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Acquired Gynaetresia: A Retrospective Review of Cases Managed at a Hospital in Rural Southwest Nigeria

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Abstract

Objective: To determine the total number of cases with acquired gynaetresia seen at the facility within the stated period and outline the demographic and clinical characteristics of the women. Materials and Methods: All women who presented with acquired gynaetresia, between January 2019 and December 2024 at Wesley guild hospital, a unit of Obafemi Awolowo University teaching hospitals complex, in Ilesa, Southwest Nigeria. A structured questionnaire was used to collect the data. This was processed using Microsoft excel with descriptive statistics. Results: During the period under review, forty-four women were seen at the gynaecological outpatient clinic with diagnosis of acquired gynaetresia out of a total of 935 women with various gynaecological conditions making a prevalence of 4.7%. Approximately 57% of the patients had stenosis following insertion of corrosive pessaries, there was also secondary infertility in these women who used corrosive pessaries. Seven of the patients who had gynaetresia, also had vesicovaginal fistula and there were two cases of recto-vaginal fistula. They all had surgery done, 75% had improvement at first attempt, with improved ability to achieve peno-vaginal intercourse. The remaining 25% had varying other procedures done at different timelines based on the associated complications they had. Conclusion: Acquired gynaetresia is increasingly becoming a major concern in gynaecological practice especially with the increasing use of corrosive pessaries.

Keywords

Acquired Gynaetresia, Corrosive Pessary, Genital Fistula, Dyspareunia, Vaginoplasty, Obstructed Labour, Hysterectomy

1. Introduction

Acquired gynaetresia is increasingly becoming a major concern in gynaecological practice. This manifests as the reduction in the depth and capacity of the vagina, this can present as either a complete occlusion where the vaginal canal is totally obliterated or partial occlusion. The adhesions that occur could also vary from flimsy adhesions to being dense fibrotic, this will ultimately affect the type of surgical intervention, the ease of the treatment, complications and prognosis thereafter [1] [2]. It is a unique, complex and difficult clinical condition in Nigeria or anywhere it occurs because of the anatomic distortion it creates, the disruption of normal physiologic functions such as cryptomenorrhea, apareunia, and in some cases infertility, and genital tract fistulas. These all contribute negatively to the affected women's quality of life. This condition is rare in high-income countries and follows therapeutic procedures such as extensive pelvic surgery or radiotherapy, however in developing nations especially Nigeria, acquired gynaetresia is frequently a tragic consequence of poverty, poor healthcare choices, limited access to quality healthcare, harmful trado-medical practices [3]. This difference in the aetiology will also require a different and more pragmatic approach in addressing this challenge such as public enlightenment campaign, training and targeted interventions to address the menace and infrastructure provision. Other identified causes are birth related conditions such as obstructed labour, caesarean hysterectomy, vaginal hysterectomy and total abdominal hysterectomy. The aim of this study is to review the cases seen with this condition and treated over a period of 72 months at a federal teaching hospital in southwest Nigeria [3].

Many case reports and series exist about this disturbing problem; we have decided to highlight our findings to provide more insight to the disturbing figures that exist regarding this gynaecological condition.

2. Methods

2.1. Study Design

Study design and setting: This study was a retrospective, descriptive observational analysis of patients managed within the Urogynaecological unit at Wesley Guild Hospital (WGH), Ilesa, a unit of Obafemi Awolowo University Teaching Hospitals Complex between January 2019 and December 2024.

2.2. Study Population

The data was retrieved for women seen within the stated period with acquired gynaetresia. A total of 44 women presented with this problem and were managed within this period. The patient's records were matched with the diagnostic keyword which was gynaetresia. Pre operative and post operative findings were collected and confirmed to be similar.

