

## Outcome of Infertility Consultations in a tropical tertiary health institution in Nigeria

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### Original Article

#### ABSTRACT

**Aim:** To examine the outcome of gynaecological consultations for infertility in a tropical Teaching Health facility.

**Material & Methods:** This is a cross-sectional study of infertility cases seen at the Bowen University Teaching Hospital, Ogbomoso over a year (16 October, 2010 to 15 October, 2011). The patients were followed up for twelve months thereafter. Data collection was done using a designed profoma. All patients coming for gynaecological consultations because of infertility within the study period were included in the study after giving their informed consents. Patient information recorded in the profoma included age, parity, educational status, occupation, duration of infertility, investigations, modality of treatment and treatment outcome. Outcome was measured by the number of live births amongst treated patients.

**Results:** A total of 195 patients presented for gynaecological consultations during the one year period; infertility was one of the commonest reasons for gynaecological consultation, accounting for 38.5% (75) of the cases. Tubal factor, 25(33.5%) was the commonest etiological cause. The treatment modality involved myomectomy (20, 26.6%), ovulation induction (20, 26.6%), laparoscopic adhesiolysis (8, 10.7%) and tubal surgery (5, 6.7%). Treatment of infertility resulted in 10 (13.3%) live births, with ovulation induction giving the highest percentage of live births (5, 50%).

**Conclusion:** The outcome of treatment of infertility is poor. Therefore, establishing a standard assisted reproductive technology (ART) unit will be of immense value in improving the outcome.

**Key Words:** Infertility, consultation, outcome

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## Résultats des consultations infertilité dans un pays tropical tertiaire santé institution en Nigéria

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### L'article d'origine

#### RÉSUMÉ

**Objectif:** examiner les résultats des consultations gynécologiques de la stérilité dans un pays tropical enseignement établissement de santé.

**Matériel & Méthodes:** Il s'agit d'une étude transversale de l'infertilité cas vu à la Bowen hôpital d'enseignement de l'Université Ogbomoso, plus d'un an (16 octobre 2010 au 15 octobre 2011). Les patients ont été suivis pendant une période de douze mois par la suite. Collecte de données a été effectué à l'aide d'une conçu profoma. Tous les patients venant de consultations gynécologiques en raison de l'infertilité dans la période de l'étude ont été inclus dans l'étude après avoir donné leur consentement éclairé. Informations patient enregistré dans le profoma inclus l'âge, la parité, le niveau d'éducation, l'occupation, la durée de l'infertilité, enquêtes, modalité de traitement et résultats du traitement. Résultat a été mesurée par le nombre de naissances vivantes chez les patients traités.

**Résultats:** Un total de 195 patients a présenté pour consultations gynécologiques au cours de la période d'un an ; stérilité était l'un des hospitalisations pour consultation gynécologique, de la comptabilité pour 38,5 % (75) des cas . Facteur des trompes, 25 (33,5 %) était la plus courante cause étiologique. La modalité de traitement impliqués points d'endométriose entre autres (20, 26,6 %), induction de l'ovulation (20, 26,6 %), laparoscopique adhesiolysis (8, 10,7 %) et de tubal surgery (5, 6,7 %). Traitement de la stérilité ont abouti à 10 ( 13,3 %) des naissances vivantes, avec induction de l'ovulation donnant le pourcentage le plus élevé de naissances vivantes (5, 50 %).

**Conclusion:** Le résultat du traitement de l'infertilité est médiocre. Par conséquent, l'établissement d'une norme de reproduction assistée technologie (ART) unité sera d'une immense valeur pour améliorer les résultats.

**Mots clés:** infertilité, consultation, résultats

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## INTRODUCTION

Infertility is the inability to achieve a pregnancy, despite regular, unprotected intercourse over a period of one year (1). It may be primary, when no pregnancy ever occurred, or secondary, when previous pregnancies have occurred, irrespective of the outcome of these pregnancies (1). Infertility is a worldwide problem which does not exclude rich or poor countries. About 60% of married couples will achieve pregnancy within 6 months of marriage, while 90% will achieve pregnancy in 12 months and 95% of the couples would have achieved pregnancy in 18-24 months(1).

