women with hypertensive disorder of pregnancy, 14 women were having severe preeclampsia. *Conclusion:* There is significant dyslipidemia with raise in triglycerides, HDL, LDL and VLDL found in our study in women with hypertensive disorder of pregnancy in comparison to normotensive pregnant women. As lipid profile can be easily measured in pregnant women, it can be followed up if abnormal so that, complications of pregnancy can be detected early and managed.

## A Study of the Prevalence and Risk Factors of Postpartum Depression and Anxiety in Mothers in a Coastal Population in a Tertiary Care Centre in Mangalore: How Important is Postpartum Psychiatric Evaluation?

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### Abstract

**Objectives:** 1. To highlight the importance of screening for psychiatric symptoms and routine postpartum psychiatric assessment in postnatal mothers. 2. To identify risk factors for postpartum depression and anxiety. 3. To highlight the dire need for psychiatric intervention in mothers suffering from postpartum depression and anxiety

**Materials and Methods:** An in-house observational, analytical study was conducted in the department of OBG, Father Muller's Medical college and hospital, a tertiary care centre in coastal Karnataka. A written informed consent was obtained from all the subjects recruited for the study and 96 inpatient postnatal mothers were evaluated on the second postnatal day. Sociodemographic variables and clinical variables were recorded in a semi structured proforma prepared for the clinical study. All patients were screened for anxiety and depressive symptoms using Hospital Anxiety and Depression Scale. Patients who were screened positive for anxiety and depressive symptoms postnatally were referred to the department of psychiatry for further evaluation and management (pharmacotherapy +/- psychotherapy). Postnatal mothers admitted during the period from March 2016 till May 2016 were taken as the population of the study. The inclusion criteria were postnatal mothers of age group 18-40 years and those who had given written informed consent. The exclusion criteria were pre-conceptional psychiatric illness and pre-conceptional general medical illnesses. The tools

used for assessment were HADS-Hospital Anxiety Depression Scale and analyzed by frequency, percentage and by Chi-square test.

**Results:** As per the HADS scale, 60.4% of mothers were found to be at high risk for postpartum depression and anxiety and 1.8% of these had confirmed postpartum depression that required therapy. Among 39.6% mothers who had no risk factors, 2.7% had postpartum depression that required therapy.

**Conclusion:** Our results indicate that postpartum depression may be prevalent in Mangalore and may be associated with multi-parity and duration of labour. Postpartum depression is a significantly unrecognized and a non-clinical entity in India. Postpartum depression ranges from mild and transient "baby blues" experienced by 70% women of all strata's of society to actual postpartum psychosis affecting only 1.8% of mothers with risk factors and 2.7% of mothers without risk factors for postpartum depression as per our results. This study provides valuable information about the prevalence of postpartum depression and its risk factors in Mangalore. Health professionals should be aware of the high prevalence rate of postpartum depression and possible risk factors so that these women and families can be identified and receive adequate support and treatment. Heightened awareness and detection of symptoms in postpartum depression can go a long way in reducing maternal morbidity and improving the harmonious existence of mother, child and the entire family.

## A Correlative Study of Serum Gamma- Glutamyl Transferase and Serum Glutathione-S-Transferase with PAP Smear Test Results

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### Abstract

**B**ackground: Cervical cancer is the commonest cause of death in reproductive age group women, next to breast cancer. Cervical cancer is routinely screened by Papanicolaou (PAP) smear test. However the levels of oxidants, antioxidants and enzymes have been assayed and studied to screen as well as to decide the prognosis in pre malignancy and in cervical cancer, as an alternative.

**Aims and Objectives:** To estimate the serum levels of liver enzymes Gamma-glutamyltransferase (GGT) and Glutathione-S-transferase (GST) in the serum of patients who have undergone PAP smear screening test or HPV testing, and to correlate the levels of GGT and GST with PAP smear results.

**Materials and Methods:** A cross-sectional observational hospital based study was conducted in which the serum GGT and GST was estimated in

19 patients with PAP smear test report positive cervical intraepithelial neoplasia (cases) and 51 patients with PAP smear test report negative for cervical intraepithelial neoplasia (controls).

**Results:** Median serum GGT level did not show significant difference between cases and controls ( $P=0.491$  NS) whereas GST levels showed a highly significant difference between cases and controls ( $P=0.005$  HS).

**Conclusion:** Based on our pilot study, serum GGT and GST levels were lower in newly diagnosed PAP smear positive cases compared to PAP smear negative controls but only serum GST showed statistical significance. As this study is a pilot study, more studies need to be conducted before coming to a strong conclusion.

**Keywords:** GGT; GST; Cervical Intraepithelial Neoplasia; PAP Smear.

## Factors Influencing the Acceptance and Awareness of Permanent Method of Family Planning

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### Abstract

**B**ackground: Among developing countries, India holds the second place in being the most populated country accounting to 1.23 billion. This issue addresses the need for effective population control by implementing various family planning and contraceptive services thereby improving the quality of life. Permanent method of family planning referred to tubectomy (tubal ligation) in women either by mini laparotomy or by laparoscopic sterilization and vasectomy (vas deferens ligation) in males. Our study aims at assessing the factors influencing the awareness and acceptance of permanent method of family planning.

**Materials and Methods:** This is a questionnaire based prospective survey carried out in A.J. Institute of Medical Sciences on 300 postpartum women after they have undergone two or more child births.

**Results:** 77.3% of women were aware of the available family planning services out of which 64.3%

had knowledge about permanent method of sterilization. 73% preferred to undergo tubectomy whereas only 13.7% were willing for vasectomy with the main reason for refusal being fear of surgery (25.9%). 32.6% of women wanted their husbands to undergo vasectomy rather than having a tubectomy themselves. Desire for more children (39%) was the main reason given by most women who refused to undergo tubectomy.

**Conclusion:** Though women were aware of contraceptive practices, proper knowledge about permanent methods of family planning was still inadequate especially regarding vasectomy. Male participation plays a key role in decision making and acceptance of permanent family planning methods. Our study showed that lack of awareness and knowledge, fear of adverse effects, fear of sexual dysfunction, culture and religious beliefs, opposition from the male partner and health concerns were the factors influencing tubectomy acceptance over vasectomy as a method of permanent method of sterilization.

## Effects of Preterm Labour on Neonates

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### Abstract

**I**ntroduction: Although the mortality rate for preterm infants and the gestational age-specific mortality rate has dramatically improved over the last few decades, infants born preterm remain vulnerable to many complications, including respiratory distress syndrome, chronic lung disease, necrotising enterocolitis, cardiovascular disorders, hearing and vision problems, and neurological insult. Infants born at the lower limit of viability have the highest mortality rates and the highest rates of all complications. Few studies have reported mortality and morbidity rates in gestational age-specific categories, which limits the information available for counseling of parents before a preterm delivery and for making important decisions on the timing and mode of delivery.

**Aims:** To establish perinatal mortality among preterm babies and to identify the neonatal complications in preterm labour.

**Methodology:** This study was conducted in the department of OBG, Goa Medical College over a period of one and half years.

Considering the facilities at the neonatal unit of

the institution, 28 weeks was taken as the lower limit for period of viability for this study.

Neonates born to patients admitted with preterm labour were followed up in the immediate neonatal period to note neonatal complications and the effect of preterm birth on the neonate.

**Results:** The study showed the incidence of preterm births to be 7.81%.

The commonest postnatal complications were hyperbilirubinemia (60.36%), respiratory distress syndrome (36.06%), hypoxic ischemic encephalopathy (35.36%) and sepsis (23.42%). Most neonatal complications were seen in those with birth weight <1.5kg. 81.98% of preterm babies were admitted in the NICU. Perinatal mortality in this study was 12.22%, which included 6 stillbirths. Respiratory distress syndrome was the most common cause of mortality, responsible either solely for mortality or was associated with other causes like pulmonary haemorrhage and early onset sepsis, followed by anomalous neonates.

**Conclusions:** Improvements in management of preterm labour may improve the outcome of preterm neonates.

## Comparative study on the Effectiveness of Ormeloxifen Versus Norethisterone in the Management of Dysfunctional Uterine Bleeding

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### Abstract

**B**ackground: Dysfunctional Uterine Bleeding is defined as abnormal uterine bleeding in the absence of organic disease. Menorrhagia (menstrual blood loss >80 ml per cycle) affects 10 -33% of women at some stage in their lives. Many Pharmacological treatment options are available for DUB. Norethisterone is the commonly used progesterone. Progesterone therapy for 21 days of the cycle results in a significant reduction in menstrual blood loss and can be used for both ovulatory as well as anovulatory. Ormeloxifene is a selective estrogen receptor modulator or SERM which is anti-estrogenic on endometrium and breast while estrogenic on bones, vagina, and cardiovascular systems. The present study was conducted to compare both in the treatment of DUB.

