

## AFRH Conference 2017 Abstracts

### Oral Presentations

#### Hysteroscopic findings among female partners presenting in a government-funded IVF centre of National Hospital Abuja, North central Nigeria

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The development of hysteroscopy has provided a minimally invasive approach to common gynaecological problems, such as management of infertility, abnormal uterine bleeding. Hysteroscopy has been shown to be the gold standard for the accurate evaluation of the endometrial cavity especially in infertility. The aim of the study is to describe the indications and findings at hysteroscopy in the national hospital, Abuja.

Retrospective reviews of all cases of hysteroscopy between January 2016 to December 2016 at National Hospital, Abuja was carried out. Relevant information was extracted from the patient's case notes.

A total of 92 hysteroscopies were done. Majority (77.2%) of the patients presented with secondary infertility with age range of 35-39 years as seen in (29.3%). (80.4%) of the patients were nulliparous. The commonest pathology encountered was cervico-uterine adhesions (34.8%) and hence the commonest procedure was adhesiolysis (43.5%) with the least procedure being cervical dilatation.

Hysteroscopy offers the benefits of combining evaluation with treatment in most cases of infertility work-up. Also, it avoids the risk of missing focal pathology, as may occur with other modalities of endometrial evaluation especially in the infertile female.

#### Use of Duphaston® vs Cyclogest® for luteal support in in-vitro fertilization cycles

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Luteal phase support (LPS) is an essential component of every in-vitro fertilization (IVF) cycle as a defective corpus luteum may produce low levels of progesterone insufficient for endometrial ripening, implantation or placentation. In Nigeria,

vaginal micronized progesterone pessary has remained the standard of care for LPS despite the fact that women prefer to use oral than vaginal formulations. It is expected that any oral formulation with similar outcome measures like the traditional vaginal formulation will bring a great relief to our women. This is the thinking behind this observational comparative study.

The objective of the study is to compare the pregnancy outcome with the use of Duphaston® (oral dydrogesterone tablet) for luteal phase support to the present standard of care (vaginal micronized progesterone pessary – Cyclogest®) in In-vitro fertilization cycles.

Infertile Women aged between 28 and 40 years were recruited from January 2017 for self ovum IVF cycle using a cut off of Day 2–5 follicle-stimulating hormone level of  $\leq 10$  iu/l. Down regulation using Long Protocol with Buserelin 0.5mg daily from day 21 of previous cycle and reduced to 0.25mg from day of ovarian stimulation. Evidence of down regulation was taken as endometrial thickness less than 4mm and estradiol  $< 50$  pg/ml. Ovarian stimulation was achieved with Menopour® 150 – 375mg daily depending on the woman's age. Follicle development was monitored by transvaginal ultrasound and ovulation trigger with HCG 10,000 iu.

The women were allocated to two groups for LPS using computer generated codes to group A: Dydrogesterone 20mg daily (10mg BID) [Duphaston®] and group B: Micronized Vaginal Progesterone 400mg daily [Cyclogest®] from oocyte retrieval day for 14 days post embryo transfer [pET] (day 3 transfer of 1-4 embryos) and continued to 14 weeks if pregnancy is confirmed. The Progesterone level was assessed on Day 3 pET and pregnancy test performed with blood and urine samples on day 14 pET. Transvaginal ultrasound was performed on day 28 pET to confirm pregnancy and fetal heart presence. Follow up of the successful pregnancies is ongoing.

The analysis of the first fifty women showed a statistically significant improvement in pregnancy rate in the Duphaston group (8/24: 33.3%) compare to the Cyclogest group (5/26: 19.2%) ( $p < 0.05$ ). The Progesterone levels on Day 3 post embryo transfer were comparable for both groups. There was a remarkable reduction in the cost of medications for luteal phase support with duphaston compared to cyclogest (N3,780 vs N9,078 till 14th day pET: 21/2 times less expensive). The pregnant women are still on follow up to assess the miscarriage rate and live birth rates.

Oral dydrogesterone (Duphaston®) achieved comparable progesterone levels on day 3 post embryo transfer at a reduced

cost of medications with significantly improved pregnancy rates over the present standard of care - vaginal micronized progesterone pessary (Cyclogest®). We consider duphaston safe, efficacious and cost effective for LPS in IVF cycles.

## **A comparative analysis of anti-Mullerian hormone and follicle stimulating hormone in assessment of ovarian reserve**

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The ovarian reserve and responsiveness are important in in-vitro fertilization treatment cycle. Various markers including the anti-Mullerian and follicle stimulating hormone are used in this assessment. The objective of the study is to evaluate basal anti-Mullerian hormone (AMH) as compared to follicle stimulating hormone (FSH) as a marker of ovarian reserve and responsiveness.

This was a cross-sectional and comparative study. Stored basal menstrual cycle day three serum samples of 112 women was evaluated for AMH and FSH and compared to the number of oocytes retrieved. A correlation analysis, ROC curve and analysis of variance were performed to determine the level of accuracy between AMH and FSH in predicting the ovarian reserve and responsiveness.

AMH values correlated the best with the number of retrieved oocytes ( $r = 0.65$ ;  $P < 0.001$ ) relative to FSH ( $r = -0.461$ ;  $P < .001$ ). ROC curve analysis demonstrated that, for the prediction of  $\leq 3$  oocytes retrieved, AMH had the largest area under the curve ( $AUC = 0.91$ ;  $P < 0.05$ ) relative to follicle-stimulating hormone ( $0.23$ ;  $P < 0.05$ ). The ROC curve plotted for the region of  $> 3$  Oocytes, showed a contrary indication such that FSH demonstrated a good performance as it recorded cut-off of  $0.772$ ;  $P < 0.05$  as against AMH cut-off of  $0.01$   $P < 0.05$ . However, AHM demonstrated a higher Positive Predictive Value, Negative Predictive Value and Accuracy.

AMH correlated better than FSH with the number of retrieved oocytes. ROC curves estimated that anti-Mullerian hormone accurately predicts ovarian responsiveness to controlled ovarian stimulation with higher sensitivity and specificity.

## **A Three year review of the seminal fluid analysis pattern of male partners of women attending infertility clinic at State specialist hospital, Abeokuta, Ogun State (2013-2015)**

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Male factor as a cause of infertility is on the rise. The study was aimed at identifying the pattern of seminal fluid analysis (SFA) of male partners of infertile couples, highlighting the commonest pathologies observed.

A retrospective study over a three year period (2013- 2015) was used to assess the pattern of Seminal fluid analysed. Data were collected from laboratory records and corresponding case notes and analysis was done using epi- info statistical software 2016 with Statistical significance set at a p-value  $< 0.05$ .

The proportion of male partners of all infertile couple that presented for SFA was 66.5%. The mean age of male partners analysed was  $38.02 \pm 6.97$ . About 65% of them were being managed for secondary infertility and 51.1% had abnormal SFA results according to the WHO 2010 criteria. The percentage of male partners with abnormal SFA values was on the rise over the years under study. Asthenospermia (25.6%) was the commonest single abnormal parameter seen while Asthenooligozoospermia was the overall commonest abnormality observed at 35.9%. Azoospermia occurred in 14.1% of the men, while oligoasthenoteratozoospermia was seen in 4.5% of the respondents. There was a statistically significant association between the age and type of infertility with

Male factor as a cause of infertility is on the rise and oligoasthenozoospermia accounted for the commonest pathology seen on seminal fluid analysis.