2.3. Data Collection

Data was collected with a proforma from admission and discharge registers, sur-

gical registers, patient case notes, operation notes and nursing registers. The data collected included socio-demographic details of age, marital status, occupation, tribe, educational status, parity. The details of presenting complaints, specific interventions or actions that occurred which preceded the complaints, the progression of the problems presence or absence of complications such as obstetric fistula, cyclical abdominal pains, the care received so far. The socio-economic, sexual, marital and psychological effects of this on her was also collected and recorded. Women who presented with history of inability to achieve peno-vaginal sexual intercourse were asked to know if it was a recent event or not and when the event began. This is to have an idea of the timeline of the onset. Information on the events that preceded this was also obtained, they typically volunteered the information that some medication was inserted into the vaginal either at a traditional healer's facility of procured from the same facility and inserted by the patient, usually for the treatment of a gynaecological condition such as infertility, uterine fibroids of genital fistula. The type of corrosive pessary used; "Tumorex" was also mentioned by the patients and some of them brought the same to the gynaecology clinic at the subsequent visit. The time it took between insertion and notice of symptoms was also collected and documented.

2.4. Case Definition

Acquired gynetresia was defined as a condition that occurs as a result of stenosis or occlusion of the vaginal lumen resulting from a form of traditional practice, complications of delivery or surgical intervention such as use of herbal pessary, female genital mutilation, obstructred labour etc. [2]. The eventual depth of the vaginal lumen is measured to determine classification into partial or total classification. With the use of a Size 10 hegar dilator, the depth of the vagina is measured and checked with a measuring tape. Depth of 2 cm of less is considered complete occlusion, while 3 cm to 6 cm is considered partial occlusion [2].

2.5. Outcome of Interest

The primary outcomes expected after surgery was the ability to achieve penetrative sexual intercourse in those who had apareunia and satisfactory in those who experience dyspareunia as a result of stenosis instead of occlusion. This was done via simple verbal feedback in the follow-up clinic visits which extended to 6 months if there are no complaints.

The majority had adhesiolysis with vaginal mould insertion used. This is a simple cost-effective way to address the gynetresia, if the patient was willing to comply with the vaginal mould insertion. In addition to this, the surgery was limited to adhesiolysis and use of mould alone, when there was minimal to moderate fibrosis. The use of flaps was considered in thtose who had been operated before, those who had severe rigid fibrosis. Post-operative dilation was commenced 2 days after the surgery. A dildo is used, and inserted into the vagina after lubrication. The women are encouraged to use it as frequently as possible, while they re also encouraged to have

sexual intercourse as they desire, though 3-5 times a week is encouraged.

2.6. Data Analysis

The collected data was inputted into Microsoft excel and analyzed. Descriptive and inferential statistics were employed using simple percentages and Chi square for categorical variables to establish association.

3. Results

Data of 44 patients who had acquired gynaetresia with surgical repair was retrieved between January 2019 and December 202 During this period a total of 935 women with various gynaecological conditions were seen at the gynecological outpatient clinic, with a prevalence of 4.7%. The data was inputted and analyzed. The mean age was 37.5 ± 6.8 years. 40 were still married at the time of the presentation. 2 were widowed and 2 separated from their spouse at the time of presentation.

Table 1. Patient's demographics and diagnostic information.

	Frequency N (%)
	N
Age Range	28 - 52 years
Mean ±SD	36.77 ± 6.29
Sex	female
Educational status	
Primary	12 (27.3%)
Secondary	17 (38.6%)
Tertiary	15 (34.1%)
Tribe	
Yoruba	35 (79.6%)
Ijaw	4 (9.1%)
Igbo	4 (9.1%)
Others	1 (2.2%)
Age at onset of gynaetresia (years)	
20 - 30	7 (15.9%)
31 - 40	26 (59.1%)
41 - 50	8 (18.2%)
≥50	3 (6.8%)
Duration of before presentation (years)	
≤1	9 (20.5%)
1 - 5	25 (56.8%)
6 - 10	7 (16.0%)
≥10	3 (2.2%)
Parity	
1	29 (65.9%)
2	11 (25.0%)
≥3	4 (9.1%)

All the patients involved had primary and secondary school education, with 15 having tertiary education and 2 were educated up to master's degrees as shown in Table 1.