*Material and Methods:* Sixty women presenting with DUB were randomly allocated to 2 equal groups, Group-A, which received 60 mg ormeloxifene twice a

week for 12 weeks followed by 60mg once a week for next 12 weeks and Group-B which received 5 mg norethisterone twice daily for 21 days for 3 months. The primary outcome measures were reduction in menstrual blood loss which was measured by fall in PBAC (Pictorial Blood loss Assessment Chart) score, rise in hemoglobin level and reduction in endometrial thickness.

*Results:* The reduction in mean PBAC score with ormeloxifene (294 to 64) was significantly more than that seen with norethisterone (288 to 103) after 3 months of therapy ( $p < 0.05$ ). The increase in hemoglobin level and reduction in endometrial thickness were also found to be significantly more with ormeloxifene than norethisterone (9.02 g% to 11.51 g% vs. 9.12 g% to 10.43 g%,  $p < 0.05$ , and 7.4 mm to 5.1 mm vs. 6.9 mm to 5.7 mm,  $p < 0.05$ , respectively).

*Conclusion:* Ormeloxifene was found to be more effective than norethisterone in reducing blood loss and reducing endometrial thickness.

## A Study of Thyroid Dysfunction in Cases of Hyperemesis Gravidarum in a Coastal Population at a Tertiary Care Centre in India

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### Abstract

**H**yperemesis gravidarum is defined as excessive nausea and vomiting in pregnancy, which incapacitates the pregnant lady from her daily routine activities. Thyroid dysfunction is very common during pregnancy, more so in south east Asia. It can either be preexisting or pregnancy aggravated thyroid disorders. It has been seen that there is an association between hyperemesis gravidarum and thyroid dysfunction in pregnancy. This could be due to the elevated beta HCG levels. The most common disorder noted is called transient gestational hyperthyroidism, which seldom requires treatment.

The aim of this study was to study and characterize thyroid dysfunction in patients with hyperemesis gravidarum.

*The objectives of this study were :*

1. To determine the percentage of thyroid dysfunction in antenatal mothers diagnosed with hyperemesis gravidarum.
2. To determine the percentage of hyperemesis gravidarum patients with euthyroid state, hyperthyroidism and hypothyroidism.
3. To determine the percentage of patients with hyperthyroidism with hyperemesis, who required treatment.

*Methods:* An in house clinical analytical one time observational study was done on 25 antenatal mothers, who were admitted to the father medical college obstetric inpatient unit with hyperemesis

gravidarum. The clinical details and investigation reports of the patients were noted as per a semi structured performa. Each woman was examined for clinical signs of thyroid disease and underwent investigations including hemoglobin, urine ketone, urine microscopy and thyroid function tests (TFT) as well. The data was analysed using SPSS software.

*Results:* Five patients (20%) had biochemical hyperthyroidism (suppressed thyroid stimulating hormone and increased free tetraiodothyronine index), 4 percent had hypothyroidism (subclinical and overt) and 19 patients (76%) had normal thyroid tests. Among the four percent (5) hypothyroid patients, two had tested positive for anti thyroid autoantibodies (Anti TPO). These were positive with mean  $\pm$  SD  $145 \pm 73.1$  IU/mL. Four percent of patients with hyperemesis, had symptomatic and biochemical hyperthyroidism that required antithyroid therapy (PTU). Ninety six percent of hyperemesis patients however did not require any therapy for hyperthyroidism.

*Conclusion:* In our study thyroid dysfunction was 24% in subjects with hyperemesis gravidarum. The clinical features of thyrotoxicosis in women with hyperemesis gravidarum are usually absent. A few patients however may have clinically evident thyrotoxicosis. The thyrotoxicosis of hyperemesis gravidarum usually resolves spontaneously within several weeks as the vomiting disappears. In rare instances, due to the severity of clinical presentation patients may require treatment with PTU. A follow up study on patients with hyperemesis who develop hyperthyroidism requiring therapy, will probably give more conclusive evidence.



## Variable Decelerations in Admission Test and Its Relation with Labour Outcome

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### **Abstract**

**T**he Study was conducted to correlate the perinatal outcome with variable decelerations in patient with spontaneous onset of labour pain. A Retrospective observational study was done in 489 pregnant patients had come with spontaneous onset

of labour in AJ Hospital Mangalore were included and excluding patients with admission test or CTG tracings in the course of labour. Parity index, type of variable deceleration, APGAR score and NICU admission was noted. Out of the 489 patients 36 had variable decelerations in which 12 were atypical and 24 were typical decelerations.

## Partial Septum of Uterus : Fertility Results of Hysteroscopic Resection

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### Abstract

**O**bjective: To evaluate the fertility results after hysteroscopic resection of partial septum of uterus in women who presented with infertility.

*Methods:* During a period of 21 months from 1<sup>st</sup> October 2015 to 30th June 2017 we had – women who presented to out patient department with history of infertility. Of which 49 women underwent Hysterolaproscopy as part of infertility evaluation. 19 cases were detected to have partial uterine septum and 3 cases had complete septum. Hysteroscopic resection was done during the same sitting. Fertility results of the cases having partial septum are presented here in this study.

*Results:* Diagnostic hysteroscopy was initially performed. If a uterine septum was found, hysteroscopic division of such pathology was performed at the same setting. Among 19 cases of

partial septum, 4 cases solid hysteroscopic scissors and operative hysteroscope were used, with normal saline as distension medium. In 15 cases resectoscopic collin's knife electrode with Glycine 1.5% used as a distension medium. The procedure was considered complete upon achieving a triangular and symmetrical uterine cavity.

Among the 19 cases, 14 concieved post hysteroscopic resection. Of the 8 women who delivered at term gestation, 5 had vaginal delivery and 3 ceserean section. 2 had first trimester abortions. Rest 4 are in antenatal period, 2 in third trimester and two in 2nd trimester.

*Conclusion:* Aim of metroplasty is to restore a normal anatomy of uterine cavity as a prerequisite for a positive implantation and subsequent good obstetrical outcomes. The hysteroscopic resection with its simplicity and safety has shown improved fertility outcomes in this study.

## An Infertile Patient

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### Abstract

**B**ackground: Although the relation between genital tuberculosis (GTB) and infertility has been well established, but for the asymptomatic patient, the diagnosis requires a very high index of suspicion. Though GTB is always secondary to a primary foci, CA 125 value, Adenosine deaminase levels (ADA), biopsies, curettings or aspirate for histopathological examinations for granulomatous lesions and also AFB smear and culture or BACTEC systems are necessary for accurate diagnosis. We report here a case of a patient with 6 years infertility that was diagnosed to have genital tuberculosis following a laparotomy for a pelvic mass.

*Case Report:* 23 years-old nulligravida, with six years of infertility, came with complains of six weeks of amenorrhoea associated with abdominal pain and guarding with vaginal spotting. There was no abdominal distension or palpable mass. Her urine pregnancy test was negative. Ultrasound reported a right adnexal dermoid cyst measuring 6x6 cm with suspected torsion. There was another cystic lesion in

right adnexa measuring 7x5x3cm suggestive of pyosalpinx. She underwent emergency laparotomy with right ovarian Cystectomy and right salpingectomy. Adhesiolysis of flimsy adhesions in POD was also done. The cyst contained hair and sebaceous material.

Presence of adhesions and pyosalpinx, seemed unrelated to torsion of ovarian cyst, and raised the suspicion of another pathology. Hence, a check curettage was done and samples were sent for histopathology (HPE) and TB PCR.

Postoperative recovery was uneventful. Her chest radiograph was clear and mountex test was also negative. However, HPE and TB PCR confirmed our suspicion of GTB. She was started on Category 1 antitubercular treatment.

*Conclusion:* Genital TB affects about 12% of patients with pulmonary tuberculosis and represents 15-20% of extrapulmonary tuberculosis. Genital TB may be asymptomatic or may masquerade as other gynaecological conditions. Diagnosis requires a high index of suspicion.

