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*Photo on the cover page*

Conference Building at the University of Dohuk



**University of Duhok  
College of Medicine**

# **Duhok Medical Journal**

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# Duhok Med J

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## SALINE SONOHYSTEROGRAPHY VALIDITY IN ABNORMAL UTERINE BLEEDING DURING THE REPRODUCTIVE AGE

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*Submitted 10 February 2016; accepted 12 April 2016*

### ABSTRACT

**Background and objectives:** To study the Sonohysterography accuracy and to compare results with the hysteroscopy and histological study. One of the tools for investigation in patients with Abnormal Uterine Bleeding (AUB), is Vaginal Ultra sound (VU/S), as an initial investigation. Saline Sono-Hysterography (SSHG), is more reliable for focal and generalized endometrial lesions. The technique was introduced in 1987 where by Installation of Isotonic Saline Solution into the cavity of the uterus was found to improve the endometrial cavity's Transvaginal Sonographic imaging outcome. This study was conducted for the comparison of the accuracy of (VU/S), and (SSHG) as a first step in the diagnostic approach of endometrial abnormalities of women presenting with (AUB), and to compare the results with hysteroscopy and histopathological findings.

**Patients and Methods:** Ethical approval was properly taken. Patients were collected from Private and Azadi Teaching Hospital Consultation Clinics. A prospective study was started from June 1st. 2013 to March 1st. 2014 and conducted in 200 women in their reproductive years of age presented to Private and Azadi Teaching Hospital Consultation Clinics complaining from (AUB). All of them underwent (VU/S), and (SSHG) Transvaginal ultrasound, and Sonohysterography. Focal or generalized endometrial abnormalities were noticed, and classified into seven types (normal endometrium, thickened endometrium, endometrial hyperplasia, endometrial polyp, submucous myoma, uterine synechiae, and suspicious of malignancy). Those women with positive findings then underwent hysteroscopy and diagnostic curettage, the histopathologic findings was compared with the results of (SSHG). Finally the correlation between sonographic results with definitive diagnoses that were obtained by hysteroscopy & endometrial biopsy was used to calculate the test predictive values.

**Results:** The sensitivity and specificity of (SSHG) was 92.9% and 89.7% respectively, in contrast to the sensitivity and specificity of (VU/S) which was 71.4% and 67.7% respectively. The (SSHG) and Hysteroscopy were 91% in agreement to each other while (VU/S) and Hysteroscopy were in agreement to each other in 69% of cases only, ( $p = 0.002$ ). The diagnostic efficiency of (SSHG) in three main endometrial abnormalities (endometrial hyperplasia, polyps and sub mucous fibroids) were superior to that (VU/S). with the best results being seen in patients with sub mucous myoma where the level of both sensitivity and specificity reached 100% for (SSHG), this was in contrast to those of (VU/S) which reached 61.55 and 97.7% respectively.

**Conclusions:** The results of our study have concluded that (SSHG) is a much better assessment tool than traditional (VU/S) in dealing with intrauterine lesions. Decision making in selecting cases for hysteroscopy and directed biopsy would be much better supported by having an accurate differentiation between focal and generalized endometrial abnormalities beforehand. Hence the use of (SSHG) as a first step in the diagnostic approach of (AUB) is strongly recommended by this study.

**Keywords:** Abnormal Uterine Bleeding, Vaginal Ultra sound, Saline Sono – Hysterography.

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## ZINC STATUS IN WOMEN WITH UNEXPLAINED INFERTILITY IN DUHOK CITY, KURDISTAN REGION, IRAQ

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*Submitted 12 February 2016; accepted 12 April 2016*

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### ABSTRACT

**Background and aim:** Alterations in the status of nutrients and minerals including zinc should be considered in the etiology of unexplained infertility. The aim of this study was to determine serum zinc status in women with unexplained infertility and compare it with that of fertile controls.