Eleven women (11) developed gynaetresia on account of obstructed labour and complications during caesarean delivery for obstructed labour, this accounted for 25%.

There was a single case of gynaetresia following dilation and curettage for an unwanted pregnancy as shown in Figure 1.

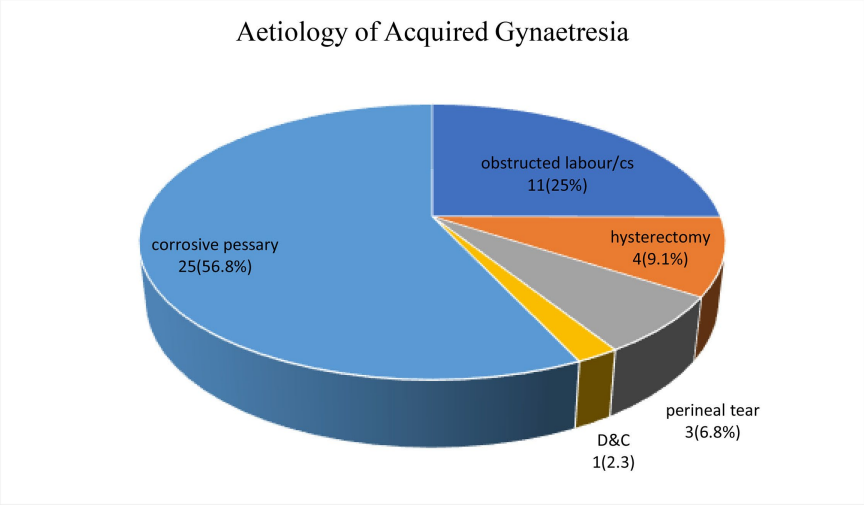

Figure 1. Aetiology of Acquired gynaetresia.

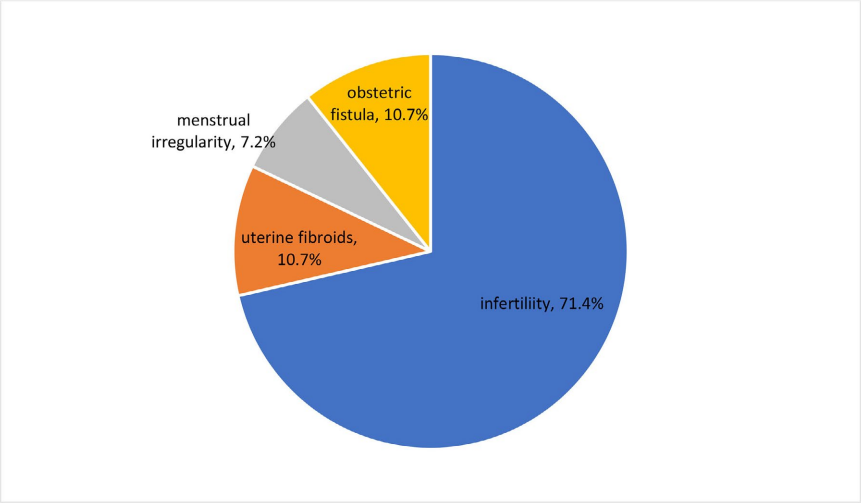

Figure 2. Indications for use of corrosive pessary.

We had 42 of the women presenting with difficulty or inability to achieve peno-vaginal sexual intercourse due to the extent of vaginal stenosis, this accounted for 95.5%. All the cases of vesico-vaginal fistula and one of the women with rectovaginal fistula occurred as a result of obstructed labour, the second case of rectovaginal fistula developed as a result of insertion of corrosive pessary as shown in Ta-

ble 2. Majority of the women (71.4%) who inserted corrosive substance did so to cure their infertility while two (10.7%) of the cases of vesicovaginal fistula also used the corrosive pessaries, hoping to achieve a cure in the process (Figure 2). In 2 cases, 4.54% gynaetresia was an incidental finding, they had presented with vesicovaginal fistula, they were widowed and not sexually active.

Table 2. Diagnosis and associated complications.

