

E-POSTER

Abstracts



4th World Congress on

Polycystic Ovarian Syndrome

June 07-08, 2018 | London, UK

Polycystic Ovarian Syndrome

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Apurva Goel et al., J Clin Mol Endocrinol 2018, Volume 3
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CLINICAL EVALUATION OF FUROSTANOLIC SAPONINS AND FLAVONOIDS IN POLYCYSTIC OVARIAN SYNDROME (PCOS) PATIENTS

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Objective: PCOS affects approximately 4–12% women of reproductive age. For such a common syndrome, there is surprisingly a lack of well-defined diagnostic criteria, making it confusing to doctors. Furthermore, the symptoms of PCOS range from physical to psychological and can also lead to infertility. It was thus, pertinent to deliberate upon more ways of managing PCOS and so the objective of the study was to find out the effect of standardized fenugreek seed extract on reduction in ovarian volume and the number of ovarian cysts.

Method: An open-label, single armed, single-centric and non-comparative study on 107 female patients suffering from PCOS was conducted using a novel fenugreek seed extract for a period of 12 weeks to determine its efficacy in reduction of ovary volume and number of ovarian cysts. The inclusion criteria for the study were premenopausal women between 18–45 years of age and BMI less than 42, diagnosed with PCOS by Rotterdam Criteria with adequate hepatic, renal, cardiac, hematological functions and with a stable weight for the last two months (i.e. change of weight <3kgs). Patients willing to participate submitted an informed consent in writing for the study. Data was described as mean \pm standard deviation. The baseline characteristics were compared between the two groups using t-test and other statistical parameters.

Results: On completion of the study, significant decrease was

noticed in both the ovaries' volume (p-value 0.0001). More than 65% of the patients showed reduction in cyst size in both left and right ovaries. 15 patients got pregnant by the end of the study and HOMA Index was reduced in 75.67% of the study population. 79.5% of the study population had regular menstrual cycles at the completion of the study and prolactin levels were significantly reduced. Hirsutism score was significantly reduced (p=0.002) at the end of 12 weeks of treatment. No changes were observed in liver function test (LFT), kidney function test (KFT) and haemogram levels.

Conclusions: The fenugreek seeds extract was proven to be safe and effective in treating PCOS in women of reproductive age by reducing the cyst volume in both ovaries as well as cyst sizes.

Biography

Apurva Goel has completed her Masters in Law and started her professional career in healthcare segment. She is currently working at a Senior Position in Chemical Resources (CHERESO), India. In addition to her background in leadership, she has in-depth understanding of natural products, life sciences, research protocols, business development, product development, and market research. She is a young self-made disciplinarian, who has crossed the boundaries of success with her sincere dedication and a crystal clear vision to provide effective healthcare.

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THE WEIGHT REDUCTION IN ADOLESCENTS WITH POLYCYSTIC OVARIAN SYNDROME IS ASSOCIATED WITH INCREASE IN SERUM ADIPOLECTIN

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Introduction: Adiponectin is produced and expressed by adipose tissue, which is prevalent in Polycystic Ovarian Syndrome with increased Body Mass Index (BMI), Adiponectin has profound insulin – sensitizing, anti-inflammatory and anti-atherogenic effects.

Objective of the study is to investigate the association between weight reduction in obese adolescents with PCOS and adiponectin and TNF- α and C-R-P.

Patients and Methods: Twenty-seven adolescent women between 10 and 20 years with anovulation and hyperandrogenism were recruited from the outpatient clinic over a three year period September 1, 2014 to August 31, 2017. All had clinical evaluation including history and physical examination – weight and height and Body Mass Index. They were randomized into 3 treatment groups: Metformin only, Metformin and Exercise and Exercise only. Serum levels of adiponectin, TNF- α , and C-reactive protein were estimated by ELISA technique initially before treatment and repeated after 3 months of treatment.

Results: The features of oligomenorrhoea, high BMI and acne like in other parts of the world. All the three interventions resulted in weight reduction and regular menstruation in about 34% of the young women. Metformin with exercise had more significant effect in decreasing total 50% as compared to 28% with metformin only and 14% with exercise only. Similarly, Metformin with exercise had a more significant increase of adiponectin (3.42 Vs 8.48 P < 0.001) decrease of TNF- α (11.08 Vs 48.4 P < 0.020) and C-RP (20.8 Vs 11.4 P < 0.031).

Conclusion: Weight reduction in Obese adolescents with PCOS is associated with increased level of adiponectin and decrease levels of TNF- α and C-Reactive Protein.

Key words: Adolescent, Adiponectin, weight reduction, Metformin, Tumor Necrosis Factor Alpha.

Biography

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EARLY IMPROVEMENT IN METABOLIC SURGERY FOR OBESE POLYCYSTIC OVARY SYNDROME MAY BE INDEPENDENT OF THE BENEFITS OF WEIGHT LOSS

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Aim: To investigate and discuss the clinical curative effect of laparoscopic sleeve gastrectomy (LSG) on polycystic ovary syndrome (PCOS).