## Comparative Study of Effect of Delayed Umbilical Cord Clamping and Umbilical Cord Milking in Term Neonates Iron Status: A Randomised Control Trial

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### Abstract

**O**bjective of the study was to compare the effect of delayed umbilical cord clamping (DCC) and umbilical cord milking(UCM) in term neonate iron status and upto 10 weeks of life. It was a Randomized Controlled Trial conducted at AJ Institute Of Medical Sciences And Research Center, Mangalore . Babies born at >37 weeks of gestation were randomised in two groups, DCC and UCM (100

in each group). In DCC group , clamping was delayed by 60 seconds before cutting the cord. Umbilical cord milking was done by milking the cord length of 10 cms three times. The baseline characteristics were comparable in the two groups . Mean Hb ( ) , mean PCV( ) and mean bilirubin values ( ) done at birth, 72hours after birth were and 10 weeks of life were comparable.

*Conclusion:* The delayed cord clamping and umbilical cord milking had comparable effect on Iron Status of term neonates, at 10 weeks of life.

## Connective Tissue Disorders in Pregnancy: Case Series

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### Abstract

**B**ackground: Connective tissue disorders also called collagen vascular diseases are caused by deposition of immune complexes or inherited as disorders of bone, skin, cartilage, blood vessels, basement membrane. All autoimmune diseases, to some extent, have implications for fertility and obstetrics. Currently, due to available treatments and specialised care for pregnant women with autoimmune disease, the prognosis for both mother and child has improved significantly. However these pregnancies are always high risk.

*Case Series:* We present four cases of successful pregnancy outcomes and one case of ongoing pregnancy in five patients diagnosed with connective tissue disease. Two cases diagnosed with

Antiphospholipid antibody syndrome were on aspirin, heparin, progesterone supplements antenatally and postnatally on heparin have successful outcome. One case diagnosed with Antiphospholipid antibody syndrome is on aspirin and heparin is continuing her pregnancy. One case diagnosed with Systemic lupus erythematosus was on tab azathioprine, tab chloroquine, steroids antenatally and postnatally has successful outcome. One case diagnosed with Sjogren syndrome was on steroids before and after delivery has successful outcome.

*Conclusion:* Pregnancy in most of these women is at high risk for maternal and perinatal complications. Preconceptional counseling, appropriate medication, multidisciplinary care, delivery in tertiary care hospital with specialist can result in favourable outcome.

## Gynecological Disorders in Geriatric Women - Hospital Based Study

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### Abstract

**Introduction:** Government of India adopted 'National Policy on Older Persons' in January, 1999. The policy defines 'senior citizen' or 'elderly' as a person who is of age 60 years or above<sup>1</sup>. The major challenge in 21<sup>st</sup> century is increase of elderly people in its population. Geriatric gynecology deals with gynecological disorders in elderly people at and above 60 years with an intention of early diagnosis and management of those condition which is a major health problem unseen among this group.

**Aim:** To study the pattern of gynaecological disorders in elderly women.

**Objectives:** 1. To know the disease pattern  
2. Analysis of intra operative and postoperative complication

**Materials and Methods:** Study Setting: Lady goschen hospital and in KMC at Attavar (gynecological cases).

**Study Design:** Prospective type of descriptive study

**Study Population:** All geriatric women admitted through outpatient clinic and casualty.

**Sample Size:** Time bound (September 2015 to August 2017) study (sample size is approximately 90).

**Data Analysis:** By descriptive analysis.

**Inclusion Criteria:** All women aged >60 years.

**Exclusion Criteria:** No exclusion criteria. All geriatric women admitted in the hospital are included in the study.

**Results:** The most common age group seen was between 60-65 years and the most common gynaecological problem observed is prolapse uterus (48%) followed by postmenopausal bleeding. Among the postmenopausal bleeding the most common cause is carcinoma cervix (17%).

Among the malignancy cervical cancer is leading followed by ovarian (8.9%) and endometrial malignancy (2.1%). All of them are given chemo and radiotherapy. Most of them have reported at a late stage and primary surgery could not be performed.

**Conclusion:** Increasing life expectancy should be a boon but not a bane to the society. Presenting complaints should be prioritized and treatment should be individualised towards each patient.

## The Role of Hysteroscopy Used as a Diagnostic Tool in the Evaluation of Postmenopausal Bleeding and Its Management Strategies

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### Abstract

**Objectives:** 1. To study the role of hysteroscopy as a diagnostic tool in the evaluation of postmenopausal bleeding. 2. To plan management strategies according to the findings in the hysteroscopy procedure.

**Materials and Methods: Type of the Study:** It is a retrospective analysis from June 2012 to June 2017.

**Setting:** In department of obstetrics and gynecology in Radhakrishna.

Multispeciality Hospital and IVF centre.

- The present study includes 1600 cases of postmenopausal bleeding from June 2012 to June 2017.
- **Exclusion Criteria:** women with history of HRT. Local causes such as bleeding from vagina or cervix known case of bleeding disorder. patient on anticoagulant therapy.
- The study includes 1600 cases with history of postmenopausal bleeding for which hysteroscopy was performed and also the patient

who required operative treatment was done in same setting.

- The HPE findings are divided into 4 categories- Normal, Atrophic endometrium, Endometrial hyperplasia&Endometrial carcinoma.

### Results:

- 1280 cases were found to have normal or atrophic endometrium for which they were followed up accordingly.
- 306 cases were found to have simple hyperplasia medical treatment given for them as first line of management and followed up.
- 14 cases with endometrial cancer for which stage wise management was done

### Conclusion

- Hysteroscopy in postmenopausal bleeding patients is a very good diagnostic tool for diagnosing Endometrial carcinoma and to prevent unnecessary surgery in women with normal HPE and simple hyperplasia.
- Hysteroscopy along with directed endometrial biopsy proved to be useful diagnostic aid in cases of postmenopausal bleeding.

## Sepsis in Pregnancy and Post Partum

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#### Abstract

**I**ntroduction: It is the 3<sup>rd</sup> most common cause of maternal death

- Rising rapidly
- Late diagnosis
- Overuse of antibiotics
- Sepsis- SIRS, severe sepsis, septic shock

*Scenario:* Pregnant women 24 weeks with history of fever with burning micturation 6 days back taken some tablets and feeling lethargic

*On examination:*

BP: 90/60mm hg

Pulse: 110 beats per min

SpO<sub>2</sub>: >95% with room air

Temperature: 99 degree Fahrenheit

RR: 22 cycles per minute

#### Equipments

- Pulse oximeter
- Sphygmomanometer
- IV cannula
- Blood culture broth
- CTG
- Doppler

#### WHAT WILL YOU DO?

A. SEPSIS PATHWAY: History

Equipments: O<sub>2</sub> IV fluids, Blood culture, S. Lactate, Antibiotics Fetal monitoring

- Penicillin Allergy
- RFT
- Toxic Shock Syndrome

*Documentation:* Medication Chart; Fluid Balance; MEOWS; Integrated Notes.



## Screening for Gestational Diabetes Mellitus

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### Abstract

**Background and Objectives:** Gestational diabetes mellitus (GDM) is associated with significant metabolic alterations, increased maternal and perinatal morbidity and mortality. India falls into high risk ethnic group for diabetes mellitus. The objective of this study is to find out prevalence of gestational diabetes mellitus and to evaluate and compare the occurrence of GDM with and without risk factors.

**Methods: Sample:** 450 pregnant women attending the antenatal clinic, Department of Obstetrics and Gynecology at Basappa Memorial Hospital, Mysore, irrespective of risk factors.

- Universal screening done by 50 gm Oral Glucose Challenge Test (OGCT) irrespective of time and meal of the study.
- If venous blood sample  $\geq 140$  mg/dl, the screening considered positive.
- Confirmation of diagnosis done by standard 100 gm, 3 hr Oral Glucose Tolerance Test (OGTT) as per Carpenter's and Coustan's criteria.
- Post partum 75gm OGTT at 6 wks as per WHO criteria.

**Results:** Prevalence of GDM in study population is 5.5%.

Out of 450 pregnant women screened, 192 (42.7%) were with risk factors and 258 (57.3%) were without risk factors. The commonest risk factors in the study population were, age > 25 years (38%), followed by past history of fetal loss [abortions & IUD] (18.2%), family history of diabetes mellitus (11.11%), obesity (5.56%) and unexplained neonatal loss (2%). Among GDM cases, age > 25 years (48%) followed by obesity and family history of diabetes mellitus (28%) and past history of abortion were seen.

In our study 106 (23.56% patients) had positive screening for 50 gms OGCT. Out of 106 patients, 25 (23.58%) patients of screening positive patients had positive OGTT and 68% of GDM patients had risk factors. There were no risk factors noted in 32% of GDM patients and would have been missed if universal screening is not practiced.