Variable	Frequency	Percentage
Previous attempt at repair		
None	28	63.7
1	13	29.5
2	2	4.5
3	1	2.3
Vaginal stenosis		
Yes	42	95.5
No	2	4.5
Haematuria		
Yes	4	9.1
No	40	89.9
Associated Complications		
Amenorrhea	1	2.3
Apareunia	14	31.8
Dyspareunia	16	36.4
Hematometra	2	6.6
Infertility + VVF	4	9.1
RVF	2	4.5
VVF	3	6.8
None	1	2.3
Fertility		
Primary	15	34.1
Secondary	29	65.9

All had surgical intervention for the treatment of the gynaetresia. A single stage vaginoplasty was done. This was followed up with subsequent vaginal dilation with a mould, while 10 had Singapore flap utilized in the repair accounting for 22.7%. The women who were sexually active were asked to commence sexual activity once they returned home, this was to be done alongside with the use of vaginal mould to preserve the patency of the vaginal canal created for them, while those who had vesicovaginal fistula repair were advised to abstain from sexual intercourse for 3 months and also did not have vaginal dilation done with the use

of moulds. Thirty three (33) reported an improved ability to achieve peno-vaginal intercourse following the procedure at 6 weeks clinic visit and at 3 months clinic visit. 2 were rescheduled for repeat vaginoplasty with Singapore flap, this was sequel to the reocclusion which occurred following the initial procedure. They were followed up at 6weeks, 3months and 6 months interval and they also reported satisfactory outcomes with peno-vaginal intercourse. The women with secondary infertility were referred for evaluation and management at the infertility unit. Those who had associated vesicovaginal fistula had the fistula repair done at the same surgery.

The patients who had concomitant vesicovaginal fistula and rectovaginal fistula were advised to abstain from sexual intercourse following the surgery for a period of 3 months, they were advised to resume coitus after this and it was discovered that the vagina was still patent in 4 of the cases. The other three (3) women had repeat adhesiolysis after 6months to correct the gynaetresia as shown in Table 3.

Table 3. Clinical outcomes following surgical intervention.

Variable	Frequency	Percentage
Vesicovaginal Fistula repair with successful closure		
Yes	7	100.0
No	0	0.0
Rectovaginal fistula repair with closure		
Yes	2	100
No	0	0
Improvement with penetrative intercourse following surgery		
Yes	33	75.0
No	11	25.0
Repeat repair for gynaetresia		
Yes	7	100
No	0	0
Final Outcome		
Satisfactory	42	95.5
No need for further surgery	2	4.5

Table 4 shows the factors are associated with successful outcomes of surgical repairs of patients with gynaetresia. There was a significant association previous vaginoplasty (Fisher's P = 0.0187), co-existing genital tract fistula (Fisher's P = 0.017), severe gynaetresia (Fisher's P = 0.015), the use of grafts or flaps (Fisher's P = 0.005) and successful primary outcome. The higher the number of previous attempts at vaginoplasty the lower the chances successful primary outcome. Also, fistular-associated gynaetresia and severe form of gynaetresia have poorer out-

come of surgery. The use of inter-positional grafts and flaps improve the outcome of surgery.

Table 4. Factors associated with successful surgical repair of acquired gynaetresia.

Variables	Primary Outcome		Statistical indices
	Yes (%)	No (%)	
Age (in Years)			
20 - 30	2 (28.6)	5 (71.4)	Fisher's P = 0.2444
31 - 40	20 (70.0)	9 (30.0)	
41 - 50	4 (50.0)	4 (50.0)	
≥51	1 (33.3)	2 (66.7)	
Parity			
1	14 (53.8)	12 (46.2)	Fisher's P = 0.7667
2	7 (63.6)	4 (36.4)	
≥3	2 (50.0)	2 (50.0)	
Previous Attempts at repair			
0	20 (71.4)	8 (28.6)	Fisher's P = 0.0187
1	5 (38.5)	8 (61.5)	
2	0 (0.0)	2 (100.0)	
3	0 (0.0)	1 (100.0)	
Co-existing Genital tract fistula			
Yes	2 (20.0)	8 (80.0)	Fisher's P = 0.017
No	16 (66.7)	8 (33.3)	
Severity of Gynaetresia			
Mild/Moderate	28 (75.7)	9 (24.3)	Fisher's P = 0.015
Severe	4 (30.8)	9 (69.2)	
Procedures Performed			
Inter-positional flaps/grafts	24 (85.7)	4 (14.3)	Fisher's P = 0.005
Escarotomy	7 (53.8)	6 (46.2)	