Methods: A retrospective analysis for the clinical data of 21 patients with PCOS accepted LSG in the Tenth People's Hospital Affiliated to Tongji University from May 2013 to July 2017 was made to compare the changes of menstrual cycle, body weight, endocrine and inflammatory factors before and after 6 months operation.

Results: 6 months after the operation, 90% patients recovered their normal menstrual cycle and ovulation. The shortest recovery period was two days and the average was (1.89 ± 1.286) months, and 1 patient recovered the fertility. The clinical data of 10 patients showed that canthosis nigricans were recovered, fasting blood glucose, glycosylated hemoglobin FBG, fasting insulin HbA1C FINS and HOMA-IR were significantly decreased ($P < 0.001$), insulin sensitivity index IAI increased significantly ($P < 0.001$), triglyceride TG decreased significantly ($P < 0.01$), HDL increased significantly ($P < 0.001$), uric acid UA significantly decreased ($P < 0.001$) and testosterone T level decreased significantly ($P < 0.001$).

Conclusion: LSG can decreased significantly improve the clinical symptoms of patients with PCOS which may be independent of weight and the change of Endocrinology and metabolism, and the mechanism needs to be further discussed. Metabolic surgery can be used as the effective treatment of patients with PCOS. Early improvement from metabolic surgery for patients with obese polycystic ovary syndrome may be independent of the benefits of weight loss.

Biography

Jie Dai is a postgraduate of Tongji University, resident physician, works in Youyi Community Health Center, Shanghai, China. She was selected in Baoshan medical personnel training program in the year 2015 and Tutor Shen Qu MD, PhD, professor, major in endocrine and metabolic diseases.

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TRANSVAGINAL OVARIAN DRILLING (TVOD) FOR SEVERE POLYCYSTIC OVARY SYNDROME PRIOR TO IN VITRO FERTILIZATION DRAMATICALLY IMPROVED EMBRYO YIELD, IMPLANTATION AND PREGNANCY RATES

Martin Keltz

Westmed Medical Group, USA

Objective: To evaluate the effect of transvaginal ovarian drilling (TVOD) on IVF outcomes in subjects with severe clomiphene resistant polycystic ovary syndrome (PCOS).

Materials & Methods: The study design was a prospective cohort study which was a university hospital based IVF program. Between 2008 and 2011, 19 patients with high anti-Müllerian hormone (AMH) and clomid resistant PCOS were offered TVOD prior to a possible second IVF cycle if the first IVF cycle were to fail. TVOD was performed prior to a second IVF cycle if the first cycle and any frozen cycles failed. Primary outcome measures were clinical pregnancy, ongoing pregnancy, and implantation and miscarriage rates. Secondary outcome measures were peak estradiol, gonadotropin dose, the number of oocytes and embryos and the number of days stimulated.

Results: In 15 patients who completed two fresh IVF cycles, one before and one after TVOD, the second cycle resulted in a significantly higher number of oocytes retrieved (7.2 5.9 vs. 13.2 5.9, $p=0.007$), mature oocytes retrieved (4.6 3.4 vs. 9.2 5.2, $p=0.002$), embryos (3.8 2.7 vs. 8.5 4.5, $p=0.0002$), and blastocysts (0.73 1.33 vs. 2.77 2.7, $p=0.037$). Among all IVF cycles 19 patients underwent 23 fresh IVF cycles prior to TVOD and 21 fresh cycles within six months following TVOD ovarian drilling lead to higher implantation (0.10 vs. 0.37, $p=0.001$) clinical pregnancy (17.4% vs. 61.9%, $p=0.002$), and ongoing pregnancy rates (4.4% vs. 47.6%, $p=0.014$).

Conclusion: In this prospective cohort study, TVOD appeared to markedly improve IVF outcomes in subjects with severe, clomiphene resistant PCOS after IVF failure.

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THE PREVALENCE OF OVARIAN VARICES IN PATIENTS WITH ENDOMETRIOSIS

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Purpose: Endometriosis and ovarian varices manifest with similar symptomologies and the hormone estradiol is implicated in both. We decided to investigate the possible association between them.

Materials & Methods: The sample consisted of 48 female patients between the ages of 18 and 50 years old. There were 25 patients who had been diagnosed with endometriosis; 15 had been confirmed by surgery and histopathology and 10 by nuclear magnetic resonance. There were also 23 patients without endometriosis who were considered to be the control group. The study design was an observational case control type.

Results: The prevalence of ovarian varices in patients with endometriosis was 80%, whereas, the control group was only 26.1%. The elevated percentage of ovarian varices in patients

with endometriosis is highly significant, with a difference of 53.9% and 95% confidence interval of 30% to 78%. The criteria for the determination of significance that we adopted was the level of 5%. The statistical analysis was processed using the statistical software SAS system, version 6.11 (SAS Institute, Inc., Cary, North Carolina).