**Methods:** A case-control study was conducted at Infertility center in Duhok city/Kurdistan region/ Iraq, during the period from beginning of February to end of July 2014, fifty patients with unexplained infertility and 100 age matched apparently healthy fertile control were enrolled. For each one blood sample was obtained for the measurement of serum Zinc.

**Results:** The mean age of infertility patients was 30.9( $\pm 5.95$ ) years. The mean serum Zinc was significantly lower in infertile patients than in the controls group ( $59.13 \pm 15.21$   $\mu\text{g/dl}$ ) and ( $76.32 \pm 14.75$   $\mu\text{g/dl}$ ) respectively. There were no statically significant associations between mean serum Zinc types and duration of infertility.

**Conclusion:** Zinc may have an important etiological role in the pathogenicity of unexplained infertility and therapeutic intervention might be considered,

**Keywords:** Serum Zinc, Infertility, Kurdistan region.

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## HEALTH EDUCATION ROLE IN IMPROVING AWARENESS ABOUT PREECLAMPSIA /ECLAMPSIA AMONG TRADITIONAL BIRTH ATTENDANTS IN DUHOK GOVERNORATE

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*Submitted 9 February 2016; accepted 12 April 2016*

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### ABSTRACT

**Background and aim:** Preeclampsia/ Eclampsia was the second most common cause of maternal death in Duhok Governorate during the period 2007-2014. The aim was to measure the value of a health education program in improving knowledge and practice toward Preeclampsia /Eclampsia among traditional birth attendants in Duhok.

**Methods:** A quasi experimental study was conducted during the summer of 2014 on 91 traditional birth attendants registered in Duhok governorate. Their knowledge and practice about Preeclampsia/ Eclampsia were evaluated using a standardized questionnaire before and 8 weeks after an education program. The program comprised lectures, videos and an education booklet which contains basic knowledge supported by pictures and distributed to all participants.

**Results:** The study showed that most of traditional birth attendants had correct basic knowledge, and practice toward Preeclampsia/ Eclampsia; with a statistically significant post education improvement in most of knowledge and practice toward both conditions.

**Conclusion:** Health Education has a significant role in improving knowledge and practice of traditional birth attendants toward Preeclampsia / Eclampsia

**Keywords:** Preeclampsia/ Eclampsia, Health education, Traditional birth attendants.

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## THE PREVALENCE OF GARDNERELLA VAGINALIS IN BACTERIAL VAGINOSIS AMONG SYMPTOMATIC WOMEN IN DUHOK CITY

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*Submitted 10 February 2016; accepted 12 April 2016*

### ABSTRACT

**Background** *Gardnerella vaginalis* is considered the most common bacteria that associated to Bacterial Vaginosis syndrome (BV), which is leading to vaginal disorder, and it is the most common cause of unpleasant vaginal odor and discharge in women during reproductive age.

**Objectives:** The main aims of this study were To identify the prevalence of *Gardnerella vaginalis* in the Bacterial Vaginosis cases in symptomatic women with BV in Duhok city by using VITEK2 system, and determine the susceptibility of some isolates of this bacteria against (14) different antibiotics by using the disc diffusion method.

**Methods:** A total of 500 vaginal samples taken from women of reproductive age range between (18 – 50) years suffering from symptoms of bacterial vaginosis such as vaginal discharge, burning, and itching complaints, and others. Sampling period was from November 2014 until March 2015, and the samples were taken from two major hospitals in Duhok province, Maternity hospital and VIN Private hospital.