In the developed countries the incidence of infertility is about 10 -15% of married couple, while in Nigeria it is between 20-30% (2-4). It is postulated that about 30 – 40% of women in sub-Saharan Africa would complete their reproductive years without having a child. This may be related to high level of genital infection (5).

Many studies have shown that infertility is the commonest reason for gynaecological consultation (5, 6). However, there is paucity of publication on the outcome of infertility consultations. The present study is a prospective review of the outcome of infertility consultations at the Bowen University Teaching Hospital, Ogbomosho, Nigeria. Bowen University Teaching Hospital is a young privately owned Teaching Hospital in southwest Nigeria offering specialist services in all fields of medicine.

The aim of this study was to examine the outcome of gynaecological consultations for infertility in a tropical Teaching Health facility.

## MATERIAL & METHODS

This is a descriptive cross-sectional study of infertility cases seen at Bowen University Teaching Hospital (BUTH) gynaecological clinic within one year period, (16 October 2010 - 15 October 2011). Patients were followed up for another 12 months. Authors ensured ethical conformity

with the Helsinki Declaration 1975 (as amended) and the study was approved by the Health Research Ethics Committee of BOWEN University.

Inclusion criterion included all consented couples who presented at the gynaecological clinic for infertility, while exclusion criteria were patients with childlessness of less than one year and non-consenting patients. A proforma was designed to obtain patient information including demographic parameters (age, parity, educational status, occupation), duration of infertility, result of investigations, modality of treatment and treatment outcome.

Semen analysis was used to assess the male factor while hysterosalpingogram, laparoscopy and dye test were used for the assessment of uterine and tubal factors. Follicular tracking with ultrasonography was used to ascertain ovulation.

Quantitative variables were expressed in percentages and mean, and data representation was shown in tables.

## RESULTS

During the one year study period, a total of 195 patients were seen at the gynaecology unit of the hospital. Infertility was the commonest reason for gynaecological consultation, accounting for 38.5% (75) of the cases. The average age of the studied population was 33 years (mean  $33.3 \pm 5.3$  years). There were 40 (53.3%) Christians, 30(40.0%) Moslems and 5 (6.7%) traditional worshippers. Majority of the infertile women, were civil servants 28(37.4%), while trading 22(29.3%) was the second common occupation. Others were farmers 10(13.3%), unemployed 10(13.3%), and students accounted for 5 (6.7%). The duration of infertility ranges between 2 -15 years (mean  $7.1 \pm 2.7$  years). Forty-five (60.0%) of the infertile women presented with secondary infertility while 30(40.0%) had primary infertility (see Table 1).

Tubal factor was the commonest etiological cause of infertility, accounting for 25(35.5%) and this was followed closely by uterine fibroids 20(26.7%). Other causative factors were anovulation 15(20%), male

factors 10(13.3%), while unexplained infertility accounted for 5(6.7%) of the cases. Oligospermia accounted for 8(80%) while azoospermia was 2(20%) of the cases of male factor. Table 2.

Table 3 shows various modalities of treatment of the infertile couples, excluding counseling about fertile period. The total live births resulting from the treatment of the infertile women were 10 births; 5(50.0%) of these resulted from ovulation induction, while 3(15%) occurred after myomectomy. There was one birth each from the group that had tubal surgery and laparoscopic adhesiolysis respectively. Male enhancing drugs did not yield any pregnancy following the treatment during the period of follow up.

## DISCUSSION

Infertility accounted for 38.5% of gynaecological consultation. This is similar to other studies in Nigeria and some African countries (7, 8). This implies that at least one in three patients in gynaecological clinic has infertility. Twenty-two (29.3%) of the infertile women were traders, most of whom were petty traders making it difficult for them to afford the cost of investigations and treatment in the hospital, hence, poverty is an important obstacle to receiving treatment.

Tubal factor is the leading cause of infertility recorded. This is a consistent finding in Nigeria and in some African countries over time (8-11). This suggests that many women were probably exposed to sexually transmitted diseases (STD) and pregnancy related infections that must have led to the fallopian tubes being damaged before marriage. Prevention of infertility should therefore involve intensifying efforts at educating young women about premarital sexual habits. This will prevent unwanted pregnancy and the sequelae of induced abortion.