**Interpretation and Conclusion:** Universal screening for GDM is superior to selective (risk factor based) screening in detecting more cases, facilitating early diagnosis and is associated with improved pregnancy outcome.

**Keywords:** Oral Glucose Challenge Test (OGCT); Oral Glucose Tolerance Test (OGTT); Gestational Diabetes Mellitus (GDM).

## Role of Colposcopy in Screening for Lesions of Uterine Cervix

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### Abstract

Cancer of uterine cervix is the most common cancer in women in developing world. 80% of the cases of cancer cervix occur in the developing countries and India accounts for 18% of them. High risk factors like teenage pregnancy, multiparity, low socioeconomic status are responsible for high incidence of invasive cancer (20-45/1,00,000 women) in our country. Unfortunately cases are diagnosed in the late stages and no curative treatment is possible, leading to a high mortality rate. To reduce mortality it is essential to diagnose these cases early.

*Objective:* To evaluate the role of colposcopy in screening lesions of uterine cervix.

*Study Design:* Prospective study

*Method:* Fifty patients undergoing routine cervical cytologic screening in Father Muller Medical College

at the department of Obs & Gynae outpatient clinic were randomly selected. All patients were evaluated by Pap smear, colposcopy and cervical punch biopsy. Pap smears and biopsies specimens were interpreted independently.

*Results:* Of the 50 women, the cytology was found normal, inflammatory, ASCUS, LSIL, HSIL and squamous neoplasia in 6 (12%), 2(4%), 3(6%), 2(4%), 11 (22%), 3 (6%) respectively. Colposcopically guided cervical biopsy was found normal, inflammatory, CIN1, CIN2, CIN3, CIS, Squamous neoplasia in 8(16%), 28(56%), 5(10%), 2(4%), 1(2%), 4(8%), 2(4%) respectively.

*Conclusion:* Colposcopy followed by colposcopic guided cervical biopsy is a much sensitive method compared to cytology, especially in the high grade lesions of cervix and plays an important role in the down staging of cervical cancer.

## Incidence of Ureteric Injuries in Difficult Total Laparoscopic Hysterectomies(TLH) in Last 12 Years and the Role of Retroperitoneal Ureter Dissection in Its Prevention

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### Abstract

**Objective:** The aim of the study is to evaluate all cases of ureter injuries and to assess whether identifying course of ureter prevents its injury.

*Material and Methods:*

*Type of Study:* Retrospective analysis

*Setting:* Radhakrishna multispeciality hospital, Bengaluru.

The study comprises of 452 cases of difficult TLH done between 2005 to 2016.

*Inclusion Criteria:* uterus size >12wks, endometriosis, large fibroid, adnexal mass, dense adhesions in PID, prior surgeries, ureter anomalies.

All cases were analysed in time periods, from 2005 to 2011 (186 cases) and from 2012 to 2016(272 cases) so that we can get the trend of ureteric injuries. The

procedure of TLH was kept same for all cases except retroperitoneal dissection of ureter which was done in 272 cases operated between 2012 to 2016.

*Result:* There were total 11 ureter injuries found. Thus the incidence of ureteric injuries came 2.4%. It was found, incidence was 5.9% from 2005 to 2011 while nil from 2012 to 2016. Among the risk factor maximum was endometriosis (60%), 10 cases were diagnosed intraoperatively while 1 diagnosed postoperatively, all 11 cases had lower 1/3rd injury, for 1 case ureteric re-implantation was done while others were repaired using stent.

*Conclusion:* Thus it is concluded that retroperitoneal ureter dissection is a key to prevent ureter injuries in difficult TLH cases where chances of injury are high due to anatomical distortion, hence decreasing the morbidity of patient.

**Keywords:** Total Laparoscopic Hysterectomy; Ureteric Injury; Ureter Dissection.

## Maternal and Fetal Outcome of Twin Pregnancy: A 3 Year Clinical Study

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### Abstract

**O**bjectives: The incidence of twin pregnancies has increased over the last decades. Twin pregnancy is associated with increased maternal and perinatal morbidity and mortality as well as healthcare costs. Hence in the present study an attempt has been made to study the annual trend, the probable etiological factors, demographic and obstetric characteristics, maternal and fetal complications of twin pregnancy in a tertiary care hospital.

**Method:** A 3 year descriptive observational study was conducted in Lady Goschen Hospital and Kasturba medical college hospital, Mangalore from July 2014 to June 2017. A total of 218 women with twin gestation who had their pregnancy outcome in these hospitals were included in the study and the maternal, fetal and early neonatal complications studied.

**Results:** There was a rising trend in the incidence of twin pregnancy. 12.84% of patients conceived with assisted reproductive technology. Twin pregnancy

was common in 20-29 years age group (67.89%) and in multipara (55.96%). The average height and weight of the patients were 152.97cm and 60.44kg respectively. Preterm labor was the most common maternal complication (39.45%) followed by PROM (28.44%). Anemia (27.52%), hypertensive disorders complicating pregnancy (20.18%) were the most common medical disorders associated with twin pregnancy. Most twin pregnancies presented as vertex- vertex presentation (37.76%). The most common placentation was dichorionic diamniotic. 56.88% patients had preterm deliveries. 60.21% of the patients had cesarean delivery with the most common indication being malpresentation (36.62%). Majority of twins had low birth weight (91.32%). Perinatal mortality accounted for 10.71% of twins.

**Conclusion:** Twin pregnancies are in the rising trend probably due to widespread use of assisted reproductive technology. Majority of twin pregnancies belong to high risk causing hazards to both mother and fetus. Early diagnosis, regular antenatal checkups, institutional delivery with good NICU facilities will help to improve maternal and fetal outcome.

## A Case Control Study of Fasting Insulin Levels in Normal Pregnancy and Pre Eclampsia Patients

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### Abstract

**Objective:** To study the levels of fasting plasma insulin level in normotensive pregnant women and Pre eclamptic women. To co relate the elevation of fasting insulin levels in relation to the severity of pre-eclampsia.

**Design:** Case control study, **Setting:** Father Muller Medical College Hospital.

**Population:** 70 pre-eclamptic women as cases, 30 normotensive women as control.

**Methods:** A case control study was conducted between August 2010 – July 2012 who satisfied the inclusion criteria. Blood samples were collected and analysed by CLIA technique for fasting plasma insulin levels among both control and cases.

**Results:** Pre -eclamptic women had significantly

higher fasting plasma insulin levels (n=70, mean 17.893) than controls (n=30, mean 2.1713 $\mu$ units/ml, p = <0.001 vhs) and levels of fasting plasma insulin levels were directly proportional to the severity of the disease. (mean = 7.85 in mild PE, 21.23 in severe Preeclampsia and 29.48 in eclampsia, p < 0.001 vhs).

**Conclusion:** Fasting plasma insulin levels are increased during the normal pregnancy with levels being maximum in third trimester. In women with pregnancy complicated by pre-eclampsia an exaggeration of the insulin resistance is seen with the resultant hyperinsulinemia. The results of the study also showed that hyperinsulinemia was directly proportional with the severity of the disease.

**Keywords:** Hyperinsulinemia; Pr-Eclampsia; Fasting Plasma Insulin Levels; Normotensives; Pregnancy.

## The Effects of Extremes of Age in Obstetric Outcome and Its Association with Antenatal Care

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### Abstract

**A**ims & Objective: To determine the effect of age in women going through pregnancy and the obstetric outcome. To observe the gravity of antenatal care needed.

**Method:** A retrospective study between two extremes of maternal age conducted from Jan 2015-June 2017. The obstetric outcome between teenage pregnancy (age <20yrs) and elderly pregnancy (>35yrs) were analysed.

**Results:** The study showed a total of 3139 of

deliveries out of which 219 were elderly pregnancies and 45 were teenage pregnancies. It showed a increased risk in caesarean section, eclampsia , diabetes in elderly gravidas and an increased risk of preterm labour, premature rupture of membranes, intrauterine fetal growth restriction, anaemia in teenage pregnancies with effective role of antenatal care in both the extremes.

**Conclusion:** Pregnancy in both the extremes of age is a high risk so for good maternal and fetal outcome vigorous antenatal surveillance is a must for best results.