**Results:** From Out of 500 high vaginal swabs, 63(12.2 %) cases of bacterial vaginosis were detected depending on Nugent criteria and (56) isolates of *G. vaginalis* distinguished from them, with a prevalence (11.2%) in all samples tested, and (88.8%) in bacterial vaginosis cases. According to the age range, the highest prevalence rate of *G. vaginalis* was seen in age 20-30 years (46.4%). Due to the antibiotics susceptibility test, the results revealed that *G. vaginalis* isolates showed a good sensitivity toward Clindamycin (89.5%), while the study showed that only one isolate (5%) of *Gardnerella vaginalis* was sensitive to Metronidazole

**Keywords:** *Gardnerella vaginalis*, Bacterial Vaginosis, Duhok city.

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## PREMARITAL PERCEPTION ON OBESITY AND GESTATIONAL WEIGHT GAIN

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*Submitted 21 February 2016; accepted 12 April 2016*

**ABSTRACT**

**Background and aim:** Increasing prevalence of overweight and obesity among women in the childbearing age and during pregnancy is a growing global public health problem. The study aimed to assess pre-marital women's perception as to their own weight and future gestational weight gain.

**Methods:** Four hundred women selected by systematic random sampling from the Premarital Clinic at the Central Laboratory of Duhok city, have been directly interviewed, during the period from June 1, to July 31, 2014. They answered questions related to perceptions on their current own weight and future healthy gestational weight gain.

**Results:** The overall prevalence of overweight/obesity was 44.3%. Seventy-three percent of the overweight/obese women underestimated their body mass index, in comparison to 26.6% of the normal weight women. Only 10.8% of all the women possessed proper knowledge on the best gestational weight gain for themselves. Relations of socio-demographic factors with perception of own weight and gestational weight gain guidelines, were statistically not significant. However, obese women had prevalence of high perception on gestational weight guidelines of 16.3%, compared to 0% and 1.4% for the underweight and normal-weight respondents, respectively ( $P=0.001$ ).

**Conclusion:** Premarital women's level of perception as to their own weight and proper gestational weight gain was low.

**Keywords:** Premarital, Perception, Overweight, Obesity, Gestational Weight Gain.

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## FUNCTIONAL AND COSMETIC LABIA MINORA REDUCTION

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*Submitted 14 February 2016; accepted 12 April 2016*

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**ABSTRACT**

**Introduction:** Enlarged labia minora can cause functional, cosmetic and psychosocial problems. The purpose of this article is to present recent modify labial pedicle flap for management of problems associated with protrusion of the labia minora.

**Results:** for idiopathic labia minora enlargement. Postoperative result there was no wound infections. Minor wound dehiscence found in one patient and one painful hematoma not necessitate surgical drainage in another, one patient sustained retention of urine that necessitate bladder catheterization. All women were fulfilled with cosmetic results, no recurrence of chief complained were reported. The mean follow up was fourteen weeks but none have consequently required or requested revision surgery.

**Conclusions:** modified labial based flap was establish to be straight forward and useful technique of labia minora reduction using single procedure in small series cases this technique give favorable cosmetic and purposeful outcomes for the patient.

**Keywords:** Labia minora, Cosmetic.

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## ASSESSMENT OF SERUM HOMOCYSTEINE LEVEL IN PATIENTS WITH MISSED MISCARRIAGE

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*Submitted 16 February 2016; accepted 12 April 2016*

### ABSTRACT

**Background and Objective:** Accumulative reports documented that homocysteine (hcy) was implicated in many diseases. In recurrent missed miscarriage, the reports are limited and scarce. The objective was to evaluate the effect of hyperhomocysteinemia in the etiology of recurrent missed miscarriage.

**Methods:** This study involved sixty seven patients with confirmed diagnosis of missed miscarriage. The second group served as control group and included ninety four ladies subdivided into three subgroups: a) Thirty five normal pregnant ladies with matched gestational age' .b) Twenty nine apparently healthy non-pregnant ladies with matched age. c) Thirty apparently healthy full term pregnant ladies with matched age. The following main parameters were measured: Total serum homocysteine levels, Serum Human Chorionic Gonadotropin concentration(HCG), Serum progesterone concentration, complete blood count. Placental Histopathological Specimens Examination: Placental tissues were obtained from women after delivery and women with recurrent missed miscarriage and were examined histologically by using hematoxyline and eosin stain and also using CD34 immunohistochemistry.