## **Synergistic effect of paternal age and BMI on semen quantity and quality in a sub-Saharan black African population**

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This study is aimed at investigating the influence of the synergy of age and body mass index on semen parameters of men consulting for Assisted Reproduction in Nigeria.

The study was a descriptive, analytic and cross-sectional study conducted between 2010 and 2015 on a sample of 907 males presenting for assisted conception. Their ages (years) and BMI ( $\text{Kg}/\text{m}^2$ ) were categorized. Analysis was done using STATA 13 and level of significance was set at  $P\text{-value} \leq 0.05$ .

The overall means ( $\pm$ SD) of age (years), BMI ( $\text{Kg}/\text{m}^2$ ) and sperm concentration ( $\times 10^6/\text{ml}$ ) were  $42.67 (7.11)$ ,  $27.05 (3.63)$  and  $22.26 (23.08)$  respectively. Mean semen volume (ml) at age  $< 45$  years ( $2.28 \pm 1.40$ ) was significantly higher ( $t = 3.37$ ;  $P\text{-value} = 0.0004$ ) than at age  $\geq 45$  years ( $2.05 \pm 1.58$ ). Compared to normal weight men, mean semen volume ( $t = -1.59$ ,  $P\text{-value} = 0.05$ ), liquefaction time ( $t = -1.78$ ,  $P\text{-value} = 0.04$ ), sperm concentration ( $t = -2.02$ ,  $P\text{-value} = 0.02$ ) and progressive

motility ( $t=-2.95$ ,  $P$ -value=0.002) were significantly lower in obese men. Compared to their younger counterparts, mean semen volume was significantly lower in normal weight ( $t=2.00$ ,  $P$ -value=0.02), overweight ( $t=2.31$ ,  $P$ -value=0.01) and obese ( $t=1.57$ ,  $P$ -value=0.05) older men; mean liquefaction time was significantly longer ( $t=-1.60$ ,  $P$ -value=0.05) in older than younger obese men. Multivariate regression analysis showed that, synergistically, age and BMI gave stronger explanation of the differences observed in semen volume ( $R^2=0.0223$ ,  $F=10.31$ ,  $P$ -value=0.000001) and in progressive motility ( $R^2=0.0140$ ,  $F=6.43$ ,  $P$ -value=0.0017) than either age alone ( $R^2=0.0216$ ,  $F=20.03$ ,  $P$ -value=0.0001;  $R^2=0.0016$ ,  $F=1.46$ ,  $P$ -value=0.228 respectively) or BMI alone ( $R^2=0.0025$ ,  $F=2.231$ ,  $P$ -value=0.136;  $R^2=0.0125$ ,  $F=11.460$ ,  $P$ -value=0.001).

There is evidence of synergy of age and BMI in the outcome of semen analysis such as volume, liquefaction time, progressive motility and sperm concentration.

## Quackery in fertility clinics mimicking cryptic pregnancy: experience of fertility nurses in its management

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A Cryptic Pregnancy is one where there is little or no detectable human chorionic gonadotropin in the mother's system, due to hormonal imbalance in the mother. The foetus may not be detected until delivery. This name is being misused by quacks to label pseud-pregnancy state induced by them. The aim of the study is to present a case series of women who fell victims of quack fertility centers and presented with fake pregnancy known as 'cryptic pregnancy'. We discuss the role of fertility nurses in the management.

A narrative of the experience of eight couples who fell victims to quack fertility centers in their search to solutions to infertility. The role of trained fertility nurses in the management is highlighted.

All the eight couples had no living child. Three of the couple were from the diaspora while five were home based. All the fertility centers were in the out-skirts of town and isolated. The facilities had pregnant teenagers and hefty young men hanging around. The couples were directed not to ever have an ultrasound scan and must return to deliver the babies in the same center. There seems to be some form of hypnosis on the couple.

The experience of the couples discussed is a tip of the iceberg. Many of these quack fertility centers are baby factories. For fertility treatment to maintain its good name of being the hope for the infertile couple, this problem needs to be addressed. Nurses have a very important role to play in the management.

## Active management of infertility using a scoring tool

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Active management of infertility is the rapid investigation, diagnosis and classification of patients with infertility to facilitate treatment decision making. A tool for identifying couples who need assisted conception will aid early referral of such couples to fertility centres. The objective of the study is to develop a scoring tool and apply it to decide the best and most appropriate management option for infertile patients.

A scoring tool for infertility was generated and graded by 3 experts in the field of in vitro fertilization. The parameters were made up of causative factors for infertility. The Delphi method for medical risk scoring was used to develop scores for the tool. The tool was applied to couples who presented for infertility treatment at the gynaecological department of the Nisa hospital Abuja from June to July 2017. Some couples filled the sheet on the website of the hospital. A total of 45 patients were scored and placed in three severity categories. The sensitivity and specificity of the tool was determined. **RESULT:** The 45 patients were categorised as mild infertility 23, moderate infertility 15 and severe infertility 7. Mild infertility was graded as mild need for assisted reproductive technology and moderate and severe infertility graded as high need. The sensitivity of the tool was 100%, specificity 75%, positive predictive value 69.5%, and accuracy 84%.

This scoring tool has a high sensitivity, specificity and accuracy and should be relevant and helpful for active management of infertility.

## Preliminary Investigation of Sperm DNA Fragmentation among Sub-fertile Nigerian Men

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The aim of the study is to investigate sperm DNA Fragmentation among men presenting with infertility.

This was a descriptive and analytic study in which 32 men who presented on account of infertility also had DNA fragmentation test done alongside the routine Semen Analysis. Data from their records was analyzed using STATA 13 and significance was set at  $P$ -value  $\leq 0.05$ .

A total of 32 apparently healthy but sub-fertile males whose means ( $\pm$ sd) of age (in years) and body mass index (in kg/m<sup>2</sup>) were 36.6 (5.8) and 28.07 (3.06) respectively were studied. Majority (12, 38.5%) were professionals by occupation. Only 4 (12.5%) gave a history of smoking but 18 (56.3%) consumed

alcohol either regularly or occasionally. There were noteworthy variations in the mean DNA fragmentation index (DFI) of men aged  $\geq 50$  years (42.1%) compared to those aged 30-39 years (24.0%) ( $t=-1.90$ ,  $df=8.54$ ,  $P\text{-value}=0.04$ ); of men with good MPM (20.3%) compared with those having fair MPM (32.3%) ( $t=-2.35$ ,  $df=13.94$ ,  $P\text{-value}=0.02$ ); and in the mean number of normal oval head sperms with DFI of  $<15\%$  ( $40.0\pm 10.95$ ) compared to those with DFI of 15-24.9% ( $34.44\pm 12.36$ ) ( $t=2.74$ ,  $P\text{-value}=0.008$ ). High correlation coefficient was observed between age and DFI ( $r=1.0$ ,  $SE=0.35$ ,  $t=3.11$ ,  $P\text{-value}=0.004$ , 95% CI: 0.38, 1.80) and between DFI and different sperm morphology when controlled for alcohol consumption.