## A Rare Case of Methotrexate Toxicity in A Female Treated for Medical Management of Ectopic Pregnancy

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### Abstract

**I**ntroduction: Medical management of ectopic pregnancy may lead to disastrous complication of METHOTREXATE toxicity.

*Case Report:* A 25 year old female presented with 5 wks of amenorrhea. Investigations showed UPT-positive, TVS-empty uterine cavity,  $\beta$ HCG-1880 mIU/ml

#### Management:

- Diagnosed as Ectopic pregnancy.
- Pt was counseled for medical management of Ectopic pregnancy. She did not responded to first dose of METHOTREXATE. After second dose given, repeat  $\beta$  HCG levels elevated to 10,000 mIU/ml.
- Surgery was Planned & Laparoscopic removal

of ectopic pregnancy done.

#### Follow up:

- On 5<sup>th</sup> POD p/w- Mouth ulcers
- On 7<sup>th</sup> POD p/w-Renal failure and Aplastic anemia
- Pt was treated accordingly and discharged in a stable condition.

#### Conclusion:

- Feasibility of low dose Methotrexate use & its success is the first line of medical management for Ectopic Pregnancy.
- Besides it advantages, It should be used with caution with severe METHOTREXATE toxicity should be kept in mind.
- Proper consent should be taken.

## Study of Emergency Obstetric Hysterectomy

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### Abstract

**I**ntroduction: Obstetric hysterectomy is a hysterectomy performed on a gravid uterus during pregnancy, labour or puerperium. In no other gynecological or obstetrical surgery is the surgeon in as much a dilemma as when deciding to resort to an emergency hysterectomy. On one hand it is the last resort to save a mothers life, and beside the mothers reproductive capability is sacrificed.

**Objective:** To study indications and maternal outcome of emergency obstetric hysterectomy.

**Methods:** A prospective study of the cases of obstetric hysterectomy performed over a period of 3 years from 2014 to July 2017 in Yenepoya Medical College hospital. Evaluation of Maternal age, parity, booking status, obstetric risk factors, duration of hospital stay, indications of hysterectomy, type of hysterectomy, intra-op and post-operative

complications, blood transfusions and maternal morbidity and mortality was done.

**Results:** During the study period there were 7246 deliveries of which 8 required emergency obstetric hysterectomy with an incidence of 0.11%. It was more common in multipara (0.11%). Adherent placenta (62.5%) and post partum hemorrhage (37.5%) were the common indications. All were total abdominal hysterectomies. No maternal mortality was noted in all cases.

**Conclusion:** Emergency obstetric hysterectomy is a lifesaving procedure. The maternal outcome greatly depends on timely decision and good clinical judgment because unnecessary delay can cost life and undue haste can cause morbidity. Active management of 3<sup>rd</sup> stage of labour, early recognition of complications, blood transfusion facilities are very important measures to be taken to prevent maternal mortality.



## Application of WHO C-Model and Robson's 10 Group Classification for Auditing Caesarean Section Rates in a Tertiary Institution

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### Abstract

**I**ntroduction: Recent ecologic data from WHO Department of Reproductive Health and Research including HRP show that when caesarean section rates increase to 10% across a population (e.g. a country), the number of maternal and newborn deaths decrease. When the rate goes above 10%, there is no evidence that mortality rates improve. Due to differences in the cases and obstetric profile of mothers however, it is often difficult to determine an appropriate rate of caesarean section for individual health facilities. According to WHO, caesarean section rate is an auditable global standard for assessing, monitoring and comparing adequacy and appropriateness of and among healthcare facilities over time. In 2011, a systematic review of available classifications for CS concluded that the Robson classification (also called the 10-group classification) would be the best of its kind to audit caesarean sections. Since the system can be applied prospectively and its categories are totally inclusive and mutually exclusive, every woman that is admitted for delivery can be immediately classified based on these few basic characteristics, which are routinely collected worldwide in obstetric wards.

A new mathematical model has now been launched to address this issue. Known as the C-Model, and developed by WHO RHR / HRP and partners, the tool is able to estimate the expected caesarean section rate in health facilities according to the characteristics of the population that they serve.

The tool works as a calculator which can help obstetric teams, health system managers, health facilities, researchers and governments to produce a customized reference for the rate of caesarean sections. This data can therefore help people worldwide working across sectors to assess the use and / or

overuse of caesarean sections in specific contexts.

*Objectives:* To combine WHO C-Model and Robson group of classification in auditing the caesarean sections at a tertiary centre.

*Design:* Retrospective cohort study.

*Setting:* Father Muller Medical College

*Participants:* All mothers delivered in Father Muller Medical College Hospital Labour room between May 2017 to July 2017.

*Method:* All women were classified according to the Robson's classification within which caesarean section rate was assessed. Then based on C-Model, probability of caesarean section was calculated for each group and compared with the existing caesarean section rates.

*Results:* There were significant differences in the sizes of the groups of women and the incidences of events and outcomes within the Robson's classification. The largest group in the study belonged to Robson's group 1 (Primi with spontaneous onset of labor). The largest contributor to caesarean section rates was by Group 5 (previous caesarean section). Highest caesarean section rate was found in groups 5 to 9. When compared to C-Model groups 1, 3 and 5 had 50-60% caesarean section rates higher while the other groups were lower than probability.

*Discussion:* Robson's group of classification and C-Model combination for auditing helps in auditing the caesarean section rate more specific to population. If we classify only according to Robson's classification, we have to compare with international standards which may differ from local demography. For example, as per the study in Mangalore, Robson's group 10 is significant contributor to Caesarean rates where as contribution by this group to overall caesarean section is less in other countries. Hence use of C-Model will give probability more specific to

local demographics and will help in assessing the caesarean section rate more specific to local population. It will have all benefits of Robson classification with added benefit of demography based comparable standards.

*Conclusions:* By using Robson's classification, the group with highest contribution to caesarean section

rate as well as with highest caesarean section within the group can be identified and compared with international standards. Using C-Model, the probability for each group can be calculated and the group with significant deviation can be concentrated on for reducing the caesarean section rates.

## Factors Affecting Uterine Scar in Lower Segment Cesarean Section

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### Abstract

*Introduction:* Cesarean section is defined as the birth of a fetus through incisions in the abdominal wall (laparotomy) and the uterine wall (hysterotomy). This method of delivery has been the most important operations in obstetrics and gynaecology due to its life saving value to both mother and fetus. Because huge numbers of women undergo cesarean section, even small differences in techniques could translate into improved health for substantial number of women, and significant cost savings.

*Materials and Methods:* This study was carried out in the department of Obstetrics and Gynaecology, SCB Medical college, Cuttack, Odisha from December 2011 to September 2013. A total of 200 cases were taken who had documentation of previous cesarean. Mode of delivery of the present pregnancy and type of repeat cesarean was noted. Indication of previous cesarean, previous elective or emergency cesarean

and interval between the two pregnancies was compared with the present uterine scar using the statistical package SPSS, version 7.

*Results:* Out of 200 patients with previous caesarean, 82 (41%) had interpregnancy interval of less than 3 years and 118 (59%) had more than 3 years. 170 (85%) underwent repeat caesarean, 17(8.5%) had normal vaginal delivery, 13 (6.5%) had instrumental delivery, 1 (0.5%) had laparotomy for rupture uterus following vaginal delivery. Out of 170 cases who underwent repeat caesarean section, majority i.e. 130 (76.5%) underwent repeat elective caesarean section and 40 (23.5%) underwent repeat emergency caesarean section. Out of 171 cases that underwent surgery, majority i.e. 92(53.8%) had normal scar, 71(41.5%) had thinned out scar, 6(3.5%) had incomplete rupture and 2 (1.2%) had complete scar rupture.

*Conclusion:* The relation between the indication of previous cesarean, previous elective or emergency caesarean, interpregnancy interval and present elective or emergency caesarean with the present uterine scar was not significant.

## Study of Adequacy of Informed Consent for Caesarean Section in a Tertiary Care Centre

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### Abstract

**Introduction:** Better diagnosis, early referral and increased health care coverage have increased the caesarean deliveries at tertiary-care hospitals of India.

With the improvement in the health care system, there is a need for cross-checking the patient's awareness & knowledge about the caesarean section.

While most of the LSCS are done in good faith, it doesn't escape the purview of consumer awareness and protection. This study aims to audit the awareness among patients about the Informed Consent (IC) taken prior to the caesarean sections.

**Objective:** To assess the level of patient's understanding & adequacy of an IC for caesarean section.

**Methods:** A questionnaire was designed including several aspects of awareness of IC & given to 150 post-caesarean patients at Yenepoya Medical College

& Hospital, Mangalore (YMCH) from 2016 to 2017 July.