**Results:** Serum homocysteine in cases of single missed abortion was significantly higher compared to recurrent missed miscarriage cases, non-pregnant cases and pregnant with matched gestational age groups (13.1 VS 9.8, 8.5, 8.7 $\mu$ mol/L,  $P < 0.009$ ). Serum Human Gonadotropin was significantly higher in pregnant controls compared to that of missed miscarriage groups( 10000 VS 2198.5 mlu/ml,  $P < 0.001$ ). Serum progesterone level was significantly higher in pregnant controls than recurrent missed miscarriage group (30.06 VS 3.64 ng/ml,  $P < 0.001$ ). In missed miscarriage group, serum Hcy significantly negatively correlated with gravity and parity. Histopathological Results: There were histopathological changes of placental tissues of missed abortion cases in comparison to placenta of normal healthy fullterm pregnant cases including hyalinization of villi with focal or total losing of cytotrophoblast, hydropic degeneration, vasculitis of blood vessel and hemorrhage within decidua.

**Conclusion:** Data of the present study demonstrated that elevated homocysteine level has an important role in the pathogenesis of missed miscarriage.

**Keywords:** Recurrent missed miscarriage, Homocysteine.

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## OUTCOME OF ANTENATALY DIAGNOSED HYDRONEPHROSIS AMONG NEWBORNS IN DOHUK CITY

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*Submitted 19 February 2016; accepted 12 April 2016*

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### ABSTRACT

**Background:** Fetal hydronephrosis is a common finding on antenatal ultrasound examination occurring in 0.5 to 1 percent of pregnancies,

**Methods:** In this study 67 newborn were evaluated soon after delivery by ultrasound examination and for those with moderate and severe hydronephrosis IVU & VCUG were done, the severity of the hydronephrosis and time of diagnosis were correlated with the cause whether it is physiological or pathological.

**Results:** One third of cases showed no pathological causes and the hydronephrosis resolved during follow up, while two third of cases had pathological causes and the most common two causes were VUR 34% and UPJ obstruction 30% and other causes include lower ureteric obstruction in 10%, posterior urethral valve in 6%, MCDK in 6% and lower ureteric ureterocele in 1.4% , and most cases diagnosed in first trimester seems to have severe hydronephrosis while most of the cases diagnosed in second trimester revealed mild cases with no pathological causes and cases diagnosed in third trimester usually showed to have pathological causes behind hydronephrosis.

**Keywords:** Hydronephrosis, Newborn, Duhok.

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\* Lecturer, Department of Surgery, University of Duhok, College of Medicine



## MATERNAL SERUM AND TISSUE LEPTIN IN FIRST TRIMESTER SPONTANEOUS MISCARRIAGES

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*Submitted 5 February 2016; accepted 12 April 2016*

### ABSTRACT

**Background and objectives:** Spontaneous miscarriage is a term used for a pregnancy that ends on its own, within the first (20) weeks of gestation, mostly occur during the 1<sup>st</sup> thirteen weeks of pregnancy. This study investigates the role of maternal serum and tissue leptin expression as a possible endocrine cause for early spontaneous miscarriages.

**Methods:** The study included three groups of women; (34) cases presented with 1<sup>st</sup> trimester spontaneous miscarriage, (34) cases with normal ongoing 1<sup>st</sup> trimester pregnancy, and (34) cases of normal non pregnant women with comparable age range regarded as a control group. Serum leptin concentration determined for study groups and trophoblastic immunohistochemical expression of leptin was studied in miscarriage group.

**Results:** Serum leptin concentration in miscarriage group was significantly lower than both pregnant and the non-pregnant (control) women. Also pregnant women show significantly higher leptin concentration as compared to non- pregnant control group and the correlation between maternal serum concentration and trophoblastic immunohistochemical expression of leptin was statistically significant.

**Conclusion:** Low level of maternal leptin hormone concentration in miscarried women and its significant correlation with trophoblastic immunohistochemical expression of leptin indicate the important role of leptin hormone in spontaneous miscarriage and maintaining normal pregnancy.