Sperm DFI was significantly higher in men aged 50 years and above than younger men, among those with fair MPM versus good MPM and among those who consume alcohol. BMI did not appear to influence DNA fragmentation.

## Controlled ovarian stimulation protocols in assisted conception: agonist versus antagonist in normal responders

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This study aimed at comparing the reproductive outcomes of the GnRH agonist and GnRH antagonist protocol for assisted reproduction at a public health facility. The outcomes studied were dose of FSH needed, duration of stimulation, cycle cancellation, risk of OHSS and pregnancy outcome.

This is a cross-sectional comparative study of 94 eligible patients that underwent assisted reproduction program in our facility. The patients were treated with agonist or antagonist protocol according to the clinician's and patient's preference. GnRH agonist and antagonists were administered to 47 patients each respectively.

There were significant differences between agonist and antagonist in the duration of FSH, cycle cancellation rate and risk for OHSS ( $P<0.05$ ). The overall clinical pregnancy rate was 36.2%. The clinical pregnancy and live birth rates in the GnRH antagonist group were higher although it was not statistically significant. ( $p>0.05$ )

GnRH antagonist protocol gives a shorter stimulation period and reduced number of FSH used, thereby less costly. It also offers less cycle cancellation rate and OHSS risk than the GnRH agonist group, although there was no statistically significant difference in the clinical pregnancy, live birth rate and miscarriage rate between the two protocols. These results may be helpful for clinical practice. Further controlled randomized prospective studies with larger sample sizes are recommended in future.

## Improved pregnancy outcomes following novel approaches to recurrent endometrial cavity fluid accumulation amongst oocyte recipients

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The study is to evaluate pregnancy rates amongst oocyte recipients who had had recurrent ECF with varying interventions. The study was conducted at DIFF Hospital, a private ART facility in Abuja, Nigeria.

This is a retrospective study, using data collected from patients accessing ART treatment between 2014 and 2016. All patients having Hydrosalpinx, Endometriosis, and Bulky uterus with fibroids or adenomyosis, and evidence of endometritis and endometrial polyps were excluded. Interventions include instillation of steroid (100mg Hydrocortisone)/ antibiotic (500mg Ampiclox) combination (HAC), insertion of IUCD and/or withdrawal of fluid at least 48 hours prior to embryo transfer. Statistical analysis was performed using Analyse-it® version 4.6 software for Microsoft Excel.

Of the 821 available data analysed for oocyte recipients ART cycles, 475 (57.8%) of these had ECF in one or more cycles, but 20 (2.4%) of these cycles remained after exclusion. Pregnancy rate was highest amongst patients who had Drainage and HAC (50%), followed by Drainage alone (40%) and then Drainage + IUCD (17%). Overall pregnancy rate in patients with ECF was 40%.

Drainage + HAC intervention strategy in patients with ECF has shown to improve live birth rate as compared to other forms of intervention.

## Outcome of 50 consecutive intrauterine insemination procedure at a private fertility center in Ondo, south west Nigeria

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There is a recent resurgence in the use of Intrauterine insemination (IUI) in Nigeria. However there is the need for a rational use of the procedure so that couples do not waste time and money on ineffective therapy if it is not indicated, hence this study was conducted to identify possible prognostic factors affecting outcome of IUI among patient undergoing the procedure.

A retrospective review of the case files and treatment protocols of 50 consecutive couples that had IUI procedure following established diagnosis of Infertility at the Paramount Fertility Center of Paramount Specialist Hospital Ondo, Nigeria over a period of 1 year (February 2016 and January 2017).

There was 10/50 (20.0%) pregnancies recorded of which 3/10(6%) clients lost their pregnancies between 5th and 13th week, 1/10(2%) had an ectopic pregnancy, whereas 6/10(12%) were carried to the age of viability and delivered. 40 out of the 50(80%) clients did not achieve pregnancy. The post wash concentration of sperm was noticed to be the only parameter significantly affecting the rate of pregnancy in our treatment cycles with a P value <0.05. There was also a trend towards a reduction in pregnancy after the age of 40.

This study show that the post wash sperm count and the female age have the most predictive value for IUI clinical pregnancy outcome in our center.

## Outcome of treatment of retroviral disease and hepatitis b positive patients in IVF centre of national hospital, Abuja over a 10 year period

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The objective of the study is to determine the prevalence of Human Immunodeficiency Virus and Hepatitis B Virus infection, the associated causes of subfertility and the pregnancy outcome of the IVF and ET cycles in these infertile couples.

Retrospective reviews of all cases of IVF and ET that were positive for Human Immunodeficiency Virus and Hepatitis B Virus infection between January 2006 to December 2016 at the National Hospital, Abuja was carried out. Relevant information was extracted from patient's case notes.

Out of the 2051 patients whom undergone IVF and embryo transfer cycles, 50 (2.4%) women were RVD positive and 31 (1.5%) were HBV seropositive. Majority of patients with RVD were between the age group of 35-39 years (32%) and 40-44 years (32%), while (38.7%) of HBV seropositive patients were between 40-44 years and they were the majority. The causes of infertility in women that were RVD positive included tubal

factor (30%), male factor (22%), uterine factor (4%), combined male/female factors (2%) and no cause was indicated in (42%) of cases. For women that were HBV seropositive, tubal factor accounted for (29%) cause of infertility, male factor (19.4%), combined male/female factors (12.9%) and no cause was indicated in (38.7%) of cases. Pregnancy rates in the RVD positive and HBV seropositive women was (34%) and (32.3%) respectively.

Screening for HIV and HBV infection is important as it allows for immunoprophylactic measures to be taken to reduce the risk of transmission to the fetus and seropositivity could influence the pregnancy rates.

## Mosaicism in pre-implantation genetically screened embryos: an analysis of the results so far at the bridge clinic

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The study is to analyze the rate of mosaic embryos screened using next generation sequencing. This study was carried out on 34 patients with average age of 37.6 years going through pre-implantation genetic screening for chromosomal aneuploidy due to unbalanced chromosomal translocation, advanced maternal age and recurrent miscarriages. Laser assisted hatching was performed on all embryos on day 4 (Morulla stage) of embryo culture. Trophectoderm biopsy was carried out on all hatching blastocyst on day 5/6. At least 3 cells were biopsied and tubed for genetic analysis. Blastocysts embryos were frozen shortly afterwards and the cells sent for genetic analysis using Next generation sequencing (NGS) technology.

A total of 247 embryos were biopsied from 34 patients with a failed amplification rate of 20.2%. Out of the embryos biopsied, 132 were analysed from 28 patients of which 75 (56.8%) were euploid 54 (40.9%) were aneuploid. Out of the numbers analysed, 13 (9.8%) embryos were at risk of mosaicism. Clinical pregnancy and implantation rates were 50% and 33% respectively.

Performing embryo biopsy on blastocysts significantly reduces the rate of mosaic embryos, increases clinical pregnancies and implantation rates. The gold standard for embryo biopsy should be trophectoderm (Blastocyst biopsy).

## Poster Presentations

### Discarding unused human embryos in assisted reproduction-perceptions of allied healthcare professionals in Anambra state Nigeria

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The disposal of unused human embryos in IVF has remained controversial. There is need to determine the feelings of the allied health professionals

The objective of the study is to study the determinants of acceptability of discarding unused human embryos in IVF among allied health care professionals in Anambra state, Nigeria.

