EVALUATION OF MENSTRUAL PATTERN BEFORE AND AFTER TREATMENT FOR INTRAUTERINE ADHESION

[1,2]Adeniran AS, [2]Elegbua CO, [1,2]Balogun OR

[1]Obstetrics & Gynaecology Department, University of Ilorin, Ilorin.
[2]Obstetrics & Gynaecology Department, University of Ilorin Teaching Hospital, Ilorin.

Correspondence and reprint request to: **Dr Abiodun Adeniran**
Department of Obstetrics & Gynaecology University of Ilorin,
PMB 1515, Ilorin, Kwara State, Nigeria.
eMail: acrowncord@hotmail.com **Phone:** +2348057534788

ABSTRACT

Objective: To determine the pattern of menstrual disorders and treatment outcome among women managed for intrauterine adhesion at a tertiary centre in Ilorin, Nigeria. **Methodology:** A descriptive study of women with intrauterine adhesion managed at the University of Ilorin Teaching Hospital over a three year period. Diagnosis was confirmed with hysterosalpingography; the case files were retrieved from the medical records department to review the management, extract relevant data and analyse the data using SPSS version 20.0 and $p<0.05$ was significant. **Results:** The incidence of intrauterine adhesion was 1.5% of all gynaecological clinic attendees; the modal age group was 25 to 29 years (36; 48.0%), 28(37.3%) were nulliparous, 47(62.7%) followed dilatation and curettage among which 34(45.3%) were performed for induced abortion. Menstrual disorder was reported in 73(97.3%) of participants; these were secondary amenorrhea (34; 45.3%), hypomenorrhea (29; 38.7%) and oligomenorrhea (10; 13.3%) while 2(2.7%) had normal menstruation. Treatment was by hysteroscopic 55(73.30%) or blind 20(26.70%) adhesiolysis. After treatment, normal menstruation resumed in 79.3% of those who presented with hypomenorrhea, 70% for oligomenorrhea and 66.7% for secondary amenorrhea. The treatment outcome was significantly improved following hysteroscopic compared to blind adhesiolysis (p 0.029). **Conclusion:** Complications from dilatation and curettage for induced abortion remains the commonest risk factor for intrauterine adhesion; safe abortion services and post abortion care may reduce the morbidity. Hysteroscopic adhesiolysis should be the preferred treatment modality for uterine synaechiae.

Keywords: Asherman syndrome, Intrauterine adhesion, Uterine synaechiae, Menstrual disorders.

INTRODUCTION

Intrauterine adhesion also called Asherman syndrome or Synaechiae uteri[1-4] is characterised by the formation of fibrous adhesions in the uterine cavity preventing the normal growth of the endometrium[5]. Commonly, it results from endometrial curettage traumatizing the decidua basalis particularly in a pregnant or recently pregnant uterus.[4] The curettage may be for termination of unwanted pregnancy, management of miscarriage or primary postpartum haemorrhage. It is common in areas with a high incidence of unsafe abortion including Nigeria where over 600,000 induced abortions are performed annually with 60% carried out by non-doctors.[6] Reports indicate that 20-40% of Asherman syndrome in Nigeria resulted from unsafe induced abortions.[2,3,6] Other predisposing factors include caesarean delivery, myomectomy, diagnostic curettage, endometrial resection and pelvic irradiation.[5] The role of infection is not well defined but there is strong evidence that tuberculous endometritis may lead to uterine adhesion.[3,4,7] A common presentation of uterine adhesion is menstrual abnormality in the form of hypomenorrhea, oligomenorrhea, secondary amenorrhoea or dysmenorrhoea while some present with secondary infertility.[2-4]

Division of the uterine adhesion can be by either blind or hysteroscopic resection under vision. The endometrial surfaces can be kept apart using inert intrauterine devices of Foley catheter while oral oestrogen and progestogen are administered as hormone support to encourage endometrial regeneration.[2,3,7] The Foley catheter can be removed around seven to ten days while the intrauterine device is left in-situ for three months; however hormone administration for three months is important irrespective of the method of adhesiolysis.[2-4,7]

Hysterosalpingography is the most common method of diagnosis,[8] characteristically showing irregularity with filling defect in the uterine cavity or inability to fill the cavity. The principles of treatment include division of the adhesions, separation of the endometrial surfaces using an inert material and attempt at endometrial regeneration using exogenous hormone therapy.[2-4,7] Thus, an important outcome measure of successful treatment is restoration of menstruation.