Conclusion: Our results suggest that ovarian varices play a very important role in the physiopathology of endometriosis. Ovarian varices may evolve with oxidative stress in the function of the ovary, provoking an imbalance in its genetic, hormonal, and immunological aspects, provoking the chronic inflammatory process particular to endometriosis.

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BIOPSYCHOSOCIAL IMPACT OF PELVIC PAIN: A FORMER PATIENT'S PERSPECTIVE

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Pelvic pain—whether it results from PCOS, endometriosis, or an unknown cause—significantly impacts a woman's biopsychosocial health. Jackson shares her personal experience with pelvic pain, which began when she was 19 and remained unresolved until she was 27 years old. During that time, she saw dozens of providers but her quality of life and confidence in the healthcare system's ability to help her steadily diminished. Her physical and mental health suffered as she went untreated, an experience which she shares to illustrate the importance of multidisciplinary, holistic care. Jackson also discusses the ways in which pelvic pain impacts a patient's social, sexual, personal identities. By providing attendees with a comprehensive and

highly personal glimpse into the ways in which a pelvic pain condition impacts a patient's life, Jackson encourages creative problem-solving and dynamic treatment approaches that engage the patient as a whole person. Finally, she explores specific patient communication tools and treatment approaches that can be implemented to build a patient's confidence, understanding of her condition, and hope for recovery. This talk is an unconventional discussion for a medical conference, but also a vitally important one. By including patient experiences in scientific conferences, we can create truly integrated patient care which considers both medical advances and the psychosocial wellbeing of patients.

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POLYCYSTIC OVARY SYNDROME AND ANOVULATORY INFERTILITY: AN EVOLVING STRATEGY

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The polycystic ovary syndrome (PCOS) accounts for approximately 80% of women with anovulatory infertility. Various factors influencing ovarian function and fertility are adversely affected by an individual being overweight, the degree of hyperandrogenism and having elevated serum concentrations of luteinizing hormone (LH). Interestingly, a Finnish study showed that whilst women with PCOS may take longer to conceive, but their lifetime fertility is not impaired and they may display sustained fertility with advancing age as compared with infertile eumenorrheic women. For those who do present with anovulatory infertility, the principles of therapy are first to optimize health before commencing treatment and then induce regular unifollicular ovulation, whilst minimizing the risks of ovarian hyperstimulation syndrome (OHSS) and multiple pregnancies. Weight loss, in those who are overweight, should improve the endocrine profile, the likelihood of ovulation, a healthy pregnancy and the response to

ovulation induction therapy. Anovulation associated with PCOS has long been known to be amenable to surgical treatment, and a long-term cohort study has shown persistence of ovulation and normalization of serum androgens and sex hormone-binding globulin (SHBG) up to 20 years after laparoscopic ovarian electrocautery in over 60% of subjects, particularly if they have a normal BMI. There is interesting new data on improved efficacy using aromatase inhibitors compared with clomiphene citrate (CC). *In vitro* fertilization (IVF) may be required for women with anovulatory PCOS who do not conceive with ovulation induction or if there are other fertility factors such as tubal damage or male factors. The effect of basal serum LH and LH/FSH ratio on outcomes of *in vitro* fertilization-embryo transfer in patients with polycystic ovarian syndrome will be discussed.

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BEYOND PAIN PILLS AND ANTIDEPRESSANTS: THE NUTRITIONAL APPROACH TO PAIN AND MOOD ISSUES FOR WOMEN WITH PCOS

Felice Gersh

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Women with PCOS generally have more emotional suffering and physical pain than does the average woman. They have more anxiety and depression, more arthritis and tendinitis, more headaches, and more irritable bowel syndrome. This presentation will discuss the issues of pain and mood disorder in women with PCOS, and how they are closely linked and are greatly related to both the nutritional status and the endemic inflammation of the gut in women with PCOS. The evolving world of "nutritional psychiatry" recognizes that the brain is intricately linked to gut health and that gut inflammation, and the resultant impaired gut barrier (leaky gut), results in systemic endotoxemia and consequently more mood disorders and hypersensitivity to pain

stimuli. Women with PCOS are greatly impacted by various pain syndromes and anxiety. Women generally have heightened pain sensitivity and develop significantly more mood disorders than do men, which relates to the role of estrogen in both gut and brain wellbeing. Women with PCOS generally are more inflamed and have more gut dysbiosis. This presentation will bring all bodily systems together into a clear and cohesive focus, centered upon hormonal balance and the detection of nutritional deficiencies and gut dysbiosis, factors which lie at the center of mood disorders and chronic pain for women with PCOS.