A cross sectional questionnaire based study involving 820 allied health professionals from hospitals in Anambra State, Nigeria. Data analysis was done with STATA software, version 12.0 SE (Stata Corporation, Texas USA). Multiple logistic regression model was used to assess the predictors of acceptability of discarding unused human embryos in IVF among healthcare professionals in Anambra state, Nigeria.

Two hundred and fifty-six (31.3%) of the respondents accepted the practice of discarding unused human embryos in IVF while 563(68.7%) objected to it. The reasons for this objection included: it is against life (28.7%); it is immoral (22%); it is abortion (13.6%) and it is criminal (4.5%).

Factors that were significantly associated with the acceptability of discarding unused human embryos in IVF include: having previous experience with IVF (Adjusted Odds Ratio[AOR]=1.73; Confidence Interval [CI]: 1.23-2.46), feeling that babies born through IVF are normal (AOR= 9.98; CI: 2.17-45.93), preference for male baby in IVF (AOR=2.03; CI: 1.36-3.02), preference for multiple gestation in IVF (AOR = 4.86; CI: 3.10-7.67) and support for gamete donation in IVF (AOR=1.52; CI: 1.00-2.32). The Medical laboratory scientists (AOR=5.40; CI: 3.00-9.70), Radiographers (AOR= 2.40; CI: 1.27-4.51) and Pharmacists (AOR=2.73; CI: 1.17-6.39) were more likely to accept the practice of discarding unused human embryos in Assisted Reproduction. Gender of the healthcare professional ( $p=0.15$ ), marital status ( $p=0.48$ ) and being conversant with IVF processes ( $p=0.08$ ) did not affect the likelihood of accepting the discarding of unused human embryos in Assisted Reproduction.

The rate of acceptance of the discarding of unused human embryos in IVF was low among the respondents and was influenced by having previous experience with IVF, cadre of

healthcare professionals and good disposition to other ethical challenges in Assisted Reproduction. There is need to educate these professionals on the ethical challenges in Assisted Reproduction.

### The benefits of assisted hatching in frozen embryo transfer (FET) cycles

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To evaluate the efficacy of laser assisted zona hatching (LAH) in FET cycles by comparing clinical pregnancy (CPR), live birth (LBR) and implantation rates (IR) between cycles with LAH (+LAH) and without LAH

Retrospective study from FET cycles performed in a three year period between 1st of May 2015 and 31st of May 2017 at The Bridge Clinic, Lagos. A total of 295 patients of different ages who underwent FET were involved in the study. The LAH treatment (Group A) comprised of 139 patients while those without LAH (control group) comprised 156 patients (Group B), thus LAH was performed for the treatment group immediately after warming using the octax laser system. Approximately 3-4 laser shots were delivered to completely breach the zona pellucida (ZP). The outcome measures were clinical pregnancy (CPR), implantation rates (IR) and live birth (LBR) between cycles in both groups.

The overall clinical pregnancy rates were 36.7% and 20.1% in group A and group B respectively. Implantation was 24.2% in group A compared to 10.6% in group B. The LAH group resulted in 12 live births and 21 on-going pregnancies while group B had 14 live births and 4 on-going pregnancies.

LAH improves the outcome of FET cycles when performed on vitrified-warmed embryos prior to transfer. Furthermore LAH should be considered routinely for all FET cycles and possibly for fresh cycles in older women.

### Hysterolaparoscopy (pan-endoscopy) approach in the evaluation of female infertility in Nigeria: a report of 230 cases

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Hysterolaparoscopy has emerged as an improved evaluation tool in cases of infertility over laparoscopy and dye test on the

basis of its better efficacy in detecting intra uterine lesions. The aim of the study is to examine the role of Hysterolaparoscopy in the management of infertile women who were managed in 3 Fertility/ Gynaecological Endoscopy units in Nigeria.

The mean age of the women 35.6+/- 5.9 years and the mean duration of infertility was 4.6+/- 2.7 years. Most of the women had secondary infertility 43 (53.9%, n=43). Ninety eight (42.61%) of the women had done a pelvic surgery in the past and pelvic ultrasound study was abnormal in 95(41.3%) of them.

Abnormal hysteroscopy was found in 152 (66.1%) of the women and comprised mainly of intrauterine adhesions (41.0%; n=95), endometrial polyps (20.0%; n= 46), submucous fibroids (16.1%; n=37) and Mullerian duct abnormalities (14.8%;n=34). Other findings were lost IUCD (6.1% n=14), retained fetal bone (2.6%; n=6) and incarcerated omentum (2.2%; n=5)

Abnormal laparoscopy findings were seen in 171(74.4%) of the women and compromised mainly of tubal pathologies (161, n=70.0%), pelvic adhesions (39.6%, n=91), polycystic ovaries (33.0%; n=76), and endometriosis (8.8%, n=19). Tubal pathologies were mainly tubal occlusions (56.5%, n=130), hydrosalpinx (41.7%, n= 96) and plastered tubes (25.7%, n=59). Bilateral tubal occlusion was seen in 46 (20.0%) and unilateral tubal occlusion in 84(36.5%) of cases.

Hysterolaparoscopy is very effective in evaluating tuboperitoneal and intrauterine lesions among infertile women in Nigeria. There is need to develop capacity for this investigative modality.

## Prevalence and clinical characteristics of semen parameter of male infertility

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The objective of the study is to determine the prevalence of male infertility, semen parameters pattern based on the World Health Organization (WHO) 2010 strict criteria using lower 5th centile threshold.

Retrospective analysis of case records of male partners of infertile couples over a period of 5 years between January 2012 and December 2016 at The Bridge Clinic Lagos.

Semen analysis was performed in the laboratory according to the methods and standards defined by the World Health Organization (WHO) 2010 criteria for human semen characteristics.

Data was collected from the records of Andrology Unit after ethical clearance from the ethical committee of the clinic.

The results were analysed and compiled using SPSS software version 20.0. Statistics included in the base of the software are descriptive statistics

The result semen analysis of 1921 male partners with a mean age of 41.6 years were retrieved and analyzed. Volume of semen was between 0.1 to 11.5mls with an abstinence period of 2-3 days. The pattern of the semen parameters: Normospermia – 11: 611 (31.8%), Azoospermia: 204 (10.6%), Oligospermia: 779 (40.6%), Asthenozoospermia: 151 (7.9%), Teratozoospermia: 695 (36.2%), Oligoteratozoospermia: 70 (3.6%), Oligoasthenoteratozoospermia(OAT): 304 (15.8%), Asthenoteratozoospermia: 146 (7.6%).

The most common abnormal semen parameter is Oligospermia and Teratozoospermia respectively. The parameters are inter-related and affection of one can cause a negative impact on others. Furthermore, there is a growing trend of male infertility in our environment hence men should be encouraged to participate early in the investigation of infertility with their partners and need for advocacy for men to accept responsibility for their contribution to infertility and reduce the burden on women. Early evaluation is recommended for men.

## Operative Hysteroscopies among Infertile Women in a Resource Poor Country- An 18-Month Audit

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Hysteroscopy is an invaluable tool in the contemporary management of infertility. This report presents an audit of the operative hysteroscopies carried out in 3 Fertility/ Gynaecology Endoscopy units in Nigeria over 18 months period.