This study is aimed at determining the pattern of menstrual disorders and the treatment outcome among women managed for intrauterine adhesions.

MATERIALS AND METHOD

The study was a descriptive study of all cases of intrauterine adhesion managed at the University of Ilorin Teaching Hospital, Ilorin over a three year period (2012 to 2014).The inclusion criteria were a diagnosis of intrauterine adhesion and treatment at the centre with the records available for retrieval at the medical records department of the hospital. Those who did not complete the evaluation or had no treatment were excluded from the study.

The hormonal therapy was administered for three months following adhesiolysis and patients were followed up at the gynaecology clinic for a minimum of nine months to determine a successful treatment. Successful treatment was defined as ability to initiate and maintain regular and normal spontaneous menstruation for a minimum of six cycles following discontinuation of therapy.

The case files of all eligible patients were retrieved and relevant data extracted. The information included the age, parity, risk factors, clinical presentation including the menstrual pattern, mode of treatment and post-treatment menstrual pattern. The data collected was analysed using statistical package for social sciences (SPSS) version 20.0(SPSS, Chicago, Ill, USA) and presented in tables with p-value <0.05 termed significant.

RESULTS

There were 75 cases of intrauterine adhesion out of 4,920 new gynaecological clinic attendees with an incidence of 1.5%.The age range of participants was 20-44years with modal age group 25-29years, 51 (68.0%) were of low parity (para 0 and para 1). Dilatation and curettage associated with pregnancy and its complications was the commonest aetiological factor accounting for 47(62.7%) cases; among these, induced abortion was 34(45.3%). Other predisposing factors were previous caesarean section [12(16.0%)] and myomectomy [5(6.7%)].

From table 2,73(97.3%) presented with menstrual abnormality with secondary amenorrhoea as the commonest [39(52.0%)]. Also, 50(71.4%) participants achieved normal menstruation after treatment; these consisted of 23(79.3%) of those who presented initially with hypomenorrhoea, 7(70.0%) of those with oligomenorrhea and 20(58.8%) of those with secondary amenorrhoea.

From table 3, 55(73.3%) participants had hysteroscopic while 20(26.7%) had blind adhesiolysis. Post adhesiolysis, normal menstruation was restored in 72.7% (40/55) for hysteroscopic and 60.0% (12/20) for blind adhesiolysis. The treatment outcome was significantly better following hysteroscopic compared to blind adhesiolysis (OR1.778, 95%CI 0.608-5.201; p0.029).

Table 1: Biosocial parameters and predisposing factors to intrauterine adhesion

Parameter	Frequency	Percentage (%)
Age (years)		
20-24	3	4.0
25-29	36	48.0
30-34	24	32.0
35-39	10	13.3
40-44	2	2.67
Parity		
0	28	37.3
1	23	30.7
2	11	14.7
3	8	10.7
4	5	6.7
Predisposing factors		
Dilatation and curettage	47	62.7
-Induced/ unsafe abortion	34	45.3
-Incomplete miscarriage	10	13.3
-Missed miscarriage	2	2.7
-Diagnostic curettage	1	1.3
Uterine evacuation for PPH	6	8.0
Caesarean delivery	12	16.0
Previous myomectomy	5	6.7
Previous PID	4	5.3
Unexplained	1	1.3