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G4, A NEW TRANSGENIC MOUSE MODEL FOR POLYCYSTIC OVARIES SYNDROME

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Polycystic ovary syndrome (PCOS) is the number one cause of female infertility. Some mouse models are available to study it. These models are generated by different methods (mainly via administration of dihydrotestosterone) because its origin is not fully understood. A genetic cause has not been confirmed yet. Via insertional mutagenesis, we identified a new gene (*Gm10800*), which when disrupted in mice appears to phenocopy human PCOS. We are currently characterizing this transgenic mouse model (G4), have validated it as a PCOS model, studying the link between *Gm10800* and the observed phenotypes (obesity and sub-fertility). The main features of this model are: 1. Obesity with associated abnormalities such as glucose and insulin intolerance, polyphagia, high leptin levels, and lipid deposition in the ovaries. 2. Sub-fertility associated with cysts in the ovaries, di-estrous arrest, high percentage of non-viable oocytes, and high levels of LH, estrogen and testosterone. The gene disrupted by transgenic insertion (*Gm10800*) appears to be the mouse ortholog of a

human gene known as *PIRO* (*progranulin-induced receptor-like gene during osteoclastogenesis*). There is a single paper that discusses this gene, suggesting a role for it in the formation of osteoclasts. In accordance with this, our preliminary micro-CT analyses of bone mass density show that transgenic mice have greater bone mass than controls. Ongoing work is aimed at determining how *Gm10800/PIRO* contributes to the observed phenotypes. In conclusion, the G4 mouse model points to a direct link between PCOS and a gene for the first time. It's also the most representative model of PCOS currently available. This makes it an extremely valuable model to better understand the disease and the mechanism of action of some existing medication for it like metformin. It also gives us a precious chance to test new drugs on this model like endoplasmic reticulum stress inhibitors that are already in the drug market for other diseases, like TUDCA (Tauroursodeoxycholic acid).

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PCOS, ORAL CONTRACEPTIVES AND THE ACCURACY OF INFORMATION

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No consistent association between polycystic ovary syndrome (PCOS) and risk for breast cancer (BC) was observed in a recent systematic review, although it “incorrectly” reported that “no consistent association between PCOS risk and breast cancer was observed”. However, long-term use of oral contraceptives (OC) is considered a first line therapy for PCOS and their possible association to BC could be a concern in the informed consent process. In the most recent publication of UpToDate, it is stated as, “a non-significant increase (of BC) in ever users of OCs compared with nonusers”. However, the latter conclusion of a related meta-analysis of prospective cohort studies is connected with an irrelevant reference and more importantly the original paper states that “this meta-analysis provides evidence

of a non-significant increase in BC risk associated with ever OC use, but the risk for long-term OC users is significantly greater”. Furthermore, two major meta-analyses are totally ignored in this publication: 1. The collaborative group on hormonal factors in BC meta-analysis which suggested, “a causal relationship between OC use and BC”, and 2. A meta-analysis of case-control studies which concluded that “use of OCs is associated with an increased risk of premenopausal BC, especially with use before first full-term pregnancy in parous women”. For a reliable sharing decision with the patient, the accuracy and sufficiency of information is always very important.

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PLACE OF VITAMINS AND NUTRACEUTICALS IN PCOS MANAGEMENT?

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Polycystic ovary syndrome (PCOS) is a prevalent, and yet a poorly understood disorder that constitutes the commonest endocrinopathy of reproductive years. There exists heterogeneity in the clinical presentation, and pathophysiological underpinnings are varied. Insulin resistance is recognized as a contributor to the endocrine and metabolic milieu of PCOS. Management strategies are individualized to address the symptom burden,

as well as to harness the covert risks that are well recognized in this this population. A small repertoire of natural supplements and vitamins has been examined for therapeutic potential in PCOS populations, with some promising results. Existing data on therapeutic benefits of vitamin D as well as certain nutraceuticals which will be shared in this presentation.

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CONSENSUS ON THE INTEGRATED TRADITIONAL CHINESE AND WESTERN MEDICINE CRITERIA OF DIAGNOSTIC CLASSIFICATION IN POLYCYSTIC OVARY SYNDROME

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Polycystic ovary syndrome (PCOS) is the most common endocrine and metabolic disorder of women, with complex pathogenesis and heterogeneous manifestations. Professor Jin Yu recently wrote an article entitled, "Proposal of Diagnosis and Diagnostic Classification of PCOS in Integrated Traditional Chinese and Western Medicine." From this, the Obstetrics and Gynecology branches of the Chinese Association of Integrative Medicine and the China Association of Chinese Medicine collaborated with the Gynecology branch of the Chinese Association for Research and Advancement of Chinese Medicine to draft a report on the consensus of criteria for the diagnosis

and classification of PCOS in integrated traditional Chinese and Western medicine. The diagnosis for PCOS includes all three features: (1) oligo-ovulation or anovulation; (2) clinical and/or laboratory evidence of hyperandrogenism; (3) PCOS is classified into four types: types Ia, Ib, IIa, and IIb. Syndrome differentiation types for PCOS in traditional Chinese medicine are as follows: kidney deficiency with phlegm blockage syndrome, kidney yin deficiency with phlegm blockage and blood stasis syndrome, and kidney deficiency with liver qi stagnation syndrome.