A proforma was used to collect data on all the patients managed in the units over the period of study that had operative hysteroscopy. Data analysis was done with STATA software, version 12.0 SE (Stata Corporation, TX, USA).

One hundred and fifty nine patients were studied. The mean age was 36.6 +/- 6.2 years and the modal parity group was 0-1(88.1%). Secondary infertility accounted for 56.6% of cases. Abnormal hysteroscopy was seen in 112(70.4%) and comprised mainly intrauterine adhesions (47.8%) endometrial polyps (17.6%), submucous fibroids (11.9%) and Mullerian duct abnormalities (10.7%). A total of 162 hysteroscopic procedures were carried out. The procedures done were mostly adhesiolysis (46.9%), polypectomy (17.3%) septum resection/incision (10.5%). The instruments used were mainly scissor (40.1%) and the resectoscope (32.1%). The main distension media was normal saline (67.9%) and 5% d/w (18.5%). The procedure was complete in 86.4 % of cases and abandoned in 2.5 %( n=4). Normal cavity was achieved in 87.0% and complication rate was 6.8 % and constitute mainly of minor haemorrhages (3.1%). The main challenges included poor distension (6.2%) and poor vision (4.9%). Menstrual

normalization was achieved in 40.3% of cases and cumulative pregnancy rate was 19.5 % with 3.8% of live birth.

Operative hysteroscopy is feasible and safe in a poor resource region. There is need to build capacity for operative hysteroscopy to facilitate the management of female infertility in the region.

## Reproductive outcome following abdominal myomectomy at the University of Port Harcourt teaching hospital: a ten-year review.

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Fertility preservation is one of the important factors to be considered post-abdominal myomectomy especially for patients presenting with fibroids. Studies have revealed the incidence of achieving pregnancy following myomectomy as 57%. This study is aimed at evaluating the reproductive outcome following abdominal myomectomy.

The study was a 10-year retrospective study of all the cases of uterine fibroid admitted into the gynaecological ward of the University of Port Harcourt Teaching Hospital between 1st January 2003 and 31st December 2012. Information was coded and analysed using SPSS version 16.

Uterine fibroid accounted for 523(12.2%) % of the 4287 gynaecological admissions during the period under review. The modal age was 33 years  $\pm$  2. Nulliparous women contributed the highest incidence of 43.4%. Pregnancy rate following abdominal myomectomy from the study population was 24.4%. The women who had myomectomy for fibroids with infertility had 18.2% pregnancy rate, while those with uterine fibroid alone had 6.2% pregnancy rate after myomectomy. Spontaneous abortion occurred in 4 patients (20%), 7 (35%) achieved spontaneous vaginal delivery while 9 (45%) had elective Spontaneous abortion occurred in 4 patients (20%), 7 (35%) achieved spontaneous vaginal delivery while 9 (45%) had elective caesarean delivery.

One of the greatest fears our women have towards myomectomy is the ability to get pregnant after the surgery. However, this study shows the relationship between abdominal myomectomy and pregnancy outcome to be fair.

## Assessment of socio demographic factors influencing quality of life using FertiQoL tool among clients visiting fertility clinic in Abuja

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Infertility is gradually becoming a global health issue. With the trending advancement in global technological development, many factors including environmental, socio economic and demographics begin to impact the ability of the current generation to procreate. This study aimed to measure the subjective quality of life (QoL) of patients visiting the fertility clinic of Nisa Premier Hospital and to examine its socio-demographic determinants.

FertiQoL comprises of 36 items scored according to 5 response categories, with the response scale ranging from 0 to 4. Higher scores mean higher quality of life. Categories include evaluation, satisfaction, frequency, intensity and capacity. The Core FertiQoL is the average fertility quality of life across all domains, with subscales of Emotional, Mind/body, Relational and Social. The Emotional subscale score shows the impact negative emotions (e.g., jealousy & resentment, sadness, depression) have on quality of life. The Mind/body subscale score shows the impact infertility has had on physical health (e.g., fatigue, pain), cognition (e.g., concentration) and behaviour (e.g., disrupted daily activities, delayed life plans). The Relational subscale score shows the impact fertility problems have had on the components (e.g., sexuality, communication, commitment) of relationship or partnership. The Social subscale score shows the extent to which social interactions have been affected by fertility problems (e.g., social inclusion, expectations, stigma, support). The Total FertiQoL score is the average quality of life for all core and treatment domains. However, two additional items (marked A and B on the FertiQoL questionnaire) capture an overall evaluation of physical health and satisfaction with quality of life and are not used in FertiQoL scoring.

This cross-sectional descriptive study was conducted at the Fertility and Genetic Center of Nisa Premier Hospital, Abuja, Nigeria, among patients visiting the fertility clinic. The target population size was 85 patients. FertiQoL questionnaire was administered with the help of trained researchers in the hospital and data were analyzed using Analyse-it statistical software for Microsoft Excel.

Females respondents were 74% of total respondents, age group between 25 – 44years 78%, those with higher educational background 90% and primary infertility was 74%. From the analysis of data, results showed that educational and economic status are the two socio demographic variables that most influenced FertiQoL while religion and gender least influenced FertiQoL among respondents. The most varied paired attributes of the FertiQoL was between Mind/body and Relational.

Age was found to be the primary socio demographic variable strongly related to respondents' FertiQoL while Social and Relational domains of the FertiQoL are the most likely causes of low QoL among infertile couples. This study set out to determine the level and socio demographic correlates of QoL among infertile couples. There were three specific objectives

that guided this central objective and included the identification of the various socio demographic factors influencing health status and satisfaction with quality of life, establishing the relationship between quality of life and infertility, and to provide a basis for counseling infertile patients.

From the findings of this study, it can be concluded that:

- The FertiQoL subscales are responded to with significant variations such that the Social and Relational domains are the most likely cause of low QoL amongst infertile couples
- Thus these two areas (Social and Relational domains) become the sore spots for infertility counseling
- Age is a primary socio-demographic variable found in this study to be strongly related to the respondents' fertility quality of life. Although this generally correspondence with the natural; biological and psychological disposition of both sexes (especially for women) that the older they get the diminished fertility profile, therefore accompanied with this is the lower health and satisfaction of quality of life
- However, it seems that Social and Relational domains of the FertiQoL scale were found to be crucial, it should be individualized after assessment and combined with age for all cases would be an effective tool.

## Accessing the predictors of acceptability of egg donation among a cross section of allied health professionals in Anambra state, Nigeria

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Egg donation, though a key aspect of current Assisted Reproduction is associated with ethical challenges, however, the objective of the study is to determine the predictors of acceptability of egg donation among a cross section of Allied health workers in Nigeria.

A cross sectional questionnaire based study involving 820 Allied health professionals from hospitals in Anambra State Nigeria. Data analysis was done with STATA software, version 12.0 SE (Stata Corporation, TX, USA). Multiple logistic regression model was used to explore the predictors of acceptability of egg donation among the respondents. Six hundred and thirty (76.8%) of the respondents accepted egg donation as a standard procedure while 190(23.2%) did not.

