

Fertility Profile Following Induced Abortion in Calabar, Nigeria

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Abstract

Context: The incidence of induced abortion in Nigeria is high. Pelvic infection as a complication of this abortion is also common and with the rising prevalence of infertility in the population, there is a need to assess the impact of induced abortions on fertility in our women.

Objective: To establish the impact of induced abortion on the fertility rate of women in Calabar.

Design and Setting: Cross sectional descriptive study in Calabar, an urban community on the eastern flank of Nigeria's Atlantic coast.

Subjects and Methods: Women seeking gynaecological, antenatal and family planning services who gave their informed consent were recruited. Those of them who gave a history of induced abortion were interviewed in-depth. Their demographic characteristics and detailed information about their abortion history such as number of abortions, sites where the abortions were performed, the personnel providing the abortion services and complications arising from the abortions were obtained.

Results: Some 242 (40.3%) of the study subjects had undergone at least one induced abortion. The commonest late complications of induced abortion were secondary infertility (42.1%) and chronic pelvic infection (36.0%). Only 48.3% of the women who had induced abortions maintained their fertility while the remainder suffered secondary infertility ranging from three to eighteen years in duration. The fertility rate decreased with increasing number of abortions.

Conclusion: Induced abortion is a major factor in the high prevalence of secondary infertility in Calabar. Training of medical practitioners on post-abortion care may help to ameliorate the burden of secondary infertility in Nigeria.

Key Words: Abortion, Pregnancy Termination, Fertility, Infertility [Trop J Obstet Gynaecol, 2003, 20: 89-92]

Introduction

In Nigeria, the law places restrictions on abortion, but studies have shown that the incidence of illegal abortions is very high. National projections indicate that physicians in approximately 672 hospitals and clinics terminate some 610,000 pregnancies annually¹. Non-physicians terminate some of the unwanted pregnancies^{1, 2}. Most of these abortions are unsafe since they are performed clandestinely and often in poor sanitary conditions. Many studies in various centres in Nigeria have shown a high incidence of infection as abortion-related complications^{3, 4}. Abortion has also been implicated as a cause of secondary infertility, ectopic pregnancy, mid-trimester spontaneous abortions and pre-term labour^{5, 6}.

A community-based study of abortion prevalence in Nigeria showed that more than one-third of women who had induced abortions were adolescents⁷, as were 80% of the patients with abortion-related complications who were admitted in Nigerian hospitals⁸. Hence, a large number of our young women who are yet to start their childbearing career are affected by unsafe abortion complications. Many of these women with abortion complications die.

However, some survive and marry with the hope of resuming childbearing⁴.

Secondary infertility is, by far, the most common outpatient gynaecological complaint in Nigeria⁹. Generally, infertility constitutes a major public health problem in Africa and it is often a sequel to pelvic infection, which may arise from an unsafe abortion². Tubal factor was identified by the World Health Organisation (WHO) multi-centre infertility study to be the most common cause of secondary infertility in sub-Saharan Africa¹⁰. In Nigeria, infertility carries a social stigma and is a major source of unhappiness. The economic burden of infertility is also enormous as these infertile couples spend their meagre resources on medical treatment. This study was carried out as part of an initiative to reduce the burden of infertility on our couples. The aim was to establish the impact of induced abortion on the fertility rate of our women.

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Patients and Methods

This study was carried out in the University of Calabar Teaching Hospital (UCTH) and a private health facility, Saint Davis Specialist Clinic, both in Calabar. Calabar is the capital of Cross River State in the southeastern part of Nigeria. It has an estimated population of 218,000 (1991 Nigeria Census). The inhabitants are mainly civil servants, subsistence farmers, fishermen and traders. Most of the inhabitants are Christians and only few Moslems and adherents of traditional African religions are found. Monogamous marriage is common and only few families are polygamous. A private clinic was chosen along with UCTH for this study to enable us cover all classes of women. The private clinic used, provides services to all patients who present themselves for treatment but with particular interest in obstetric and gynaecological patients.