Anovulation was the second commonest cause of infertility in the population. Until recently it has always been assumed that anovulation is uncommon among Nigerian women but with the advent of hormonal assay and follicular tracking with ultrasonography, it is been realized that

anovulation is second to tubal factor in etiological cause of infertility in Nigerian infertile women (8). It is the most rewarding of treatment of infertility modalities as 25% of these women were pregnant on ovulation induction therapy in this population..

The outcome of tubal surgery is generally unrewarding, and this may be due to poor selection of patients. Poor facilities within the hospital may be responsible for the poor result obtained, although the number of the patients operated upon was small, one (20%) out of five patients operated upon got pregnant. The non-availability of subspecialists could have also contributed to poor result. Looking at the etiological factor involved in infertility in this study, one would expect that tubal surgery would top the list of the treatment modalities. However, many patients considered the surgical option unacceptable and sought alternative therapy. The cost of having the procedure done is another factor due to prevailing poverty in the land.

The small size of the sample in the study and the time of patient follow up for treatment outcome are obvious limitations to assess the true outcome of cases. Therefore, a large sample size study with a relative long period of follow up is suggested to assess the real outcome of infertility in this hospital.

## CONCLUSION

There is still great unmet need of infertile couples in our environment of the glooming outcome of the treatment of tubal factor, the commonest etiological factor as shown in this study. The hope of these patients may lie in the assisted reproductive technology (ART). ART will be a better option in patient with severe tubal damage as the pregnancy rate is better than tubal surgery (11-14). There are few ART centres in Nigeria, mainly owned by private establishment and this might be the reason why it is expensive for many infertility patients. There is the need for the Teaching Hospital management to set up subsidized ART so as to make it more available and affordable.

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**TABLE 1: SOCIO-DEMOGRAPHIC PROFILES OF INFERTILE WOMEN (N = 75)**

Parameters	No (%)
Age:	
21 – 24	5 (6.7%)
25 – 29	30 (40.0%)
30 – 34	25 (33.3%)
35 – 39	10 (13.3%)
40 - 45	5 (67.0%)
Parity:	
0 -	30 (40.0%)
1 -	25 (33.3%)
2 -	10 (13.3%)
3 -	10 (13.3%)
Religion:	
Christianity -	40 (53.3%)
Islam -	30 (40.0%)
Traditional -	5 (6.7%)
Occupation:	
Trader -	22 (29.3%)
Civil Servants -	28 (37.4%)
Farmers -	10 (13.3%)
Students -	5 (6.7%)
Unemployed -	10 (13.3%)
Duration of infertility (years)	
<2 -	30 (40%)
2-5 -	20(26.7%)
6-10 -	15(26.0%)
10 - 15 -	10(13.3%)



**TABLE 2: AETIOLOGICAL FACTORS OF INFERTILITY CASES (n = 75)**

	<b>FACTORS</b>		<b>NO (PERCENTAGE)</b>
1.	Tubal factor	-	25 (33.5%)
2.	Male factor	-	10 (13.3%)
	Azoospermia	-	2(20%)
	Oligospermia	-	8(80%)
3.	Fibroids	-	20 (26.7%)
4.	Anovulation factor	-	15 (20%)
5.	Unexplained	-	5 (6.7%)

**TABLE 3: TREATMENT MODALITIES AND OUTCOME AMONG INFERTILE WOMEN.**

	<b>TREATMENT</b>		<b>no= 75</b>	<b>LIVE BIRTHS (n=10)</b>
1.	Myomectomy	-	20(26.6%)	3(30%)
2.	Ovulation treatment	-	15(20.0%)	5(50%)
3.	Laparoscopic adhesiolysis -		8(10.7%)	1(10.0%)
4.	Tubal surgery	-	5(6.7%)	1(10.0%)
5.	Male enhancing drugs	-	5(6.7%)	-
6.	Abandoned treatment	-	20(26.6%)	-