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Original article

Socio-Demographic Characteristics and Hysteroscopic Findings among Women with Unsafe Abortion in South-South Nigeria

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Abstract

Background: Abortion is unsafe when it is carried out either by a person lacking the necessary skills or in an environment that does not conform to minimal standard, or both. It is complicated by intrauterine adhesions and secondary infertility. ***Objectives:*** To determine the socio-demographic features and hysteroscopic findings of women that had unsafe abortion in Calabar, Nigeria. ***Methodology:*** It was a cross-sectional study of 66 women in reproductive age, presenting in gynaecological clinic who consented to hysteroscopy between August 2019 to September 2020. A structured questionnaire was used to obtain sociodemographic data and hysteroscopy was done. ***Results:*** There was no significant difference in socio-demographic characteristics between women that have undergone unsafe abortion and those that have not. Cervical stenosis (76.9%) ($p = 0.005$) and intrauterine adhesions (68.3%) ($p = 0.005$) were significantly higher in women who had unsafe abortion. The odd ratios of cervical stenosis and intrauterine adhesions for 1 and ≥2 unsafe abortions were not significant. ***Conclusion:*** Cervical stenosis and intrauterine adhesions were significant complications of unsafe abortion in our environment. Multiple unsafe abortions do not confer significant higher risk of cervical stenosis or intrauterine adhesions.

Keyword: ***unsafe abortion, intrauterine adhesions, cervical stenosis, hysteroscopy.***

Introduction

An abortion is unsafe when it is carried out either by a person lacking the necessary skills or in an environment that does not conform to minimal standard, or both [1]. Among the common complications of unsafe abortion are intrauterine adhesions and secondary infertility [2-4]. Asherman syndrome which is characterised by intrauterine adhesions, infertility and menstrual abnormality has been described to be due to over-zealous curettage of pregnant or recently pregnant uterus [5]. Due to the low contraceptive prevalence in Nigeria, substantial number of women have unwanted pregnancies and many of which are resolved through clandestine abortions, even with the country's restrictive abortion laws [6,7]. The estimated unintended pregnancy rate in Nigeria was 59 per 1000 women of reproductive age, and 56% of these pregnancies were resolved by abortions [8].

Diagnostic hysteroscopy is the gold standard for diagnosing intrauterine pathologies [9,10]. Unsafe abortion and its complications impact a woman's psychosocial health, fertility, and other aspect of her live [2-4]. This study is aimed at determining the socio-demographic features and hysteroscopic findings of women that had unsafe abortion in Calabar, Nigeria. The result of this study will help to create awareness of the uterine intra-cavitary complications of unsafe abortion and to plan on preventing these tragedies.

Materials and Methods

Design and data collections

This cross-sectional study included 66 women in reproductive age, presenting in gynaecological clinic of University of Calabar Teaching Hospital who consented to hysteroscopy between August

2019 to September 2020. Exclusion criteria were refusal to give consent, women that were not in reproductive age, pregnancy, women who had hysterectomy and/or bilateral salpingectomy, women with cervical and/or uterine infection, women with lower genital malignancies and contraindication to hysteroscopy. Ethical approval for the study protocol was obtained from the Ethics Committee of the University of Calabar Teaching Hospital, Calabar. Informed consents were obtained from all patient prior to the interviews. A structured questionnaire was used to obtain sociodemographic data.

All hysteroscopic examinations were done by the same operator and procedures were performed using Diagnostic hysteroscope, consisting of 4.1 mm sheath and 2.9 mm rod lens telescope (30 degrees). Illumination was provided using LED light source via a fibreoptic lead, and all procedures were monitored using a video camera and monitor. Normal saline was used as distending media. Uterine distention was accomplished by a Hysteropump (Karl Storz), with the pressure pre-settled to 100 mmHg. Total intravenous anaesthesia was used for anaesthesia. All the hysteroscopic procedures were carried out during the proliferative phase of the menstrual cycle. With the patient lying in a lithotomy position, a bimanual pelvic examination was performed. The cervix was visualized through a vaginal speculum and the hysteroscope was introduced into the uterine cavity without dilating the cervix. The hysteroscope was guided through the endocervical canal into the uterine cavity under visual control. The tubal ostia were identified, and the endometrial surfaces systematically inspected. The cervical canal was then viewed in its entire length during withdrawal of the hysteroscope. Findings were record using standard reports.

Statistical analysis

Data was analysed with SPSS statistics program (IBM Corp. version 26). Fisher's exact test was used for statistical comparison. Level of significance was taken at $p<0.05$.

Results

Table 1 shows the socio-demographic features of participants. Women with history of unsafe abortion had significantly lower rate of miscarriage (31.3%) ($p = 0.044$). There was no significant difference in demographic data between women that had unsafe abortion and those who do not have.

Hysteroscopic findings of participants are illustrated in Table 2. Intrauterine adhesions (62.1%) and cervical stenosis (39.4%) were the commonest findings. Normal findings were seen in 6 (9.1%) women. Least findings were retained fetal bones (1.5%) and stenosed tubal ostia (1.5%).

Cervical stenosis (76.9%) ($p = 0.005$) and intrauterine adhesions (68.3%) ($p = 0.005$) were significantly higher in women with unsafe abortion as shown in Table 3.

Table 4 and 5 illustrate the logistic regression of number of unsafe abortions as risk factor for intrauterine adhesions and cervical stenosis. The odd ratios of cervical stenosis and intrauterine adhesions for 1 and ≥2 unsafe abortions were not significant.