**Keywords:** Leptin, Miscarriage, Immunohistochemical.

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## PREOPERATIVE ASSESSMENT TO ANTICIPATE DIFFICULT INTUBATION IN CESAREAN SECTION

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*Submitted 8 February 2016; accepted 12 April 2016*

### ABSTRACT

**Background and objectives:** Incidence of difficult intubation increases during pregnancy due to physiological and pathological changes. Risks associated with general anesthesia for Cesarean Section are generally related to airway problems such as difficult intubation and aspiration pneumonia. High risk of morbidity and mortality associated with difficult intubation or failure of intubation in Cesarean Section necessitates the anesthesia team to use the best way for evaluation of the airway and anticipation of difficult intubation. The aim of this study is to detect the best method for airway evaluation that anticipates difficult intubation in Cesarean Section.

**Methods:** This study was conducted at Duhok Maternity Hospital during the period from May 2013 till October 2013. It included 100 pregnant patients admitted for Cesarean Section under general anesthesia, they evaluated for difficult intubation by Mallampati scoring system, (Thyromental, Sternomental, Hyomental) distances, Upper Lip Bite Test and Body Mass Index before induction of general anesthesia and the results were compared with the Cormack and Lehane grading system (the gold standard) after induction of anesthesia.

**Results:** The sensitivity and specificity of the methods for anticipating difficult intubation were; Mallampati Scoring System (sensitivity 75%, specificity 97.82%), Upper Lip Bite Test (sensitivity 71.42%, specificity 90.69%), Body Mass Index (sensitivity 88.88%, specificity 45.05%), Sternomental Distance (sensitivity 60%, specificity 97.89%), Thyromental Distance (sensitivity 50%, specificity 97.95%), Hyomental Distance (sensitivity 33.3%, specificity 97.93%).

**Conclusions:** Mallampati scoring system is the best method for anticipating difficult intubation in Cesarean Section.

**Keywords:** Difficult intubation, Cesarean Section, Mallampati scoring system, Cormack & Lehane.

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## EFFECTIVENESS AND SAFETY OF CURRENT ANTICONVULSANT THERAPY DURING PREGNANCY: CASE SERIES FROM DUHOK

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*Submitted 18 February 2016; accepted 12 April 2016*

### ABSTRACT

**Background and aim:** Epilepsy is a very common chronic neurological disease that affects both male and female populations; there has been an association between epilepsy and course and outcome of pregnancy. The study aimed to study the effects of few currently used anticonvulsant drugs on pregnancy, labour, and the newborn in a small group of female patients.

**Methods:** This retrospective, clinical case-series included women suffering from focal/complex partial/generalized epilepsy, with/without aura, before and after their marriage, who eventually became pregnant and presented to the Neurology / Neurosurgery Consultation Clinics and Private Clinics at Duhok during the period January 2005 – December 2015. The enrolled 28 women with epilepsy came from Duhok Governorate, and their ages ranged between 15 years – 40 years. A suitable format sheet has been designed in which relevant patient's notes were recorded. All of patients had standard routine haematological and biochemical profile, including alpha fetoprotein measurement, skull X-rays, abdominal ultrasound, contrast computed tomography and magnetic resonance imaging scanning examination; all had electroencephalographic records. Patients were given anti-convulsant medication at presentation, 5mg daily folic acid supplements 2 months before and during pregnancy, plus other symptomatic drugs when appropriate; most of them were also given multivitamins and minerals preparation as additional nutritional support. The anticonvulsant drugs included Carbamazepine, Levetiracetam, Lamotrigine, and Valproic Acid, within standard dosage necessary to achieve an adequate control(seizure-free life). During the follow-up period, routine blood tests were done every 6 months to monitor the effects of those drugs on the bone marrow and the liver.