PPH: Postpartum haemorrhage

Table 2: Evaluation of menstrual characteristics before and after treatment

Menstrual pattern at presentation	Frequency n (%)	Menstrual pattern after treatment			
		Normal n (%)	Oligomenorrhea n (%)	Hypomenorrhea n (%)	Amenorrhea n (%)
Hypomenorrhea	29(38.7)	23(79.3)	1(3.5)	5(17.2)	0
Oligomenorrhea	10(13.3)	7(70.0)	3(30.0)	0	0
Secondary amenorrhea	34(45.3)	20(58.8)	2(5.9)	10(29.4)	2(5.9)
Normal	2(2.7)	2(100.0)	0	0	0
Total	75(100.0)	52(69.3)	6(8.0)	15(20.0)	2(2.7)

Table 3: Evaluation of treatment modalities and menstrual pattern post-adhesiolysis

Post treatment menstrual pattern	Hysteroscopy n=55 (%)	Blind adhesiolysis n=20 (%)	χ^2	OR (95% CI)	P-value
Normal	40(72.7)	12(60.0)	1.177	1.778 (0.608-5.201)	0.029
Abnormal	15(27.3)	8(40.0)			
-Oligomenorrhea	5(33.4)	1(12.5)			
-Hypomenorrhea	10(66.6)	5(62.5)			
-Amenorrhoea	0	2(25.0)			

DISCUSSION

This study reported an incidence of 1.5% for intrauterine adhesion with about three quarters occurring after uterine curettage mostly for induced abortion among younger low parity women. Menstrual disorder was a common presenting complaint especially secondary amenorrhea although there was appreciable restoration of normal menstruation after treatment.

The incidence of intrauterine adhesions in this study was slightly higher than 1.3% from a previous study in the same centre[2] but lower than reports of 1.7% from Abuja[9]and 4.3% in Lagos, Nigeria.[6] This suggests that the variation is related to the study area and study population with the highest incidence reported among a subset of women attending a reproductive endocrinology clinic in Lagos Nigeria.[6] The age and parity however remained comparable across multiple studies[8,10] with highest occurrence in young women of lower parity in all the studies. In addition, previous studies reported an association between intrauterine adhesions and infertility[8,11] probably due to the importance of a functioning endometrium and a conducive intrauterine environment for conception.

Dilatation and curettage associated with pregnancy especially induced abortion as a predisposing factor for intrauterine adhesion was common in this study similar to previous reports.[2,6,9] In a series, the proportion due to induced abortion was reported to be increasing compared to those from curettage for puerperal complications[4,6]in low-resource countries. This is due to the high incidence of induced abortion in low-resource countries including Nigeria with restrictive abortion laws such that women go to non-doctors[12] for voluntary termination of unwanted pregnancies. A report indicated that 79.2%[9]of women who procured induced abortion patronized non-medical personnel with an array of other morbidities and mortality.[13,14] While contraception remain central in the prevention of unwanted pregnancy, it is hindered by a number of factors relating to the woman, the partner, cultural, economic and religious factors.[13,15] The contribution to intrauterine adhesion from caesarean section in this study compares to reports of2.3%to 19.8% [2,6,9] from similar studies while myomectomy as a factor appear to be reducing compared to previous reports[2,9].The role of infection in intrauterine adhesion suggesting a possible role for severe endometritis in the aetiology has also been reported.[2,6,16] These brings to the fore the role of using the right technique during uterine surgeries especially caesarean delivery and myomectomy as well as correct and aggressive treatment of pelvic infections in women of reproductive age. However, the high rate of menstrual disorders following intrauterine adhesion corroborates previous reports[2,6,8] although presentation with normal menstruation is not impossible and has been reported.[6,8]

Correct management of intrauterine adhesion has attracted an encouraging rate of return to normal menstruation[2,6,9] following the principles of separation of adhesions, keeping the endometrial surfaces separate and hormone administration to encourage endometrial regeneration. While outcome with blind adhesiolysis is good,[2,9] this can be improved further with hysteroscopic lysis for a better future reproductive performance.[8,16-18] The statistically significant improvement following

hysteroscopic adhesiolysis corroborates the relevance of the new technology and is encouraging as hysteroscopic facilities are increasingly becoming available in centres across Nigeria and most low resource settings.