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TCM TREATMENT OF POLYCYSTIC OVARY AND POLYCYSTIC OVARY SYNDROME

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Polycystic ovary syndrome is a disease which is recently reported in one out of five women in genital ages are involved (1); Author separates that polycystic ovary (PCO) belongs to a pre-clinical condition which appears delayed menstrual circles, even amenorrhea in some time; and Polycystic Ovary Syndrome (PCOS) is a disease which has been exploring a sexual hormonal disorder; both being gradually increasing incidences which have become common causes of infertility. Among them, women with severe PCOS are few, most of ladies lie PCO which is a gentle state. Author identifies PCO and PCOS in three patterns: 1) Qi deficiency of spleen and kidney, accumulation of fluid and stasis of blood; 2) Kidney yang deficiency and accumulation of fluid and phlegm; liver qi stagnation and blood stasis, according to the clinical approach of TCM (traditional Chinese medicine) and

manage an effective treatment to regulate menstrual circle and assist a pregnancy through acupuncture and Chinese herbal medicine. Treating methods and typical cases which are treated in the UK have been reported. Conclusion is that managing the treating methods of TCM and taking diagnostic references from conventional western medicine (CWM) can make the treatment more distinctive and effective. The method of integrated TCM and CWM will raise efficacy of TCM rather than following its traditional way. TCM will appear its advantage to treat the pre-clinical stage of a severe disease and bar the organic disease's occurrence, hence helping women getting their regular menstrual cycles and successful conceiving.

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INOSITOL: A NEW PHARMACOLOGICAL TOOL FOR SEVERAL ISSUES IN PCOS

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Polycystic ovary syndrome (PCOS) is a complex syndrome characterized by reproductive and metabolic implications. Pharmacologic treatments target the hormonal and metabolic dysregulations associated to the disease such as insulin resistance, anovulation, hirsutism and menstrual irregularities. Inositol consists of nine stereoisomeric forms, all having a ring made by six carbons with a hydroxyl group attached to each carbon. Such stereoisomers are engendered through the epimerization of the hydroxy groups. Myo-inositol (MI) is the most important and widespread inositol. Also, D-chiro-inositol (DCI) deserves great attention; it is originated from MI by means of the epimerization of the C1 hydroxyl group, furthermore it exists at a 40:1 ratio between myo-inositol and D-chiro-inositol. This enzymatic reaction is controlled by insulin and acts in agreement with specific tissue necessities. MI in the ovary is involved in glucose uptake and FSH signalling while DCI works as inducer

of testosterone synthesis under insulin stimulus. In insulin resistant PCOS women, hyperinsulinemia ends causing a severe growth of DCI concentrations from MI thorough the upregulation of epimerase activity in the ovary. MI could play a pivotal role in re-addressing both hormonal and metabolic parameters toward homeostasis, counteracting the symptoms and signs typical of this syndrome. In fact, our personal data showed an improvement of menstrual disorder, hirsutism and both a reduced ovarian hyperandrogenism and hyperinsulinism by six months of a combined treatment with MI+DCI. MI and DCI could represent an alternative important new tool for the management of metabolic and hormonal features in PCOS, although longitudinal randomised studies along with prospective interventional trials may contribute to better clarify the role of this intriguing and safe new therapy.

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PREDICTORS OF ANTENATAL CARE UTILIZATION IN ETHIOPIA

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Background: Maternal morbidity and mortality can be prevented through appropriate health follow-up during pregnancy. Maternal death due to pregnancy related complications remains a major public health problem. Ethiopia is among the countries that contributes about 50% of maternal death; although improvement has been shown to wards reduction of child mortality, change in maternal mortality is very far from the MDG 5 target. According EDHS (Ethiopia Demographic and Health Survey) 2011, maternal mortality ratio (MMR) is 676 per 100,000 live births. Despite the effort of the government to improve the health status of women, achieving significant change by increasing access to health facility is still very low. It is thus important to assess how maternal health care utilization is affected.

Method: This study utilizes secondary data on ANC service utilization and factors affecting, mainly from PubMed. The data were thoroughly analyzed.

Result: The result of the study is presented based on examination of literature within the context of the study objective. Maternal awareness, distance of the health facility from home, place of residence, education, income, age, parity, unintended pregnancy

and service satisfaction were strong predictors of ANC service utilization. EDHS 2011 indicated that ANC visit in women with secondary education and above were 91.3%, compared to 33.9% in those not educated.