Factors that were significantly associated with accepting egg donation include age less than 30 years (AOR=2.47; CI: 1.10-5.51), duration of practice more than 10 years (AOR=2.50; CI:

1.05-5.93), acceptance of semen donation (AOR=36.96; CI: 20.97-65.16), acceptance of discarding of unused embryos in IVF (OR=2.75; CI: 1.49-5.07) and feeling that the child born to IVF mother is normal(AOR=7.88; CI: 2.09-29.65). The medical laboratory science cadre (AOR=6.01; CI: 2.39-15.07) and nursing cadre (AOR= 5.85; CI: 2.25-15.24) were significantly associated also with accepting egg donation. Religion (p=0.31), type of hospital of practice (p= 0.18) and being conversant with IVF procedures (p=0.74) did not affect likelihood of accepting egg donation.

The rate of acceptance of egg donation was high among the respondents and was influenced by age, duration of practice, cadre of profession as well as good disposition to other ethical challenges in Assisted Reproduction

## Higher follicular fluid high sensitivity C - reactive protein is associated with negative implantation outcome in IVF procedures

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Nigeria lies within the Infertility belt of the world where the prevalence of infertility is at its highest. In-vitro fertilization (IVF) is a form of assisted reproductive technique (ART) suitable for most types of infertility. Despite advances in ART, IVF success rates remain low, 11-46% Worldwide, with implantation failure being the commonest cause of IVF failure. The role of inflammatory mediators in implantation outcome and their use in follicular fluid as markers of oocyte quality is currently being investigated in IVF procedures with the aim of improving outcome. This study is aimed at investigating the relationship between follicular fluid levels of high sensitivity C - reactive protein (hs-CRP) and plasma levels of  $\beta$ -hCG.

This was a prospective cohort study consisting of 150 women. Base-line plasma levels of hs-CRP were measured prior to commencement of down regulation. Follicular fluid levels of hs-CRP was measured during oocyte retrieval and compared with plasma levels of  $\beta$ -hCG measured fourteen day post embryo transfer.

Baseline median follicular fluid (FF) hs-CRP was 3.69mg/L (IQR = 5.18) in the study population, 4.72mg/L (IQR = 5.18) and 2.25mg/L (IQR = 5.01) in subjects with a negative implantation outcome, and positive implantation outcome respectively, p- value of 0.035 (significantly). Positive implantation outcome ( $\beta$ -hCG  $\geq$  200mIU/L) was observed in 55 subjects (36.7%), while 95 subjects (63.3%) had a negative implantation outcome ( $\beta$ -hCG < 200IU/mL).

Higher Follicular Fluid level of hs-CRP was obtained in subjects with a negative implantation outcome than in subjects with positive implantation outcome.

## Sarcoidosis appearing in a patient undergoing IVF treatment

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Abnormal collections of inflammatory cells, the cells form lumps, known as granuloma, commonly affects the lungs, skin and lymph nodes, less common sites: Eyes, liver, heart, brain

Causes:

- Unknown
- Risk factors:
  - Black race
  - Age: 20-50 years
  - Genetic
  - Infectious agents like Mycobacterium
  - Autoimmune.

Signs and symptoms:

- Depend on the organ involved
- If Lungs: wheezing, cough, dyspnoea, chest pain
- If Skin: Lumps, ulcers, discoloured skin
- If eyes: visual problems
- In children: weight loss, bone pain, feeling tired.

Serum Markers for Sarcoidosis:

- Serum Amyloid A
- Soluble interleukin-2 receptor
- Lysozyme
- Angiotensin converting enzyme
- Glycoprotein KL-6.

Diagnosis

- By exclusion depending on the organ affected
- If Lungs: rule out pneumonia, TB
- If Eyes : rule out other causes of visual problems
- If skin: rule out causes of skin ulcers, lumps.

Treatment

- May be self-limiting after a few years with or without long term or severe disease
- Drugs:
  - Anti-inflammatory agents like Ibuprofen
  - Steroids like Prednisolone- in severe disease
  - Other drugs: Chloroquine, Methotrexate, Cyclophosphamide, Azathioprine are given to decrease the side effects of steroids.

Sarcoidosis and Pregnancy

- Does not prevent successful pregnancy and delivery
- Increased estrogen levels of pregnancy has a slightly beneficial immunomodulatory effect
- Possible outcomes:
  - Unaffected- in most cases
  - May improve
  - May worsen- in very few cases

- Drugs used to reduce the side effects of steroids are known teratogens.

Prognosis

- Risk of death: 1-7%
- Recurrence: <5%.

The patient: Case Summary

- Mrs I.U
- 40 year old
- Para 2+0, 2 Alive, Both successful IVFs in Nisa
- Came for PGD XY
- For OCR tomorrow
- Had a 5 month hx of painful swollen legs and 3 months hx of cough
- Diagnosed to have Sarcoidosis
- Being worked-up for steroid therapy
- Not physically incapacitated
- 11 eggs retrieved at OCR and 7 eggs fertilized
- ? Fitness to have, ET and Pregnancy.

Conclusion

- It is a rare condition
- ? Possibly the first patient seen in the unit
- Need to co-manage with the Rheumatologist.

## Laparoscopic treatment of endometriosis in a Nigerian hospital

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Endometriosis is one of the most common gynaecological diseases occurring in women of reproductive age. The exact incidence in the general population is unknown. The prevalence rate is about 20-50% in subfertile women but can be as high as 80% in women with chronic pelvic pain. Pelvic endometriosis typically occurs in women aged 25-35years. Extrapelvic manifestations have been seen to occur in women aged 35-40years. The objective of the study is to determine the frequency of endometriosis in women who underwent laparoscopic procedures at our centre.

This is a retrospective study of women in the reproductive age group, who presented to our hospital from March 2012 to June 2017. They were different indications for laparoscopy which included: chronic pelvic pain, dysmenorrhea, subfertility and others. All surgeries were done by the same surgeon.

There were a total of 204 laparoscopies done within the study period and 30 cases included treatment of endometriosis. This gave an incidence of endometriosis on laparoscopy to be 14.7%. 9 out of the 30 cases (28%) was treatment of endometriosis only. Other procedure done alongside includes myomectomy, cystectomy, dye test, adhesiolysis and others. The majority of patients are between 25 and 39 years with a range of 21-47years. The average time from onset of symptoms to presentation was less than 1 year.

The severity of endometriosis varied, about 76.7% (23 of 30) was minimal to mild, 10% moderate and 13.3 % severe. In 60% of the case, endometriosis was diathermised, 20% was excised while another 20% had both diathermy and excision done. Post operatively, 26.7% (8 of 30) went home the same day, 63.3% the following day and 10% 2 days or more depending on other procedures done intraoperatively. All patient attended their immediate follow up (either a week or two) post procedure. 30% required adjunct therapy (Zoladex or Contraception). At 3 months follow up, about 50% did not attend. Of those that attended, only 10% still complained of symptom (abdominal pain). At 1 year, 30% of the patients that came for follow up at 3 months had attained pregnancy, while the rest were lost to follow up hence outcome unknown.

There is good evidence that laparoscopic treatment of endometriosis surgery, when done by an experienced and skilled surgeon, helps in long-term symptomatic relief, improves rate in pregnancies and reduces recurrence of the disease avoiding largely the complications.

## Effect of Maternal Age on Embryo Aneuploidies in Nigerian women at Nisa Premier Hospital

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The presence of aneuploidies within an embryo significantly affects its' outcome. Many of these aneuploid embryos do not survive till term; in fact two-thirds of spontaneous abortions that occur during the first trimester of a pregnancy have been attributed to chromosomal anomalies.