**Results:** All have achieved good epilepsy control before, during, and after pregnancy, and during the follow-up period. Clinical examinations, blood tests, skull X-ray, computed tomography, magnetic resonance imaging were within normal; however, alpha-fetoproteins value was only abnormal in the patient who gave birth to the newborn with facio-oral defect. The course of pregnancy, labour, and post-partum period was smooth in all of the patients. All gave birth to healthy single viable newborns, having normal gestational age, birthweight or APGAR score, except one of the patients who was taking Valproic acid, her newborn had cleft lip and palate. The latter patient was switched over to carbamazepine and gave rise to a healthy newborn baby in subsequent pregnancy.

**Conclusions:** WWE treated by CBZ, LVC, LTG and VPA showed good seizure control during pregnancy and labour whether vaginal or cesarean section. Unlike CBZ, LVC and LTG, only VPA use was associated with one case of facio-oral congenital abnormality.

**Keywords:** Pregnancy, women with epilepsy, safety of anticonvulsants.

\*Lecturer in Neurology, College of Medicine, University of Duhok,

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## DOES OXIDATIVE STRESS INCREASE FOLLOWING IRON THERAPY DURING THE 2ND AND 3RD TRIMESTERS OF PREGNANCY

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*Submitted 12 February 2016; accepted 12 April 2016*

### ABSTRACT

**Background:** Pregnancy contributes to the processes of oxidation and free radical formation, the causes may be due to mitochondria rich placenta and a number of transitional metals, especially iron, which is particularly abundant in the mammalian placenta, are important in the production of free radicals.

**Objective:** to evaluate the oxidative stress status at the 3<sup>rd</sup> trimester of pregnancy in two groups of pregnant women according to the iron supplement therapy.

**Methods:** Enzyme linked immune sorbent assay (ELISA) technique was used for assessing the serum oxidative stress biomarker; malondialdehyde (MDA), total antioxidants capacity, ferritin and complete blood picture were studied in 81 pregnant women at the 3<sup>rd</sup> trimester of pregnancy who were routinely visited the Duhok maternity hospital for checking up their pregnancy, forty one of them who were took Iron therapy continuously during the 2<sup>nd</sup> and 3<sup>rd</sup> trimester of pregnancy and forty women who didn't took iron at all during their pregnancy. The inclusion criteria were young pregnant women below the age 35 years with their hemoglobin > 11 g% and absence of any chronic medical problem.

**Results:** serum MDA, ferritin, Hb and pack cell volume were significantly higher in pregnant women who took iron than those who didn't took any iron supplement.

**Conclusion:** higher oxidative stress and lipid peroxidation was found in women at the late stage of the 3<sup>rd</sup> trimester of pregnancy in iron treated group was shown by increased serum MDA levels due to increase serum ferritin. The higher serum MDA and ferritin during the 3<sup>rd</sup> trimester of pregnancy in ladies who took iron continuously will probably provide the need of guidance for planning the iron supplement dosage regime.

**Keywords:** Iron, Pregnancy, Oxidative stress, Ferritin, Total antioxidants.

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## RELATIONSHIP BETWEEN AGE AND SERUM ANTI-MULLERIAN HORMONE IN FERTILE AND SUBFERTILE FEMALES

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*Submitted 22 February 2016; accepted 12 April 2016*

### ABSTRACT

**Background and aim:** Infertility is a common problem in our society, female fertility declines with age due to decrease in the number of growing ovarian follicles. Anti-Mullerian hormone, is a glycoprotein produced in the ovaries by the granulosa cells of ovarian follicles, mainly in preantral and small antral stages. The aim of this study is to measure the level of serum Anti-mullerian hormone in both fertile and subfertile females of the same age group (20-40) years and to find whether Anti-Mullerian hormone level changes with age and to compare its level between the two groups and their age subgroups, this could be useful to evaluate ovarian reserve and female fertility.

**Methods:** A case control study was conducted on 130 females, 70 (53.84%) subfertile females (patients) with a mean  $\pm$  SD 28.75 $\pm$ 6.76 years and 60 (46.15%) fertile female (controls) with a mean  $\pm$  SD 31.26 $\pm$ 5.98 years, in Mosul city / fertility and IVF center in Al- Batool Teaching Hospital during the period from 1<sup>st</sup> of November 2013 to 30<sup>th</sup> of April 2014. Serum Anti-Mullerian hormone concentration was measured in both patients and controls.