Conclusion: This study has shown that the use of ANC service in Ethiopia is low and affected by women and facility related several factors. With regards to the women related factors awareness, place of residence, education, income, age, parity and desire of the pregnancy are important predictors. From the health facility aspect, distance of the facility, transportation conditions and service quality are found to be essential determinants to use ANC services. Therefore, utilization of ANC service could not be improved if the above predominant factors are not addressed. Since the problems have multiple natures, multi-sectorial collaboration to improve and solve personal factors of the women and institutional factors is very important. Improving maternal health status is also a key factor for national and economic development of countries because problem affecting women has intertwined effects on the child, family and nation.

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PCOS AND OBESITY: OVERWEIGHT BUT NOT OUT OF SHAPE

Nicola Burns

London

People look at you they instantly judge you; fat, skinny, attractive, unattractive, lazy, fit, active, tidy, scruffy, groomed, sloppy; it is human nature to judge a book by its cover. I know my friends know me well enough to know that regardless of what the outside shows, I am active and outgoing, and I eat pretty cleanly. But what about strangers? What about the person I have to squeeze past on the tube, or the bus driver who sees me walking up and assumes I won't run to catch it? I spent years with private trainers, in the gym, trying to manage my food choices. I am no hard core, gym-going, meal-prepping machine, but I am pretty good most of the time. My weight never reflected how I was eating. I came to terms with my weight a long time ago. The way I saw it was, if the worst aspect of my life was my weight, I have nothing to complain about! But in

society, this doesn't seem to be acceptable. How could I possibly be ok with being so overweight, which in today's culture makes me automatically unattractive? Day to day most people don't bother you, you get the odd comments on a night out or notice people saying something to friends when you walk by, but it was my family who put the most pressure on me. My brothers used it against me in verbal fights to hurt me, and my parents made an issue about it regularly. When you are eating well and working out, you feel healthy. Yes, I was carrying additional weight, but I was in good health. Convincing others is a battle, but I eventually just stopped caring about defending myself, I knew how I felt and I was ok with that.

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PREVALENCE OF ENDOMETRIOSIS AND ITS SYMPTOMS AMONG YOUNG ADULT FEMALES WITH CHRONIC PELVIC PAIN REFRACTORY TO CONVENTIONAL THERAPY

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Background: Young adult females with chronic pelvic pains (CPP) refractory to conventional medical therapy are still a big dilemma for gynecologists.

Study Objective: To study the prevalence and clinical manifestations of endometriosis in young adult females with CPP refractory to conventional medical therapy.

Materials & Methods: Design: Prospective clinical study. Setting: General and private hospitals in the city of Al-Karak/Jordan. Participants: A total of 28 females aged ≤ 21 years who had CPP refractory to conventional medical therapy and underwent laparoscopy during the years 2010–2014 were identified for this study. Endometriosis was staged according to the American Society for Reproductive Medicine (ASRM) classification.

Results: The mean age of participants was 18.4 years (range

15–21). Endometriosis was found in 20/28 cases (71.4%). Stage I: 9/20 (45.0%), stage II: 8/20 (40%), stage III: 2/21 (10%), stage IV: 1/21 (5%). Notably, 16/28 (57.1%) of all cases reported cold intolerance, 14/20 (70%) with endometriosis and 2/8 (25%) of those without endometriosis (Chi-square 4.725, df-1, p=0.03). There was no association between stage of disease with age distribution (≤ 18 and $>19-21$ years) p=0.700 nor with duration of symptoms (≤ 2 and >2 years) and the presence of cold intolerance p >0.05. However, severity of pain symptoms (<7 vs ≥ 7) was associated significantly with the stage of the disease p=0.011.

Conclusions: High prevalence of endometriosis among young adult females with CPP refractory to conventional therapy was mainly observed in the mild stage. Cold intolerances were highly associated with endometriosis.

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EFFICACY OF LETROZOLE (LE) COMBINED WITH CABERGOLINE (CE) IN COMPARISON TO LE ALONE IN OVULATION INDUCTION AMONG PATIENTS WITH POLYCYSTIC OVARIAN SYNDROME (PCOS) AND HYPERPROLACTINEMIA (HP)

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Background & Objectives: PCOS is the most common cause of anovulatory infertility. Up to 64% of women with mild HP fulfill modified Rotterdam diagnostic criteria for PCOS. HP affects hypothalamic-pituitary-ovarian axis causing anovulation. CE, a dopamine receptor agonist, inhibits prolactin secretion and can lead to better ovulatory response in those patients. LE, an aromatase inhibitor, without adverse effects on endometrium, induces fewer mature follicles with less risk of ovarian hyperstimulation syndrome (OHSS). Our study aim was to investigate effects of combined LE and CE in comparison to LE alone on ovulation and clinical pregnancy rates in PCOS patients with HP.