4. Discussion

Acquired gynaetresia is a still a significant reproductive health concern in south-west Nigeria, with obstetric trauma and insertion of corrosive pessaries being the leading cause of the problem in this region. The commonest cause identified was insertion of corrosive pessaries which accounted for 56.8% of the cases seen, the reasons for the use of this was mainly because of infertility which was secondary infertility in all the women seen. This accounted for 71.4%, the other reasons were uterine fibroids, in three women, vesicovaginal fistula in 3 women and 2 used the pessaries for menstrual irregularities, these accounted for 10.7%,10.7% and 7.2% respectively similar to the previous report [4] The use of corrosive vaginal pessa-

ries have been documented in literature almost fifty years ago [5], but preceding that time, obstretric trauma, female genital mutilation were the leading causes of acquired gynetrsia [5] [6]. The trend has however changed, with corrosive pessaries being the major risk factor. Despite of the increase in knowledge, improved socioeconomic conditions and better access to healthcare and specialist medical doctors, the use of corrosive vaginal pessaries has continued to sincrease, and has become the leading cause of acquired gynaetresia as attested to in some publications within the country [3]. The use of corrosive pessaries is not limited to women without formal education as shown in this study, rather well-educated women also patronize quacks who introduce the pessaries to them. The pessaries have been documented to contain potash and herbs which cause chemical vaginitis [3] [7] [8]. However, there are some present and marketed as "tumorex" the chemical component of this is however yet to be known. The use of these substances' highlights, the desperation of these women to seek care from the alternative sources rather than orthodox medicine. Some of the reasons given were aversion to surgery and treatment for infertility.

Some of the women who presented, 15 women, accounting for 34.1% had surgical intervention done before by orthodox medical practitioners, however, the procedures were not successful. The reasons for these were not known, with some reporting no improvement right after the surgery. All the women who presented at our center had surgery done. Some others developed the condition as a consequence of traumatic vaginal delivery with accompanying vesicovaginal fistula. The treatment offered was a modification of the McIndoe vaginoplasty [9], which involves careful dissection in the area of where the anterior and posterior vaginal walls were bound together. In many cases, there is moderate to severe scarring with complete or partial loss of the vaginal epithelium and the cervix would no longer be visible, having sloughed off, when the corrosive substance was inserted. we usually create a reasonable depth and width of approximately 10 cm and 4 cm respectively. In situations with hematometra, a combined abdominal and vaginal approach is done, where a probe is inserted abdominally via an incision on the uterus and it exits through the cervical canal. Cases which result from obstructed labour, difficult deliveries, previous hysterectomies are far less mutilating compared with those that result from the insertion of corrosive pessaries. The use of the Singapore flap, is easier, cosmetically better and has been reported to have better outcomes [10]. This was applied in those with extensive scarring, otherwise adhesiolysis, with use of vaginal moulds was sufficient to keep the vagina patent for coitus. This mutilating condition severely affects the quality of life of these women; concerted efforts need to be put in place to help the society and eradicate this from the community

Study Limitation

This was a retrospective, descriptive study, designed to analyze cases we had seen at our center over a period of time and it was a single-center study.

5. Conclusions

This study highlights the need for improved maternal healthcare, prevention, and multidisciplinary approaches to diagnosis and treatment to stem the rising tide of acquired gynaetresia which is still common in our environment, especially with the use of corrosive pessaries.

This study adds to knowledge about this condition and serves as a reminder to everyone involved in the practice of women's health to be more dedicated in eradication of the problem.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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