**Results:** 84.6% of patients knew the exact indication. 79.3% were well explained about the procedure. 96% were satisfied with outcome of the procedure. 84% preferred the same institute for their subsequent delivery. 12% reported that consent was forcibly taken. 94% were unaware about the intra-op complications. Only 4.6% were explained about the preferred mode of delivery for the next pregnancy. 92% wanted a vaginal delivery for the subsequent pregnancy.

**Conclusion:** An adequate Informed Consent brings about awareness about risks and complications of caesarean section. Hence an elaborate counselling session during antenatal visits will help better decision making. The main deficiency was that the doctor did not explain the possible intraop and postop complications. This lacunae if corrected will lead to a better patient doctor relationship and bring down medicolegal litigations.

## A Study of Maternal-Near-Miss(Mnm) at A District Teaching Hospital" - A Retrospective Observational Study

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### Abstract

Maternal health is an integral part of health care system. Maternal mortality is an indicator of maternal health. Severe morbid conditions require comprehensive approach. Hence the concept of Maternal-Near-Miss (MNM) has emerged.

*Aims and Objectives:* To identify and analyse the (i) Strategies undertaken in the management of Maternal-Near-Miss(MNM) and outcome (ii) Measures to improve the quality of care.

*Materials and Methods:* A retrospective observational study for the period January 2016 to December 2016 at District Teaching Hospital, Kodagu Institute of Medical Sciences, Madikeri, by collecting data from hospital records.

*Results:* In our study, there were 25 Maternal-Near-Miss(MNM) cases and four maternal deaths out of 3347 live births giving a maternal mortality ratio of 119/100,000 live births(LB), maternal near miss ratio of 7.46/1000LB, MNM:1MD ratio is 6.25 and mortality index(MI) is 13.79%. 25 cases of obstetric

emergencies with serious concerns for maternal health were selected out of 97 cases who met the WHO criteria for MNM(25.77%). 12 cases(48%) received multiple blood-transfusion, 8 cases(32%) of sepsis, 7 cases (28%) of PPH, and 5 cases(20%) of hypertensive disorder of pregnancy (pre-eclampsia, eclampsia). There were 12 cases(48%) that had more than one inclusion criteria. Surgical intervention(s) were required in 8 cases(32%) i.e. 2 peripartum hysterectomies, 2 laparotomies, 1 MRP, 1 uterine reposition and 2 traumatic PPH repair.

*Conclusion:* Maternal-Near-Miss (MNM/SAMM) and its relation to maternal mortality contribute as sensitive measures of pregnancy outcome than mortality alone. Proper documentation is of paramount importance in analysis of data, to make conclusions and recommendation. Prospective structured study is required to get a clear picture and to suggest corrective measures which can be taken as far as obstetric care is concerned, to reduce maternal mortality and to achieve the Sustainable Developmental Goal (SDG) by 2030.

**Keywords:** Maternal Near Miss; SAMM; Maternal Mortality.

## Correlation of Protein to Creatinine Ratio with 24-Hour Urine Protein in Pregnancy Complicated by Hypertension

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### Abstract

**Aims and Objectives:** To compare the spot urine Protein to Creatinine ratio with 24-hour protein estimation and to establish the cut-off value of urine Protein to Creatinine ratio in predicting significant proteinuria, in pregnancy complicated by hypertension.

**Materials and Methods:** Comparative study consisting of single group, of 1500 admitted pregnant women after 20 weeks of gestation with hypertension of  $\geq 140/90$  mm of Hg. Women with pre-existing renal diseases, diabetes or urinary tract infection were excluded. First voided morning urine sample was taken for urine protein and creatinine estimation and urine culture. Subsequent urine samples were

collected for 24 hours protein estimation. Urine protein estimation was done by colorimetric method and creatinine estimation by modified Jaffe's method using auto analyzer. The Receiver-Operator Characteristics (ROC) was used for comparison. With  $\geq 300$ mg proteinuria as true positive and  $< 300$ mg proteinuria as true negative.

**Results:** The area under the ROC curve is 0.995(95% confidence interval). With An excellent degree of correlation a cut off value of 0.285 has sensitivity 100%, specificity 99.65%, positive predictive value 99.56%, negative predictive value 100%.

**Conclusion:** The cut-off value of spot urine Protein to Creatinine ratio is 0.285 mg protein/ mg creatinine. The level below this is not associated with significant porteinuria and further testing is unnecessary.

## A Study to Assess the Safety, Efficacy of Ppiucd in a Tertiary Care Centre

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### Abstract

**Aims and objectives:** 1. To assess the safety and efficacy of PPIUCD. 2. To study the patient compliance after PPIUCD insertion.

**Materials and Methods:** This is an observational study from June 2016 to May 2017, conducted in department of OBG, kodagu Institute of Medical Sciences to assess the safety and efficacy of CuT380A when inserted within 10 mins of placental expulsion upto 48 hours after delivery. During this period total number of deliveries were 3293. Among them 833 women had PPIUCD insertion. Counselling of PPIUCD was done during their antenatal visit, early labour, immediate postpartum and while preparing for the scheduled caesarean delivery. Post abortal and 6 weeks postpartum IUD insertion were excluded from study.

**Results:** Of 3293 total deliveries, women who had PPIUCD insertion were 833 (25.9%). Among them Post placental 165 (19.8%), Primary cesarean delivery 550 (66%) and repeat cesarean delivery 24 (2.88%).

PPIUCD counselling were done during antenatal period in 211 (25.3%), during early labour in 528 (63.3%) and during postpartum period 94 (11.2%). Acceptance of PPIUCD insertion was found to be 526(63.14%) among women of age 20-25 years , primipara 651(67.34%),who had atleast primary education 249(29.9%). 812 women attended follow up. 651(80.17%) had no complaints, continued counselling helped. Complications like string problem (5.9%),expulsion rate (2.8%), pain abdomen (6.4%), bleeding P/V( 3.9%). PPIUCD was found to be safe as there was no evidence of perforation or failure rate. 10 women insisted for removal of PPIUCD, one of the main reasons was socialfactor.

**Conclusion:** The acceptance of PPIUCD was high in Primipara. PPIUCD was demonstrably safe with low expulsion rate and more retention rate, thus more effective. To improve acceptance and to remove misconceptions regarding PPIUCD, Community should be educated.

**Keywords:** Cu T 380A; Safety.

## Conception 40 Years & Above - Our Experience @ Radha Krishna Multispecialty Hospital

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### Abstract

**A**im: Evaluate conception rate in women 40 years & above.

*Material & Methods:* Type of study:- Retrospective analysis from 2012 to 2016 in 50 women 40 years & above in ART cycle.

*Setting:* IVF center of Radha Krishna multispecialty

Hospital Bangalore

*Results:* In woman above 40 years the spontaneous pregnancy rate was 8% & with donor embryo transfer was 10% & with oocyte donor was increased to 16% thus we could achieve overall pregnancy rate of 35%

*Conclusion:* With careful evaluations of ovary & uterine cavity we achieved increased fertility rate in woman above 40 years.

## Role of Risk of Malignancy Index-4 and its Correlation with Histopathological Result

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### Abstract

Ovarian cancer is the 3<sup>rd</sup> leading site of cancer among women in India. Screening of ovarian cancer pose a challenge to clinicians which is when RMI was standardized to improve pre-operative evaluation. RMI-4 is a simple scoring method based on menopausal status, USG findings, serum CA-125 levels and size of the tumor. The objective of the study is to analyze the effectiveness of RMI-4 with a cut off value of 200 in diagnostic evaluation and histopathological correlation.

*Method:* Women with ovarian neoplasm, who underwent exploratory laparotomy in Yenepoya

University from August 2016-May 2017 are included. RMI-4 calculated.

*Results:* 86 patients were included in the study, 65 were reported as benign, 7 as borderline and 14 as malignant ovarian mass. RMI-4 with a cut off value of 200 and above with histopathological analysis is more accurate in predicting malignant rather than benign ovarian neoplasm with a sensitivity of 76.9%, specificity of 93.8%, PPV of 71.4%, NPV of 95.3%, and a diagnostic accuracy of 91%.

*Conclusion:* RMI-4 is a valuable, simple, easily applicable and reliable method in primary evaluation of patients with malignant ovarian masses.



## Immediate Maternal and Neonatal Effects of Forceps and Vacuum-Assisted Deliveries

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### Abstract

**Introduction:** In certain conditions when normal delivery cannot be allowed for various reasons, assisted vaginal delivery is the method of choice.