Methods: A total of one eighty women with PCOS were enrolled in a hospital based clinical trial and randomly allocated into two groups (A and B). Participants were in the age group of 22–38 years, all with a serum prolactin >32 ng/ml. Patients in A group (92) were given LE, 5 mg from day cycle 3–7/3 cycles in addition to CE, 0.5 mg weekly for 12 weeks. Those in group B (88) received only LE; same dose and duration. All patients were matched for their age and body mass index. Exclusion criteria: other causes of HP. Main outcome measure was rate of ovulation and detection

of both chemical and clinical pregnancies by estimation of β hCG and ultrasound detection of fetal cardiac activity, 2–4 weeks after missed period. Follow-up period was for six months. Statistical analysis of data was performed using SPSS version for windows. P-value was considered significant if <0.05.

Results: Three patients from group A and five from group B had drug side effects and were excluded from the study. None of the patients in either group were lost during the follow-up period. In group A, difference between mean serum level of prolactin before and after treatment was statistically significant ($P<0.001$): 48 ± 3 ng/ml and 9.7 ± 4.5 ng/ml, respectively. No significant decrease was observed in prolactin level in group B. Ovulation rate was higher in group A (64.8%) in comparison to group B (41.2%), ($P<0.001$). Clinical pregnancy rate was (40.8%) in group A and (27.3%) in group B ($P<0.001$). Neither twin pregnancy, nor OHSS were recorded in both groups.

Conclusions: The combination of LE and CE is superior to LE alone in management of anovulatory patients with PCOS and should be used as the first-line treatment for them.

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CLINICAL EVALUATION OF STANDARDIZED FENUGREEK SEED EXTRACT AS FUROSTANOLIC SAPONINS (FUROCYST) IN POLYCYSTIC OVARY SYNDROME PATIENTS

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Background: Polycystic ovarian syndrome (PCOS) is one of the most common endocrine conditions affecting women of reproductive age group with prevalence of approximately 7–10% worldwide.

Objective: The objectives of the study were to find out the effect of standardized fenugreek seed extract as furostanolic saponins (Furocyst) on reduction in ovarian volume and the number of ovarian cysts.

Method: An open-label, multicentric, single-arm, and non-comparative study was planned on 50 female patients suffering from PCOS. Patients were enrolled as per inclusion, i.e. premenopausal women between 18-45 years of age, BMI less than 42, diagnosed with PCOS, with adequate hepatic, renal and haematological functions, as well as patients willing to give informed consent in writing. Patients with hysterectomy/ congenital adrenal hyperplasia/ Cushing's syndrome/androgen secreting tumour/ thyroid-dysfunction/ hypo-gonadism were excluded. Women were allocated to receive Furocyst and were

assessed on parameters of ultrasonographic (USG) and hormonal diagnosis on the second day of cycle before and every four weeks within treatment period of 12 weeks

Result: After treatment for three months with Furocyst, there was significant reduction in ovary volume ($p=0.000$), 46% of study population showed reduction in cyst size who had bigger cyst, 36% study population showed complete dissolution of cyst who had small cysts, 12% study population got pregnant and 71% patients reported regular menstrual cycle on completion of treatment and LH:FSH ratio was also reduced to normal. Overall 94% of patients reported positively or got benefitted from standardized fenugreek seed extract dosing. No changes were observed in liver function test (LFT), kidney function test (KFT) and haemogram level.

Conclusions: The present study indicates that standardized fenugreek seed extract as furostanolic saponins (Furocyst) is very effective and safe in the management of poly cystic ovary syndrome in women of reproductive age group.

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IMPACT OF CONSECUTIVE EMBRYOS TRANSFER IN PCOS REPEATED IMPLANTATION FAILURE CASES

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Introduction: The majority of intracytoplasmic sperm injection (ICSI) cycles lead to the transfer of embryos to the uterus, in cases of polycystic ovary syndrome (PCOS) but some do not implant. Thus, the main cause of failure in IVF is implantation failure. Repeated failure in vitro-fertilization treatment is frustrating to patients and doctors. Patients with good quality embryo pose a special therapeutic challenge (consecutive embryo transfer).

Objectives: To examine whether consecutive transfer of embryos on day three and on day five improves ICSI success rates in PCOS with multiple consecutive implantation failures.

Study Design: This is a randomized controlled clinical trial including 50 patients, randomly distributed into two groups: Group A (The study group) consists of 25 patients subjected to

consecutive (double) embryo transfer at day three and at day five. Group B (The control group): consists of 25 patients subjected to embryo transfer at day five.

Results: There was statistical non-significant difference of age, cause of infertility, number of previous trials, oocyte retrieved, embryos available and multiple pregnancies. There was statistical significant difference of pregnancy rate and clinical pregnancy rate in two groups (54% to 34%).

Conclusion: For PCOS patients with repeated ICSI-embryo transfer failures, sequential transfer on day three and day five may improve the clinical pregnancy rate in cases of repeated implantation failure as long as good-quality embryos are available.