In conclusion, complications from dilatation and curettage for induced abortion remains the commonest risk factor for uterine synaechiae; safe abortion services and post abortion care may reduce the morbidity. Also, hysteroscopic adhesiolysis should be the preferred treatment modality for managing uterine synaechiae.

REFERENCES

1. Asherman JG. Amenorrhoea Traumatic (atretica). J Obstet Gynaecol Bri Emp 1948; 55:23-27.
2. Abiodun OM, Balogun OR, Fawole AA. Aetiology, clinical features and treatment outcome of intrauterine adhesions in Ilorin, North Central Nigeria.West Afr J Med 2007; 26(4):298-301.
3. Deans E, Abbot J. Review of intrauterine Adhesions. J Minimally Invasive Gynaecol 2010; 17(5):555-569.
4. Monga A, Dobbs S (Eds). Disorders of the Menstrual Cycle. Gynaecology by Ten Teachers 19th ed. London, Book Power 2011: 42.
5. Yu D,Wong YM,Cheong Y,Xia E,Li TC. Asherman syndrome-one century later. Fertil Steril 2008; 89(4):759-779.
6. Ogedengbe OK, Ogunmokun AA. The Trend of Intrauterine Adhesions in Lagos Nigeria. Trop J Obstet Gynaecol 1999; 16(1):57-60.
7. Alex S, Wendy YC, Decherney AH. Amenorrhoea. In: Decherney AH, Nathan L, (Eds.). Current Obstetric and Gynaecologic Diagnosis and Treatment 11th ed. New York, McGraw-Hill 2013:889-890.
8. Otubu JAM, Olarewaju RS. Hysteroscopy in Infertile Nigerian Women. Afr J Med Medical Sci 1989; 18:117-120.
9. Efena ER, Umezulike AC, Okafor UV.Clinical and Demographic characteristics of women with intrauterine adhesions in Abuja, Nigeria. Obstet Gynaecol Int 2012.doi:10.1155/2012/435475
10. Ogedengbe OK, Giwa-Osagie OJ, Usifoh CA, Solanke O. The Impact of the Lagos Manual Vacuum Aspiration (MVA) Training Courses on Medical Education. Niger J Med 1998; 17(3):210-212.
11. Kodaman PH, Arici A. Intrauterine adhesions and fertility outcome: how to optimize success? Curr Opin Obstet Gynecol 2007; 19(3):207-214.
12. Okpere E. Legal and illegal (induced) abortions. Clinical Gynaecology. Benin-City, Mindex Publishing, 2007: 247-252.
13. Adeniran AS, Fawole AA, Adesina KT, Aboyeji A, Ezeoke GG. Maternal near-miss in a great grandmultipara following unsafe abortion: A focus on the uncommon contributing factors. Int Medical Technological Univ Journal 2014; 5(1):11-14.
14. Adeniran AS, Fawole AA, Aboyeji AP, Adesina KT. Uncommon Presentation of Foetal Bone Retention after Surgical Induced Abortion- A Case Report. J Med Biomed Res 2014; 13(1):86-89.
15. Balogun O, Adeniran A, Fawole A, Adesina K, Aboyeji P, Adeniran P. Effect of male partner's support on spousal modern contraception in a low resource setting. Ethiop J Health Sci 2016; 26(5):439-448.
16. Dawood A, Al-Talib A, Tulandi T. Predisposing factors and treatment outcome of different stages of intrauterine adhesions.J Obstet Gynaecol Can 2010;32(8):767-770.
17. El-Mazny A, Abou-Salem N, El-Sherbiny W, Saber W. Outpatient hysteroscopy: a routine investigation before assisted reproductive technique? Fertil Steril2011; 95(1):272-276.
18. Yu D,Li T,Xia E,Huang X,Peng X.Factors affecting reproductive outcome of hysteroscopic adhesiolysis for Asherman's syndrome.FertilSteril 2008; 89(3):715-722.