**Results:** In this study, there was a significant negative correlation between serum concentration of Anti-Mullerian hormone and age. The Anti-Mullerian hormone level was inversely correlate with the age of whole sample ( $r=-0.53$ ), age of subfertile females ( $r=-0.50$ ) and age of fertile females ( $r=-0.73$ ). The serum Anti-Mullerian hormone level of subfertile females was significantly lower than its level in fertile females ( $p=0.006$ ), a significant higher Anti-Mullerian hormone in fertile younger and older females in comparison to subfertile females ( $p=0.001$  and  $p=0.006$  respectively); a significant decrease in Anti-Mullerian hormone after the age of 30 years in both fertile and subfertile females ( $p=0.0001$ ).

**Conclusions:** The present study, concluded that there was a significant negative correlation between serum Anti-Mullerian hormone and age, a decline in Anti-Mullerian hormone level with increasing age in both fertile and subfertile females and its level can be considered a useful test to predict ovarian reserve in females, and should be done routinely.

**Keywords:** Age, Anti-mullerian hormone, Fertile and subfertile females.

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## IMPACT OF OXIDATIVE STRESS IN RECURRENT MISSED ABORTION

RAED SALIM AL-NAEMI, PhD (MEDICAL PHYSIOLOGY)\*

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*Submitted 21 February 2016; accepted 12 April 2016***ABSTRACT**

**Background and Objective:** Recurrent pregnancy loss is a frustrating and heart-wrenching experience for both the patient and the physician. There is strong evidence that oxidative stress has a role in the pathogenesis of many human diseases and early aging processes.

The aim of the study was to determine the impact of oxidative stress on recurrent pregnancies loss via the evaluation of the oxidative stress status in blood and placenta of women with recurrent missed miscarriage.

**Methods:** This study was conducted at the Department of Physiology, College of Medicine, University of Duhok and Azady Teaching Hospital. Two groups of women were included: the 1<sup>st</sup> group was (88) patients women admitted to Gynecology and Obstetrics Department in Azady Teaching Hospital with confirmed diagnosis of missed miscarriage; for termination of pregnancy, it was subdivided into (73) patients with a history of recurrent missed miscarriage, and (15) patients with a previous one missed miscarriage. The 2<sup>nd</sup> group, (84) women, served as a control group, and subdivided into 3 subgroups: a. thirty pregnant women with matched gestational age, b. thirty apparently healthy non-pregnant women with matched women's age, c. twenty four apparently healthy full-term pregnant ladies with matched women's age.

Serum total antioxidants capacity (TAC), serum and placental tissue oxidative stress biomarkers, 8-iso prostaglandin F<sub>2α</sub> (8-Isoprostane), and inhibin A were measured using specific ELISA kits,

**Results:** showed the significant increase in serum and placental tissue of 8-Isoprostane suggests that the oxidative stress is a feature of the patho-physiological changes and the damage of placental syncytiotrophoblast which had seen in recurrent missed miscarriage. Serum total antioxidants capacity and Serum inhibin A, were significantly lower in missed recurrent miscarriage group compared with the control group.

**Conclusion:** Oxidative stress was found to be present in the group women with recurrent pregnancy loss which indicates its role as a cause of missed miscarriage, especially in those women with low concentrations of total serum antioxidants capacity and inhibin A.

**Keywords:** Oxidative stress, Antioxidants, Recurrent Pregnancy loss. 8-Isoprostane, inhibin A.

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خزيران ٢٠١٦

پهريهندا ١٠ ژماره ١ (پاشگو ١)



زانكویا دهوك  
كوليژا پزیشکی

# گوفارا پزیشکی یا دهوكی

گوفارا فهرمی یا کولیژا پزیشکی یا دهوكی