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PSYCHOLOGICAL ASPECTS OF PCOS

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Statement of the Problem: The physical symptoms of polycystic ovary syndrome (PCOS) are relatively well recognized these days, but the psychological aspects of PCOS have only recently begun to receive attention. The purpose of this study is to review the psychological aspects of PCOS, and their relationship with biology.

Methodology & Theoretical Orientation: The material reviewed consists of research of the relationship between physiological aspects of PCOS (e.g. testosterone, obesity, subfertility) and psychological aspects (e.g. depression). Meta-analytic research is also used.

Findings: A wide range of psychological problems have been attributed to PCOS. PCOS is a complex condition, but we can say with certainty that anxiety and depression are increased in

PCOS. Low mood in PCOS might be caused by the hypoglycaemia related to insulin resistance. Testosterone contributes directly to some of the troubling symptoms (e.g. acne and hirsutism), but can also improve visuospatial cognition. Although depression might be treated by medication, there is evidence that psychological interventions, such as mindfulness, can help not only psychological issues but also improve hormonal parameters.

Conclusion & Significance: PCOS is not just a medical issue, but a psychological challenge. The biopsychological pathways of psychological issues are only beginning to be understood, and need to be fully explored in order to inform appropriate interventions. Recommendations are made for better awareness of the psychological aspects of PCOS for medical practitioners and psychologists.

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EFFICACY EVALUATION OF FUROSTANOLIC SAPONINS (FUROCYST) IN MANAGEMENT OF INSULIN RESISTANCE AND OVARY VOLUME IN PCOS SUBJECTS

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Background: Polycystic ovary syndrome (PCOS) affects 10%–15% females of reproductive age. Insulin resistance is a central feature of PCOS. Hyperinsulinemia contributes to anovulation, hyper androgenism, infertility and early pregnancy loss along with increased risks of diabetes and cardiovascular events in women with PCOS. Furocyst (furostanolic saponins) ameliorates the metabolic syndrome associated with insulin resistance in PCOS and prevents long-term cardiovascular and diabetes complications. Based on the published study of Furocyst and three patents (US Patent 8217165B2 July 10, 2012, US Patent 8754205B2 June 17, 2014, Europe Patent 2285821 B1 December 17, 2014) this observation study was planned.

Objective: Our specific objective was to evaluate reduction in ovary volume and insulin resistance in women with PCOS, treated with furostanolic saponins (Furocyst).

Method: An open-labeled, single armed and non-comparative observation study on 30 female subjects suffering from PCOS with high insulin resistance was conducted. Patients were enrolled as per inclusion, i.e. premenopausal women between

18–45 years diagnosed with PCOS with adequate hepatic, renal and hematological functions. Patients with Cushing's syndrome/ androgen secreting tumor/thyroid-dysfunction were excluded. Included subjects received Furocyst and were assessed on various parameters on second day of the cycle in the beginning, and then after every four weeks within a treatment period of 12 weeks. Ovary volume was calculated with lower abdomen USG/ TVS and Insulin resistance was calculated by HOMA-IR method.

Conclusion: After 12 weeks of Furocyst intake, a significant reduction in ovary volume, insulin resistance and LH:FSH ratio was observed. The reduction in left and right ovary volume was 24.35% and 25.97%, respectively ($p < 0.001$). Reduction in insulin resistance and fasting insulin was also found highly significant ($p = .002$ and $.007$). The reduction in fetal bovine serum (FBS) and LH was also found to be highly significant ($p < .001$). After treatment with Furocyst, the irregularity of menstrual cycle was also significantly reduced ($p < .001$). No significant adverse effects were observed. In summary, Furocyst was efficacious in ameliorating the symptoms of PCOS.

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EFFECTS OF FEMALE GENITAL MUTILATION ON PHYSICAL, SOCIAL AND PSYCHOLOGICAL HEALTH OF THE VICTIMS

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Female circumcision also known as female genital mutilation (FGM), involves none medical cutting or removal of some parts or the entire external female genitalia. FGM is known to cause physical health problems such as scarring or formation of keloids, infertility, infections and menstrual difficulties. FGM also causes complications during labor and delivery, which include prolonged labor, post-partum hemorrhage and perineal tears. Psychological problems are major effects such as depression, low self-esteem and post-traumatic stress syndrome. Social health problems to victims and indirectly to significant others may include lack of intimacy related to sexual dysfunction like arousal, orgasm, lubrication and satisfaction. The practice is very rampant in most African countries and the effects have global impacts. Much is

being done to try and alleviate the suffering of the victims as well as trying to eradicate the practice by educating communities through their leaders, men involvement and coming up with policies that protect the rights of women against such gender based violence. Studies have been done on FGM but still there is literature gap on the global physical, social and psychological effects of FGM. These effects need to be studied specifically on the victims as the study group and the survivors as the control group. Such studies will provide evidence to healthcare providers to effectively initiate high quality medical care to both the victims and the survivors of FGM.

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