Women who attended the gynaecological, antenatal and family planning sessions of the clinics between 1st July and 31st December, 2000 were interviewed. All those with a history of induced abortion were recruited for the study. The aims of the study were explained to them and they were assured of absolute confidentiality. Those of them who gave their informed consent were then selected for the study. Demographic characteristics such as age, parity, educational attainment, *etc.* were obtained. Detailed

information about their abortions such as the number of abortions, age at which the abortions were procured, where the abortions were performed and the personnel who provided the abortion services were also obtained. The exact gestational age at which the abortions were procured was difficult to obtain as most of the patients had forgotten such information after many years. Information on post-abortal complications and inability of the patient to regain fertility after the induced abortions were recorded. The number and outcome of pregnancies after the induced abortions were also documented. The information obtained was analysed using tables and percentages.

Results

Six hundred women gave their informed consent for this study. Two hundred and forty-two (40.3%) of them had at least one induced abortion. The ages of the patients were between 18 and 45 years and only two patients did not know their ages. Most of the patients (64%) were between 26 and 35 years of age (see Table 1). Of these 242 women, 98 (40.5%) had only one induced abortion, 63 (26.0%) had two induced abortions; 39 (16.1%) had three induced abortions while 42 (17.4%) had four or more induced abortions.

Table 1

Age Distribution of the Patients

Age Group	< 20	21-25	26-30	31-35	36-40	41-45	Unknown
Abortion Frequency							
1	5	21	36	19	10	5	2
2	1	10	28	16	5	3	-
3	1	6	14	10	4	4	-
4	-	3	19	13	7	-	-
Total	7	40	97	58	26	12	2

Three hundred and seventy-six (376) medical practitioners were involved in the termination of the pregnancies. The abortions were procured in 210 private clinics. Five patients had their pregnancies terminated by physicians in the general hospital, while 18 patients had their pregnancies terminated by non-medically qualified personnel in pharmacy shops. Seventeen (7.0%) patients had their abortions induced in the doctors' places of residence, while 12 of the patients terminated their pregnancies at home by self-medication with native herbs and toxic chemical substances (see Table 2).

The late complications of induced abortions are shown in Table 3. Secondary infertility (42.1%) was the commonest complication. This was followed by chronic pelvic infection (36.0%) and spontaneous abortion (8.7%) in the first trimester. The less common complications were dyspareunia (3.3%), cervical incompetence (2.9%), ectopic pregnancies (2.1%) and dysmenorrhoea (2.1%).

One hundred and seventeen (48.3%) out of the 242 patients who had induced abortions were able to get pregnant again without difficulty, while 125 (51.7%)

Table 2
Personnel Terminating the Pregnancies and Site Where Abortions Were Induced

Abortion Provider	Number	Proportion (%)
Medical Practitioner	376	92.6
Non-Physicians	18	4.4
Others	12	2.9
Total	406	100.0

Site of Procedure

Private Clinic	210	80.8
Physician's Residence	17	6.5
Pharmacy Shop ('Chemist')	16	6.2
Patient's Home	12	4.6
General (Government) Hospital	5	1.9
Total	260	100.0

suffered from secondary infertility ranging in duration from 3 to 18 years. Ninety-six (39.7%) had two hundred live births, while twenty-one (8.8%) patients had spontaneous abortions and evacuation of the uterus in the first trimester after the induced abortion(s). These are shown on Table 4.

Table 4
Fertility Rates After Induced Abortions

Variables	Abortion Frequency				Total
	1	2	3	≥4	
No. of Patients	98	63	39	42	242
No. of Patients With Live Births	41	34	12	19	96
Proportion of Patients With Live Births (%)	41.8	54.0	30.8	45.2	39.7
Number With Spontaneous Abortions	11	2	4	4	21
Number of Children Born	109	44	14	23	200
Average Fertility Rate	2.6	1.8	1.2	1.2	2.1

The result also shows that fertility rate decreases with increasing number of abortions procured by the

patients. The highest fertility rate of 2.6 in this group of women occurred in patients with only one induced abortion whilst the lowest fertility rate of 1.2 occurred in women with three or more induced abortions.