Preimplantation genetic screening is a detection tool used for the identification of unusual chromosomal configurations that may result into diverse genetic disorders. It allows for the screening of all 22 autosomes and sex chromosomes for aneuploidies via the use of the array comparative genomic hybridization (aCGH) technique. Such screening methods aid in the transfer of euploid embryos thereby increasing pregnancy and live birth rates in patients undergoing IVF.

It is well established that the incidence of embryo aneuploidy increases with maternal age (Munne et al., 1995; Battaglia et al., 1996; Spandorfer, et al., 2004; Young, et al., 2013). Therefore, this study aims to identify an association between advancing maternal age and the incidence of embryo aneuploidies in Nigerian women undergoing an in vitro fertilisation (IVF) PGS cycle at Nisa hospital.

In this retrospective study, data was collected from Nigerian female patients who sought for PGS during their IVF cycle at Nisa Hospital, Abuja, Nigeria between 2013 and 2017. Fifty-

one patients (age range: 19 -51 years) participated in the study, all of whom generated a total of 260 embryos.

Cells obtained from each of the 260 embryos following biopsy on day 3 were analysed at Reprogenetics, UK, where PGS for all 22 pairs of chromosomes was performed using aCGH technique. Results generated were sent to Nisa hospital.

For the purpose of this study, patients were grouped into the following 3 age categories: <35 (mean age: 27; n=30), 35-40 (mean age: 37; n=8) and >40 (mean age: 44; n=13) years. An association between maternal age and aneuploidy rates was analysed using the Pearson's product-moment correlation test (R Software, Vienna, Austria) and a p value < 0.05 was considered as statistically significant.

Of the 260 embryos analysed, 176 (68%) were identified as aneuploid embryos. 60% of these aneuploid embryos represented the <35 years group, 22% were attributed to the 35-40 years group while 18% of these embryos represented the >40 years group.

The percentage of aneuploid embryos per patient was deduced and plotted against the respective maternal age. A 'line of best fit' suggested a negative correlation between age and aneuploidy rates, whereas, a plot of the number of aneuploid embryos against age revealed an almost linear regression line, although 2 slight peaks of increasing magnitude were observed within the <35 and 35-40 years groups. A trough within the >40 years age group was also seen. To thereby identify an association between advancing maternal age and the frequency of aneuploid embryos, a Pearson's correlation test was performed. No significant correlation was observed between maternal age and aneuploidy rates ( $p>0.05$ ).

The results from this study indicated that there was no significant association between advancing maternal age and rates of aneuploidy. This finding is highly unusual as the general consensus had always been, the older the mother, the higher the occurrence of aneuploid embryos (Spandorfer, et al., 2004; Young, et al., 2013). Such observations could be due to intrinsic factors which may be either paternal (Gianaroli et al., 2000; Silberetal., 2003; Maglietal., 2009) or maternal (Schon et al., 2000; Wilding et al., 2001) in origin. External factors may also contribute towards aneuploidy rates. The administration of exogenous follicle-stimulating hormone (FSH) has been implicated in increased rates of cleavage stage aneuploidies (Taylor et al., 2017). It is noteworthy that many of the patients below 40 were hyper-stimulated to ensure that the maximum number of eggs possible were retrieved.

Our findings were however similar to observations made by Adeyokunnu (1982) but in a different context. It was observed that the incidence of Down's syndrome (trisomy 21) in infants born to Nigerian women of varying age groups was highest in young mothers (below 35 years). Large scale studies spanning several centers are however required to provide further insight.

## An Improvised Endotrainer for Low Resource Settings

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Training in minimal access surgery has always been difficult in developing countries with limited resources, paucity of animal laboratories, unaffordability of conventional endotrainer and limited number of trained endoscopic surgeons to help the trainee. The objective of the study is to design an endotrainer for use in resource-poor settings with the aim of domestication of laparoscopic surgery.

A fabricated endotrainer box with a camera, a bulb for adequate illumination powered by electricity connected to a television was designed at affordable price to improvise for the conventional endotrainer for low resource settings.

The fabricated endotrainer model was found to be an effective training tool for improving psychomotor skills and dexterity of movement, especially for suturing in difficult areas. This is comparable to the sophisticated virtual reality simulator. Also, it is far less expensive compared to the expensive virtual reality simulator, thus affordable.

It is concluded that this model should be employed by other low resource setting to improve the skills of surgeons in endoscopy surgery and facilitate the training of new hands.

## Awareness of ART among infertile women seen at a tertiary hospital in northern Nigeria

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Globally, the prevalence of infertility is about 10-15% but is much higher in Sub-Saharan African countries 2,3, and is mainly related tubal factor caused by infection—Sexually Transmitted Diseases (STDs), post-abortal and puerperal sepsis 2. Assisted reproductive technology (ART) options are increasingly available in this environment but women can only access it if they are aware of it and can afford it.

The objective of the study was to determine the level of awareness of ART among women seeking infertility care in the study setting.

A cross sectional survey was done at the infertility clinic of the Barau Dikko Teaching Hospital, Kaduna from January 2016 to May 2017. Semi structured questionnaires were administered to one hundred and twenty-eight consenting women as part of an ongoing study. Information was gotten on demographic

and reproductive characteristics, previous fertility treatment, awareness and acceptability of ART. Data was analysed with SPSS computer software version 22 and a p value of <0.05 was considered significant.

This is an ongoing study but preliminary results were obtained from 128 women seeking infertility treatment. All were married and majority were aged 20-29 years (51.6%) with a mean age of 29.8 ±6.9, had been educated up to secondary level or more (76.6%), were Muslims (71.9%), Hausas (51.5%), unemployed/homemakers (69%), had an income of <N10,000 (50%), presented with secondary fertility (59.4%), duration of infertility was between 1-5years (52.3%) and had received previous fertility treatment (71.1%). Only Forty five percent of respondents were aware of ART (mainly from films, friends and medical personnel) while 55% were not. Awareness of ART was found to be significantly associated with ethnicity and occupation (p<0.05).

A lot more can still be done to increase awareness of ART among infertile women in this setting as awareness the first step in accessing this innovative treatment.

## Experience of laparoscopic assisted vaginal hysterectomy (LAVH) in a Nigerian Hospital

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Laparoscopic Assisted Vaginal Hysterectomy is a minimally invasive procedure done by using laparoscopic surgical techniques and instruments to remove the uterus and/or tubes and ovaries through the vagina. The maximum uterine size indicated for LAVH varies with the experience and skill of the surgeon. The objective of the study is to analyze the outcome of LAVH done at our centre.

Its greatest benefit is the potential to convert what would have been an abdominal hysterectomy, into a vaginal hysterectomy. Hence, there is lesser blood loss, reduced post-operative discomfort, rapid recovery and shorter stay in the hospital after surgery. We carried out a retrospective study of women who had LAVH in our facility from February 2013 to July 2016. All the surgeries were carried out by the same surgeon. Patients' case notes were reviewed to obtain information.