Table 1: Socio-demographic characteristics of participants

Variables	Total	Unsafe abortion present (%)		Unsafe abortion absent (%)		p-value
Age (years)						
< 40	49	24	49.0	25	51.0	Fisher's test
≥ 40	17	12	70.6	5	29.4	P = 0.162
Marital status						
Single	4	2	50.0	2	50.0	Fisher's test
Married	62	34	54.8	28	45.2	P > 0.999
Educational level						
Primary/Secondary	10	7	70.0	3	30.0	Fisher's test
Tertiary	56	29	51.8	27	48.2	P = 0.327
History of infertility						
Yes	57	32	56.1	25	43.9	Fisher's test
No	9	4	44.4	5	55.6	P = 0.721
History of Miscarriage						
Yes	16	5	31.3	11	68.7	Fisher's test
No	50	31	62.0	19	38.0	P = 0.044*
Menstrual Abnormality						
Heavy menstrual bleeding	16	7	43.8	9	56.2	Fisher's test
Irregular menstrual cycle	36	16	44.4	20	55.6	P > 0.999
History of Adhesiolysis						
Yes	16	10	62.5	6	37.5	Fisher's test
No	45	26	52.0	24	48.0	P = 0.569
History of Pelvic Inflammatory Disease						
Yes	12	10	83.3	2	16.7	Fisher's test
No	54	26	48.2	28	51.8	P = 0.052

Table 2: Hysteroscopic findings of participants

Findings	Number	%
Normal findings	6	9.1
Intrauterine Adhesions	41	62.1
Cervical Stenosis	26	39.4
Endometrial Polyp	16	24.2
Submucous Fibroid	14	21.2

Septate Uterus	2	3.0
Fibrosed tubal ostia	1	1.5
Retained fetal bones	1	1.5

Table 3: Hysteroscopic findings and unsafe abortion

Variables	Total	Unsafe abortion present (%)		Unsafe abortion absent (%)		p-value
Cervical Stenosis						
Yes	26	20	76.9	6	23.1	Fisher's test
No	40	16	40.0	24	60.0	P = 0.005*
Intrauterine Adhesions						
Yes	41	28	68.3	13	31.7	Fisher's test
No	25	8	32.0	17	68.0	P = 0.005*
Endometrial Polyp						
Yes	16	9	56.3	7	43.7	Fisher's test
No	50	27	54.0	23	46.0	P > 0.999
Submucous Fibroid						
Yes	14	7	50.0	7	50.0	Fisher's test
No	52	29	55.8	23	44.2	P = 0.768

Table 4: Logistic regression of number of unsafe abortions as risk factor for intrauterine adhesions

Variable	Odd ratio	95% Confidence interval	p-value
Number of unsafe abortions			
1	1		
≥ 2	3.667	0.472 to 25.890	0.254

Table 5: Logistic regression of number of unsafe abortions as risk factors for cervical stenosis

Variable	Odd ratio	95% Confidence interval	p-value
Number of unsafe abortions			
1	1		
≥ 2	1.400	0.387 to 5.130	0.730

Discussion

Unsafe abortion is a scourge on womanhood. It is accompanied with numerous immediate and long-term complications, which ranged from psychological trauma, compromised fertility potentials to even maternal mortality [2-4]. The burden of unsafe abortion and its complications in Nigeria is high [8]. The main reasons for this are the poor contraceptive services and utilization, and the restrictive abortion legislation in the country [6,7,11]. Therefore, preventive strategies to minimise or even eradicate these problems are paramount. Providing evidence-based data on the impact of unsafe abortion on women's reproductive health will be important for advocacy and strategic planning to prevent this menace. This study was aimed to determine the demographic and hysteroscopic findings of women with unsafe abortion.

In the present study, miscarriages were significantly lower among women with unsafe abortion. The reduction of total pregnancy rate following unsafe abortion could explained the fewer miscarriages seen in women with history of unsafe abortion. Koster reported that 37% of secondary infertility in south-west Nigeria was most probably due to unsafe abortion [11]. There was no significant difference in socio-demographic features between women that had unsafe abortion and those without history of unsafe in the present study. This contrasts with countries where induced abortion is legal; Boah et al found that in Ghana, older women, married women, and those with knowledge of legal status of abortion are less likely to have unsafe abortion [12].

This study shows that cervical stenosis and intrauterine adhesions were significantly higher in women with unsafe abortion. Abiodun et al in a study of women managed for intrauterine adhesion, reported that endometrial curettage for mostly induced abortion accounted for 67% of cases [13]. Gaya et al found that dilatation and curettage were the major aetiology of intrauterine adhesions among women undergoing adhesiolysis in northern Nigeria [14]. One of the participants in the present study had a history of termination of pregnancy 5 years prior to presentation and hysteroscopic findings of retained fetal bones. These findings underscore the role unsafe abortion plays in contributing to uterine pathologies that affects women's reproductive health.

The odd of developing cervical stenosis or intrauterine adhesions for one or multiple unsafe abortions were not significant in this study. The findings suggest that risk of developing intrauterine complications is comparable between one and multiple unsafe abortions. In other words, one experience of unsafe abortion may be enough to result in intrauterine complications. Therefore, there is an urgent need to raise awareness on the dangers of unsafe abortion on reproductive health of women and the need to eradicate this menace.

Conclusion

In conclusion, unsafe abortions are complicated by uterine pathologies such as cervical stenosis and intrauterine adhesions. A single attempt of unsafe abortion as well as multiple experiences have comparable risk of these complications.

Data Availability

Data contain hysteroscopic videos of participants and would not be shared without permission from participants.

Conflict of Interests

The authors declare that there was no conflict of interests regarding the publication of this paper

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