Vaginal delivery being assisted by instruments can either be of vacuum extraction or forceps, a choice based on pelvic findings. James Young Simson was the first to use traction to deliver a baby. It was later modified by Malmstrom in 1953. The obstetric forceps had its history from the time of Chamberlain family in the seventh century.

**Aim:** To observe the immediate maternal & neonatal effects of vacuum & forceps deliveries & to compare the effects of the same.

**Materials & Methods:** This was a prospective study was done in Yenepoya Medical College from 2017 Jan to July. 63 ventouse and 11 forceps deliveries were done. The indications, maternal and neonatal outcomes were observed.

**Result:** 72.72% of forceps and 66.7% of ventouse deliveries were carried out in primigravida.

Failure of secondary forces (Poor maternal bearing down efforts) was the indication in 60.31% of ventouse, 36.26% of forceps deliveries.

Prolonged 2nd stage of labour was an indication in 20.63% of forceps and 27.27% of ventouse.

Failure rate of ventouse was 9.52%, while forceps was 8.33%. Extension of an episiotomy (30.15%) was more in ventouse than forceps, while 3<sup>rd</sup> degree perineal tear (36.36%), vaginal wall lacerations (72.7%), traumatic PPH (27.27%) occurred more with forceps deliveries. Babies who had ventouse deliveries have higher Apgar score at one minute than forceps deliveries.

**Conclusion:** Ventouse is the preferred instrument whenever the need arises for instrumental delivery. It causes much less maternal morbidity. However neonatal morbidity is insignificant in both the groups.

## To Study Changing Trends of Cesarean Section Using Robson's TGCS in Tertiary Centre: A Retrospective Study

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### Abstract

**B**ackground: With the turn of the century and increase in the litigations, increase in the number of complicated deliveries as a result of late pregnancies, and an undue increase in the precious pregnancy rate the incidence of cesarean sections ion rise globally. With the recommendations laid down by the World Health Organization stating that the Cesarean Section rates at maximum may be upto 15%, as evidence based medicine suggests that even though the rates exceed the norms there is no added advantage in terms of in maternal and neonatal mortality and/or morbidity. The Robson Ten-Group Classification System is considered as a standard to critically analyze the characteristics of pregnancy with respect to the need for caesarean section.

*Objectives:* To investigate CS rates at a tertiary care medical college setting centre which has a high referral rate of complicated pregnancies and make analysis based on the 10-group classification.

*Materials & Methods:* The study was a retrospective observational study conducted for a period of 30 months from October 2014–April 2017 at the department obstetrics and gynecology of a tertiary care center in Mangalore. All the women who were delivered during this period were included.

*Results:* The total number of women delivered for the period of months was 4486, out of which CS deliveries were 1429. Overall, CS rate calculated for our hospital in this specified period was 31.85%.

*Conclusion:* The contribution of repeat CS is 81.80 % of the overall CS rate hence studies should focus on reducing the primary CS rate.

## Study of Menopausal Symptoms and Treatment Seeking Behaviour of Postmenopausal Women Attending Menopause Clinic at a Tertiary Health Centre

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**Nagarathna G.**

Professor, Department of Obstetrics & Gynaecology, Father Muller Medical College, Mangalore, Karnataka, India.

### Abstract

**Objective:** 1. To study prevalence of menopausal symptoms. 2. To understand the treatment seeking behaviour of postmenopausal women.

**Materials and Method:** A Descriptive study conducted at Father Muller Medical College, Mangalore, Karnataka between November 2011 to August 2014. 200 post-menopausal women with natural onset menopause attending menopause clinic at Out-patient department of Obstetrics and Gynaecology were included in the study. A semi structured interview followed by examination and relevant investigations were done. Patients with vasomotor and genital urinary complaints were counselled about treatment option of HRT and non HRT. Data was analysed by mean, standard deviation, percentage and Pearson correlation test.

**Result:** Out of the 200 women analysed in this study, 80%, (n=160) had menopausal symptoms.

19.46% (n=58) women reported vasomotor complaints, 12.75% (n= 38) reported genitourinary complaints and sexual complaints by 4.36 % (n=13). Musculoskeletal complaints were reported by 20.13% (n=60) and psychological complaints by 43.28% (n=129) women. For vasomotor complaints 23 women received Conjugated equine oestrogen 0.625 mg with medroxyprogesterone acetate tablets 5 mg, 9 received Tibolone 2.5 mg, 18 received isoflavones and 3 got Selective oestrogen receptor modulator (SERM), 18 were prescribed Oestrogen vaginal cream 0.5 gram for genitourinary complaints. 7 were advised Kegels' exercise.

**Conclusion:** 48.75% (n=78) of women sought treatment for menopausal complaints. 50 women with hormonal replacement therapy and 28 with non hormonal methods.

**Keywords:** Menopause; Treatment Seeking Behaviour; Hormone Replacement Therapy.

## The Prevalence of Thyroid Dysfunction in Early Pregnancy

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### Abstract

**B**ackground and Objectives: Thyroid disorders among pregnant women during the first trimester are at risk of adverse maternal and neonatal pregnancy outcomes. This study was aimed to find out the prevalence of thyroid dysfunction during early pregnancy.

*Methodology:* This cross-sectional study was done at Department of Obstetrics and Gynaecology, Lourdes Hospital, Kochi, Kerala from April 2013 to September 2013. A total of 385 pregnant women satisfying selection criteria attending antenatal care with gestational age  $\leq 16$  weeks of pregnancy were studied. The estimation of TSH was done by chemiluminescence immunoassay (CLIA) method.

*Results:* The mean gestational age of the women was  $12.60 \pm 2.08$  weeks. Most of the women (44.94%) were aged between 26 to 28 years and mean age of the study population was  $26.16 \pm 3.28$  years and 71.17%

of the women had primi parity. History of infertility and thyroid disorders was present in 4.16% of the women each. Family history of thyroid disorders was reported by 2.86% of the women. Abnormal TSH levels were noted 33.51% of the women with mean TSH levels of  $2.49 \pm 2.20$  ng/dL. The free T3 levels were found to be abnormal in 8.05% of the women and abnormal free T4 levels were noted in 7.53% of the women.

*Conclusion and Interpretation:* Most of the women (25.19%) had sub-clinical hypothyroidism and 5.97% had overt hypothyroidism. The overt hyperthyroidism was present in 1.56% of the women and 0.78% had sub-clinical hyperthyroidism. Positive association was noted between thyroid abnormalities and family history of thyroid disorders.

**Keyword:** Hypothyroidism; Hyperthyroidism; Subclinical Hypothyroidism; Thyroid Dysfunction; Thyroid Stimulating Hormone.

## Comparison of Predictability of Fetal Growth Disorder Using Maternal Waist-To-Hip Ratio (WHR) and Early Fetal Crown Rump Length (CRL) By 11w-13w6d Scan

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### Abstract

**Objectives:** We aimed to study the effect of maternal WHR and the effect of early fetal CRL by 11w-13w6d scan on fetal birth weight and to compare the two in predicting fetal birth weight.

**Methods:** A cross sectional, prospective study was conducted at a secondary care hospital over a period of 12 months. 387 pregnant women, booked at first trimester were recruited as per inclusion & exclusion criteria. Their WHRs were recorded at first visit (upto 13w6d), followed by recording of CRL at 12+weeks scan and they were followed up till the delivery when fetal birth weights were noted. The data obtained was anonymized and analyzed using SPSS software version 22.0.

**Results:** We found that either increased maternal WHRs or increased delta CRL (> + 3 days) did not

make any difference in the fetal birth weight in the present study, probably due to small sample size.

**Conclusion:** We concluded that increased WHR and CRL are not related to LGA babies. Probably more studies with larger sample size will be needed to make a definite conclusion or anticipate complications like GDM and shoulder dystocia.

### References:

1. Salem et al. Maternal waist to hip ratio is a risk factor for macrosomia. BJOG.2011.
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3. Hackmon et al. Is severe macrosomia manifested at 11-14 weeks of gestation? Ultrasound Obstet Gynecol.2008;32:740-743.

## Patterns of Failures in Endometrial Cancer: A Retrospective Analysis

**George John**

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### Abstract

**O**bjective: The aim of this study was to assess the pattern of failure of endometrial cancer patients who have undergone treatment in Father Muller Medical College Mangalore

*Methods and Materials:* A retrospective clinicopathologic review of 37 patients with endometrial cancer who underwent treatment in Father Muller Medical College Mangalore from January 2014 to March 2017 were done. Peritoneal, hematogenous and lymph node recurrences outside the retroperitoneal area were considered as distant failures. All patients have undergone surgery +/- adjuvant radiotherapy.