There were a total of 7 LAVH done under the time frame of study. The patients were between the ages of 36 and 72years, with a median age of 47years. The indications of the LAVH were Adenomyosis (28.57%), Endometrial cancer (28.57%), Menorrhagia secondary to uterine fibroids (14.29%) Postmenopausal bleeding (14.29%) and Uterine prolapse with uterine fibroids (14.29%). Of these cases, there was only one conversion to exploratory laparotomy which was as a result of difficulty in maintaining pneumoperitoneum. Bilateral salpingo oophorectomy was done for 4 of the 7 patients

(57.14%), and there was just one case of blood transfusion (14.29%) which was in the patient who had conversion to exploratory laparotomy. The mean duration of the procedure was 3hours 16minutes, with 57.14% lasting for less than 3hours. The average duration of hospital stay for these patients was 2.85days, with 4 patients (57.14%) staying for 2days, and 1 patient (14.29%) staying for 3days, 4days and 5days each, due to co-morbidity.

LAVH is a minimally invasive surgery; it is safe, a reliable alternative to TAH with reduced post-operative complications and reduced hospital stay. However some of the patients under review stayed beyond 2days because of co-morbidities. It is widely done in the developed world, and gradually becoming popular in developing countries like Nigeria. It is however of upmost importance that the surgeon with the necessary training and experience, the available hospital specialized equipment and support are in place before the procedure is carried out.

## A three-year assessment of survival rates from vitrified-warmed blastocysts in a private IVF centre

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The objective of the study is to assess the survival rates of vitrified-warmed blastocysts. The study was carried out at The Fertility and Genetics Centre of Nisa Hospital Abuja.

This is a retrospective study design consisting data mining from a compilation of IVF treatments and cryopreservation undertaken within the period (2013-2015). Kitazato vitrification and warming using cryotop devices was carried out with all initial steps performed at room temperature (22–25oC). For Vitrification, blastocysts were exposed to 7.5% ethylene glycol with 7.5% DMSO for 6 mins and to 0.5M Sucrose, 15% Ethylene glycol and 15% DMSO for 1 min. A maximum of 2 blastocysts were loaded with no more than 0.1 microlitre drop within a minute on the cryotop device, plunged into LN2 and safely stored in LN2 filled storage dewars. During warming, the cryotop device containing the vitrified blastocysts was plunged into 1M Sucrose solution. After 1 min, the cells were transferred to 0.5M Sucrose solution for 3 mins. Subsequently, blastocysts were rinsed in culture medium before being transferred to new medium. The estimate of survival of vitrified-warmed blastocysts was based on the re-expansion and further development of blastocysts, choosing the best morphological appearance for transfer 3-6 hours post warming. Data analysis was performed using Analyse-it® Version 4.5 (Analyse-it, Leeds UK).

A total of 116 vitrification procedures were carried out within the study period. Of these, 773 blastocysts were frozen in 105 (91%) vitrification procedures. Majority of the vitrified blastocysts were generated from own eggs (74%), the

remaining were egg recipients (26%). A total of 555 blastocysts were thawed and 411 (74%) survived. Freeze-thaw survival rates per procedure ranges between 0 and 100% with an overall average of 80%. There was no significant difference (T-test,  $p < .87$ ) between survival rates in blastocysts generated from own (79%) and egg recipients (80%). Of the 105 vitrified procedures, 101 FET cycles were carried out. 27 patients had a positive pregnancy providing an overall pregnancy rate of 27%.

It can be deduced from the study that the survival rates of vitrified-warmed blastocysts using Kitazato vitrification is satisfactorily high in Nisa Hospital and can be recommended to other IVF clinics looking to improve their freeze-thaw blastocyst survival rates.

## Incidence of bone fragments seen on hysteroscopy in patients presenting with subfertility

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Bony fragments have been identified as an unusual finding during hysteroscopy, and this is usually associated with a previous history of termination of pregnancy. The study is aimed at examining the incidence of bone fragments discovered in utero during hysteroscopy procedures

The general assumption is that the bone fragments are fetal bone pieces which have remained after a uterine evacuation, but it has also been suggested that it is caused by osseous metaplasia of endometrial tissue. We discuss herewith our experience with this uncommon occurrence discovered in patients with a primary complaint of subfertility and an ultrasound finding of hyperechogenicity within the endometrial cavity.

The case notes of all patients who had hysteroscopy done in our centre from March 2012 to June 2017 were reviewed and a retrospective study was done on those who had bone fragments removed from the endometrial cavity.

There were a total of 7 patients who had hysteroscopy done for removal of bone fragments. 85.7% of the patients were between the ages of 30 and 45, with only one person aged less than 30. There was only one person (14.3%) who was nulliparous, all the patients presented with subfertility, and 71.4% of patients were undergoing assisted reproduction and were referred to us from fertility centers. More than half (57.1%) had early terminations in their last pregnancy, while 28.6% had 2nd trimester miscarriages followed by a dilatation and curettage. 42.8% had a suspicion of retained fetal bone on ultrasound scan, while 57.1% were diagnosed with intrauterine adhesions after a scan. In 71.4% of patients, there were no adhesions noted in the uterine cavity, which appeared otherwise normal. All the procedures lasted for less than 1 hour and the bone pieces were removed easily with a hysteroscopic grasper in 85.7% of cases. For one patient (14.3%), the piece of bone was removed

(14.3%), the piece of bone was removed with polyp forceps. There were no complications recorded.

Although it is rare and is usually an incidental finding, the presence of bone fragments in the endometrial cavity is associated with subfertility and should therefore be considered as a possibility for any patient who has had a previous uterine evacuation. In these cases, hysteroscopy should be considered as part of investigations for subfertility, and mandatory for patients who are being planned for an IVF procedure.

## Prevalence and pattern of tuboperitoneal pathologies among infertile Nigerian in Anambra state as seen at laparoscopy

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The contribution of Tuboperitoneal factors as seen on laparoscopy varies across regions of the world. The objective of the study is to evaluate the prevalence and pattern of

tuboperitoneal disorders as seen during diagnostic laparoscopy among infertile women managed in 3 hospitals in Nigeria.

This is a prospective study of 230 infertile women who had diagnostic laparoscopy in the hospitals within the study period.

The age of the women ranged from was 21-46 years with a mean of 35.6+/- 5.9. The modal parity group was 0-1(87.8%). Secondary infertility accounted for majority (53.9%) of the cases and the mean duration of infertility was 4.6+/- 2.7 years. Secondary dysmenorrhea, deep dyspareunia and chronic pelvic pain were seen in 59(25.7%), 62(27.0%) and 48(20.9%) of the women. Ninety eight (42.61%) of the women had done a pelvic surgery in the past

Tuboperitoneal pathologies were seen in 171(74.4%) of the women and comprised mainly of tubal occlusion (56.5%, n=130), hydrosalpinx (41.7%, n=96), Pelvic adhesions (39.6%, n=91) and endometriosis (8.8%, n=19). Bilateral tubal occlusion was seen in 46 (20.0%) and unilateral tubal occlusion in 84(36.5%) of cases. Proximal tubal occlusion accounted for 73(56.2%) of all cases of tubal occlusion women respectively.

There was a high rate of tuboperitoneal abnormalities among the studied population which comprised mainly tubal occlusion, hydrosalpinx, pelvic adhesions and endometriosis. We recommend the introduction of laparoscopy in the initial evaluation of all cases of infertility in Nigeria.

