

## Hysterosalpingography Tubal Infertility in an Environment with Non Liberalized Abortion Law

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**Abstract:** Most induced abortions in Nigeria are performed by non medical and paramedical personnel in unregistered health centers due to the non liberalization of abortion laws. This has resulted in increased abortion related complications. To determine the effect of induced abortions, especially by non medical doctors on hysterosalpingographic tubal abnormalities. The study included 110 consecutive infertile patients referred to the Radiology Department for Hysterosalpingography over a year period. Appropriate questionnaires were administered after informed consent and prior to the procedure (HSG). The data was analyzed using EPI info 2000 and the association between induced abortion and tubal abnormalities were measured using  $\chi^2$ -test and Fischer Exact test (where appropriate) and 2-sided  $p < 0.05$  was used as significant level. Past history of dilatation and curettage at unregistered hospitals (by non medical personnel) was found to be statistically significant for hydrosalpinges ( $p < 0.01$ ; odd ratio 15.6; 95% CF 3.05-106.49); tubal blockage (Fischer's exact 0.039; odd ratio 9.3; 95% CI = 1.05-18.19. Criminal abortions, often performed by quacks in Nigeria due to its illegality is found to be significantly associated with tubal pathology in infertile couples.

**Key words:** Abortions, abnormalities, doctors, pathology, infertile, Nigeria

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### INTRODUCTION

Infertility is defined as the inability of a couple to achieve conception despite adequate unprotected coitus for a period of 12 months (Pollard, 1994). It has grave social and psychological consequences on blacks, especially in Africa. Though the prevalent rate is not only difficult to assess but also varies; rates varying between 30 and 50% had been reported in some African countries. Although, several factors could be responsible for female infertility, ovulate dysfunction and tubal factors are said to be the foremost causes. Infact, tubal factors is said to be responsible for almost 50% of all cases of female infertility (Glasten *et al.*, 1997).

Tubal infertility has been identified as the most difficult to treat, especially in underdeveloped countries where there is lack of facilities and very few trained hands. Non liberalization of abortion laws in Nigeria has contributed to high rate of induced abortions by quacks and or paramedical personnel with associated increased in complications the effect of this on tubal infertility was assessed by this study.

### MATERIALS AND METHODS

A year prospective study of 110 consecutive patients referred to Radiology Department of Obafemi Awolowo University Teaching Hospital Ile-Ife, a tertiary institution located in Osun State Southwestern part of Nigeria were included in the study. Ethical clearance was gotten from the hospital's ethical committee. Patients were asked or assisted to fill the questionnaires after informed consent. Excluded from the study were patients who refused to fill the questionnaires despite counseling. All patients had hysterosalpingographic assessment of the fallopian tubes and the abnormalities were divided into hydrosalpinges (with or without peritubal occlusion) and tubal blockage. The questionnaires were analyzed using EPI info 2000 with  $\chi^2$ -test and Fischer exact test (where appropriate) used to assess the association.

### RESULTS AND DISCUSSION

One hundred and ten patients were analyzed. The mean age was  $30.94 \pm 4.87$  with patients' age range of 22-44 years. The majority of the patients were between

26-30 years of age. About 45 (40.9%) patients presented with primary infertility while 65 (59.1%) patients had secondary infertility. About 89 (80.9%) were nulliparous while 21 (19.1%) had parity of one and above.

About 52 (47%) patients gave position history of past D and C while 58 (53%) had no such history. Total 80% (42) of the patients with dilation of curettage had unwanted pregnancies as indication and the procedures were carried out by quacks with complications ranging from secondary infection, irregularity of menstrual flow to incomplete abortion. Hydrosalpinges were seen in 18 patients; 15 (83.3%) of these patients had history of evacuation by quacks while 2 (11.1%) and 1 (0.56%) had no history of evacuation and evacuation by qualified doctors, respectively. About 7 patients had tubal blockage of which 6 (86%) had previous evacuation done by quacks while the remaining one gave no history of evacuation.

The age range of the patients included in this study was 22-44 years with a mean age of  $30.94 \pm 4.87$ . This range was similar to the age ranges reported in most of the HSG studies in infertile women (Adesiyun *et al.*, 2008; Torres-Sanchez *et al.*, 2004; Bello, 2004). Also, secondary infertility was found to be commoner than primary infertility as reported in most studies. However, a ratio of 60:40 was found in this study as opposed to an approximate rate of 80:40 reported in most previous studies (Adesiyun *et al.*, 2008; Bello, 2004).

About 52 (80%) of the 65 patients with secondary infertility gave history of dilatation and curettage and 80.8% of these 52 had the procedures done in unregistered hospitals being operated by non medical doctors. Most of these procedures by non medical personnel 32 (76.2%) out of 42 developed immediate/early complications ranging from infection 19 (45.23%), irregular menstrual flow 7 (16.67%) and incomplete abortion 6 (14.29%).

About 18 patients had hydrosalpinges while 7 patients had synechiae. Most of the patient with hydrosalpinges and synechiae had previous history of D and C that is 15 (83.3%) and 6 (85.7%). Tubal blockage was seen in seven patient, 6 (86%) of which had previous evacuation by non medics. Therefore, tubal abnormality was found to be the commonest pathology in this study this was similar to several previous reports (Adesiyun *et al.*, 2008; Bello, 2004; Horwitz *et al.*, 1979; Sanfilippo *et al.*, 1978; Kiguli-Malwadde and Byanyima, 2004; Bacevac and Ganovic, 2001) although, the 22.7% tubal abnormality rate in this study is lower than most other studies (Horwitz *et al.*, 1979; Sanfilippo *et al.*, 1978; (Kiguli-Malwadde and Byanyima, 2004; Bacevac and Ganovic, 2001). Evacuation or dilatation and curettage by

non medics was found to be statistically significant as a cause of hydrosalpinges (35.7 vs 2.4%;  $p < 0.001$ , OR-15.6, 95% CI = 3.05-106.49); tubal blockage and uterine synechiae (Fischer's exact 0.039) OR = 9.5 95% CI = 1.05-218.19).

The study confirmed that tubal abnormalities contribute significantly to infertility in the environment. The prevalent ratio of induced abortion by quacks has also been associated with these tubal abnormalities. The non liberalization of abortion laws, low socioeconomic factors and poor history of contraceptive usage are mainly responsible for the high rate of unwanted pregnancies and procurement of abortion from quacks and/or non medics.

These procedures, often carried out in an unhygienic environment by untrained or poorly trained staff are often associated with complications ranging from incomplete abortion, sepsis and death. Several studies have also, associated induced abortion with tubal pathology: (Xu *et al.*, 2001) in a review of sixty consecutive patients with tubal infertility also found induced abortion to be a significant contributory factor. Verhoeve *et al.* (2008) advocate early tubal potency tests for subfertile women with history of induced abortion based on the outcome of their study which found induced abortion to be associated with increased risk of tubal pathology.

Torres-Sanchez *et al.* (2004) did not however find an association between induced abortion and tubal damage in Mexico though this finding was explained by a shift toward safer abortion practices.

## CONCLUSION

Non-medically indicated induced abortion is a criminal offence in Nigeria. This has resulted in most induced abortions being performed mainly outside the registered (and government) hospitals. The vicious cycle of poverty, illiteracy, poor contraceptive history and unwanted pregnancies have made criminal abortion a thriving business for untrained and unregistered personnel and hospitals, respectively. The immediate consequences often include incomplete abortion, sepsis and death. Its association with tubal infertility has been proven by this study.

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