*Results:* Of the 37 patients analysed 10 have suffered recurrence. The recurrence rates for stage I, II and III were 16% (3/18), 0% (0/2) and 41% (7/17) respectively. Of the 10 patients who failed 6 (60%) experienced locoregional failure, 3 had distant failure (30%) and 1 (10%) had both locoregional and distant failure. The distant failures are seen in stage III endometrial cancer. 27 (72%) of patients have good local and distant control.

*Conclusion:* For patients in the present study excellent local and distant control have been achieved with adjuvant treatment. Distant failure is an important pattern and should be considered a top priority in an attempt to improve survival in patients with endometrial carcinoma especially for patients with higher stage.

## Hdr Interstitial Brachytherapy in Carcinoma Cervix

**Pavan Kumar**

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### Abstract

*Purpose:* To assess response to HDR interstitial brachytherapy in carcinoma cervix patients who are not candidates for intra-cavitary brachytherapy post external beam radiation therapy and concurrent chemotherapy.

*Methods and Materials:* Thirty four carcinoma cervix patients (23 patients with stage IIIB, 3 patients with stage IVA, 8 patients with post surgery vault recurrences, 32 with squamous cell histology and 2 with adenocarcinoma histology) who received definitive concurrent external beam radiation therapy and chemotherapy following which patients not suitable for intra-cavitary brachytherapy were treated

with HDR interstitial brachytherapy using Martinez universal perineal implant template and analysed for response. Treatment schedules of HDR interstitial brachytherapy depending upon the residual disease after concurrent external beam radiotherapy and chemotherapy are 20GY in 5 fractions, 16.5GY in 5 fractions, 17.5GY in 5 fractions, 9GY in 1 fraction, 22.5 GY in 5 fractions and 18GY in 4 fractions.

*Results:* Complete response was seen in 19 patients, 6 patients had partial response and 9 patients had progressive disease.

*Conclusion:* HDR interstitial brachytherapy is a feasible option and alternative in patients who are not suitable for intra-cavitary brachytherapy following concurrent external beam radiotherapy and chemotherapy for better local control.

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| Dermatology International                            | 2                | 5500                    | 5000  | 430                  | 391  |
| Gastroenterology International                       | 2                | 6000                    | 5500  | 469                  | 430  |
| Indian Journal of Agriculture Business               | 2                | 5500                    | 5000  | 413                  | 375  |
| Indian Journal of Anatomy                            | 4                | 8500                    | 8000  | 664                  | 625  |
| Indian Journal of Ancient Medicine and Yoga          | 4                | 8000                    | 7500  | 625                  | 586  |
| Indian Journal of Anesthesia and Analgesia           | 4                | 7500                    | 7000  | 586                  | 547  |
| Indian Journal of Biology                            | 2                | 5500                    | 5000  | 430                  | 391  |
| Indian Journal of Cancer Education and Research      | 2                | 9000                    | 8500  | 703                  | 664  |
| Indian Journal of Communicable Diseases              | 2                | 8500                    | 8000  | 664                  | 625  |
| Indian Journal of Dental Education                   | 4                | 5500                    | 5000  | 430                  | 391  |
| Indian Journal of Emergency Medicine                 | 2                | 12500                   | 12000 | 977                  | 938  |
| Indian Journal of Forensic Odontology                | 2                | 5500                    | 5000  | 430                  | 391  |
| Indian Journal of Hospital Administration            | 2                | 7000                    | 6500  | 547                  | 508  |
| Indian Journal of Hospital Infection                 | 2                | 12500                   | 12000 | 938                  | 901  |
| Indian Journal of Law and Human Behavior             | 2                | 6000                    | 5500  | 469                  | 430  |
| Indian Journal of Library and Information Science    | 3                | 9500                    | 9000  | 742                  | 703  |
| Indian Journal of Maternal-Fetal & Neonatal Medicine | 2                | 9500                    | 9000  | 742                  | 703  |
| Indian Journal of Medical & Health Sciences          | 2                | 7000                    | 6500  | 547                  | 508  |
| Indian Journal of Obstetrics and Gynecology          | 4                | 9500                    | 9000  | 742                  | 703  |
| Indian Journal of Pathology: Research and Practice   | 4                | 12000                   | 11500 | 938                  | 898  |
| Indian Journal of Plant and Soil                     | 2                | 65500                   | 65000 | 5117                 | 5078 |
| Indian Journal of Preventive Medicine                | 2                | 7000                    | 6500  | 547                  | 508  |
| Indian Journal of Research in Anthropology           | 2                | 12500                   | 12000 | 977                  | 938  |
| Indian Journal of Surgical Nursing                   | 3                | 5500                    | 5000  | 430                  | 391  |
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| International Journal of Political Science           | 2                | 6000                    | 5500  | 450                  | 413  |
| International Journal of Practical Nursing           | 3                | 5500                    | 5000  | 430                  | 391  |
| International Physiology                             | 2                | 7500                    | 7000  | 586                  | 547  |
| Journal of Animal Feed Science and Technology        | 2                | 78500                   | 78000 | 6133                 | 6094 |
| Journal of Cardiovascular Medicine and Surgery       | 2                | 10000                   | 9500  | 781                  | 742  |
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| Journal of Orthopaedic Education                     | 2                | 5500                    | 5000  | 430                  | 391  |
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| Journal of Psychiatric Nursing                       | 3                | 5500                    | 5000  | 430                  | 391  |
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| Pediatric Education and Research                     | 3                | 7500                    | 7000  | 586                  | 547  |
| Physiotherapy and Occupational Therapy Journal       | 4                | 9000                    | 8500  | 703                  | 664  |
| Psychiatry and Mental Health                         | 2                | 8000                    | 7500  | 625                  | 586  |
| Urology, Nephrology and Andrology International      | 2                | 7500                    | 7000  | 586                  | 547  |

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| Gastroenterology International                       | 2         | 5500             | 5000  | 393           | 340  |
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| Indian Journal of Ancient Medicine and Yoga          | 4         | 7500             | 7000  | 536           | 500  |
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| Indian Journal of Biology                            | 2         | 5000             | 4500  | 357           | 300  |
| Indian Journal of Cancer Education and Research      | 2         | 8500             | 8000  | 607           | 550  |
| Indian Journal of Communicable Diseases              | 2         | 8000             | 7500  | 571           | 500  |
| Indian Journal of Dental Education                   | 4         | 5000             | 4500  | 357           | 300  |
| Indian Journal of Emergency Medicine                 | 2         | 12000            | 11500 | 857           | 800  |
| Indian Journal of Forensic Medicine and Pathology    | 4         | 15500            | 15000 | 1107          | 1050 |
| Indian Journal of Forensic Odontology                | 2         | 5000             | 4500  | 357           | 300  |
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| Indian Journal of Law and Human Behavior             | 2         | 5500             | 5000  | 393           | 350  |
| Indian Journal of Library and Information Science    | 3         | 9000             | 8500  | 643           | 600  |
| Indian Journal of Maternal-Fetal & Neonatal Medicine | 2         | 9000             | 8500  | 643           | 600  |
| Indian Journal of Medical & Health Sciences          | 2         | 6500             | 6000  | 464           | 410  |
| Indian Journal of Obstetrics and Gynecology          | 4         | 9000             | 8500  | 643           | 600  |
| Indian Journal of Pathology: Research and Practice   | 4         | 11500            | 11000 | 821           | 780  |
| Indian Journal of Plant and Soil                     | 2         | 65000            | 60000 | 4623          | 4100 |
| Indian Journal of Preventive Medicine                | 2         | 6500             | 6000  | 464           | 410  |
| Indian Journal of Research in Anthropology           | 2         | 12000            | 11500 | 857           | 800  |
| Indian Journal of Surgical Nursing                   | 3         | 5000             | 4500  | 357           | 300  |
| Indian Journal of Trauma & Emergency Pediatrics      | 4         | 9000             | 8500  | 643           | 600  |
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| International Journal of Political Science           | 2         | 5500             | 5000  | 550           | 500  |
| International Journal of Practical Nursing           | 3         | 5000             | 4500  | 357           | 300  |
| International Physiology                             | 2         | 7000             | 6500  | 500           | 450  |
| Journal of Animal Feed Science and Technology        | 2         | 78000            | 70000 | 5571          | 5000 |
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