Table 3
Late Complications of Induced Abortion Present in the Patients

Complications	Number (%)
Secondary Infertility	102 (42.1)
Pelvic Infections	87 (36.0)
Spontaneous Abortion (First Trimester)	21 (8.7)
Dypareunia	8 (3.3)
Cervical Incompetence	7 (2.9)
Asherman's Syndrome	7 (2.9)
Ectopic Pregnancy	5 (2.1)
Dysmenorrhoea	5 (2.1)
Total	242 (100.0)

Discussion

African women generally have high fertility rates, often as high as 6 to 7 per woman¹¹. This may be explained by early marriage and early initiation of childbearing. In Nigeria, for example, 72% of women aged 15 to 19 years are married¹¹. However, this study reveals that any woman who has had an induced abortion may not achieve such a level of fertility. The fertility rate of women with one induced abortion is 2.6 children per mother, while the average fertility rate of women who have ever had an induced abortion is 2.1 per woman. The fertility rate decreases with increasing number of induced abortions to the lowest level of 1.2 per woman after three or more induced abortions.

Induced abortion is associated with post-operative pelvic infection. In this study, 36.0% of the patients had features of pelvic infection compared to 52.0% of women with induced illegal abortion who reportedly had pelvic peritonitis in Benin-City². The pelvic infection leaves a residue of tubal damage sufficient to cause infertility in the affected women. The high pelvic infection rate and the associated low fertility of women after induced abortion in Calabar can be attributed to many factors. Abortion is restricted by law in Nigeria and is carried out clandestinely by physicians and non-physicians. The use of chemist shops and doctors' homes in the procurement of illegal abortions is likely to increase the likelihood of post-abort infections.

Many studies have shown that there is an increased risk of post-operative pelvic infection in the presence of *Chlamydia trachomatis*, *Neisseria gonorrhoeae* and bacterial vaginosis¹². The use of metronidazole rectally at the time of the procedure followed by doxycycline as routine antibiotic prophylaxis has reduced the incidence of post-operative pelvic infections. These preventive measures are not generally not used by illegal abortion providers. Even the physicians who provide abortion services may give prophylactic antibiotics that may not target these pathogens. Prophylaxis against *Chlamydia trachomatis* is particularly important in this environment, as an earlier histological examinations of endometrial biopsies of women with secondary infertility in Calabar revealed chronic non-specific endometritis in 52% of the cases¹³.

The preservation of fertility of women depends on many factors. The unwanted pregnancies must be prevented since fertility is significantly affected even after one induced abortion. Family life education must be sincerely carried out at homes and in schools. The use of modern contraceptive methods by Nigerian women of reproductive age must be encouraged and increased above the current rate of 9.0%¹⁴. Since most of the abortion services

in Calabar are provided by general medical practitioners in their private clinics, there is need for continuing medical education for them, with emphasis on provision of sound post-abortion care.

Women who had an abortion and risked another unwanted pregnancy represent an important group whose family planning needs remain unmet. These women need improved links between abortion and quality family planning information and services. Such a programme in Turkey has shown that once quality family planning services are made available to abortion clients, they accept family planning methods at high rates and the rates of subsequent abortions declined¹⁵. There is a strong need for such a programme in Calabar in order to reduce the incidence of induced abortion and the subsequent secondary infertility. However, the long-term solution probably requires the political will to develop a national policy on family planning and to liberalise the abortion laws. The liberalization of the abortion laws will allow the physicians who provide abortion services in Nigeria to be properly trained. Abortions could then be performed in safe environments. This should help reduce the incidence of unsafe abortion and its complications, particularly secondary infertility, which is now a major public health problem in Nigeria.

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