



(REVIEW ARTICLE)



Management of Bartholin abscess in a teaching hospital, ESUTH, Parklane, Enugu, Nigeria: A 5-year review

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Abstract

Background: Bartholin glandular diseases are common problems in women of reproductive age. When the gland obstructs and gets infected it forms an abscess. This review looked at the different patterns of presentation, the various modes of management and recurrence rate of the disease.

Aim: To review the presentation, treatment and outcome of Bartholin abscesses in ESUT Teaching Hospital.

Methodology: This was a 5-year retrospective study of all Bartholin abscesses managed in the centre from 31st december 2022 to 1st January 2018.

Result: Two thousand, seven hundred and twenty-eight gynaecological admissions were recorded over the period out of which 26 were Bartholin abscesses. This gave a prevalence of 0.95% (95:10,000 admissions) of gynaecological admission in the center. Majority of the patients 16(61.5%) were aged 20-29 years, 15(57.69%) were nulliparous and 14(53.85%) were married. Twenty-six (100%) had swelling, although four cases (15.38%) were incidental findings. All the patients had marsupialization and only 2 cases re-occurred.

Conclusion: Bartholin abscess was a rare disease in ESUTH and marsupialization was an effective method of treatment with minimal recurrence.

Keywords: Bartholin Abscess; Teaching Hospital; Enugu; Nigeria; 5-Year; Review

1. Introduction

Bartholin glands were first described by Caspar Bartholin, a Dutch anatomist in 1677.¹ These are pea sized pair glands about 0.5cm in diameter found at the base of the labia minora. Each gland secretes mucus into a 2.5cm duct that opens onto the vestibule on each side of the vaginal orifice at 4 and 8 o'clock positions.² A normal gland is not palpable and they secrete fluid that helps to lubricate the vagina.^{1,2}

Disorders of Bartholin glands include cyst, abscesses and rarely benign tumours and carcinoma.³ Bartholin duct cysts are the most common cystic growth in the vulva.^{4,5} Two to three percent of women of reproductive age will develop swelling of one or both Bartholin glands at some times in their life.¹⁻³

These diseases occur frequently in women between the ages of 20 and 30 years.^{1,2} Gland enlargement in women older than 40 years is rare and should be evaluated to exclude a Bartholin gland carcinoma which account for 1-2% of all vulvar malignancy.^{1,2,4} Bartholin abscess can also occur in young girls.⁶

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Bartholin cysts form when the ostium of the duct becomes obstructed, resulting in retention of secretions and distention of the gland or duct with fluid.⁷ Obstruction could be from nonspecific inflammation, infection or trauma (like posterior colporrhaphy or mediolateral episiotomy), inspissated mucus and congenital narrowing of the duct.^{7,8} Bartholin abscesses result from an infected cyst or a primary gland infection. If left uncared, the abscess may burst spontaneously through the lower vaginal wall.⁹

Bartholin gland disease may be an incidental finding in an asymptomatic woman or will present as a vulvar swelling with or without pain causing dyspareunia, difficulty in sitting or walking with abducted thighs.^{7,10} A malignancy should be suspected in a woman older than 40 years with a painless vulva mass or with prior history of labial malignancy.

The goal of treatment is not only to provide relief of symptoms but also to prevent recurrence.¹¹ Several techniques for drainage have been described but no large prospective studies have been performed to determine relative efficacy and complications.¹² Treatment modalities include: (1) excision of gland; (2) marsupialization; (3) fistulation using Word catheter, Foley catheter or Jacobi ring; (4) silver nitrate gland ablation; (5) needle aspiration with or without alcohol sclerotherapy; (6) incision and drainage; (7) cyst or abscess fenestration, ablation or excision using carbon dioxide laser.^{12,13}

Complete surgical excision of the gland requires general or regional anaesthesia and was described in 1942 by Catell.¹⁰ It is used for recurrent cysts refractory to previous techniques and when there is suspicion of malignancy of the Bartholin gland in women older than 40 years.^{7,10,14} However it was suggested that the morbidity of gland excision may not be justified for this rare cancer and cyst wall biopsy following incision and drainage was recommended.¹⁵ Complications of surgical excision include hemorrhage, postoperative hematoma, wound infection, disfigurement, dyspareunia and recurrence with failure to remove the entire cyst wall.¹⁶ Marsupialization involves the approximation of ductal epithelium of the cyst or abscess to the overlying introital epithelium. It was first described in 1950 by Jacobson as an alternative to excision.¹⁰ Recurrence rate is about 10-15%.^{2,4,8} Incision and drainage followed by irrigation of the abscess cavity and packing has a high rate of abscess or cyst recurrence.¹ though it provides temporary relief.^{7,16} It also requires multiple changing of packs, a procedure which is painful.

Fistulation could be accomplished using Word catheter, Foley catheter or Jacobi ring. Word catheter was introduced in 1960 and some authors advocate its use because it is safe, effective, simple to apply and can be done as an office procedure.^{1,2} Word catheter can be irritating and may dislodge or fall out before the tract is reepithelialized and is not readily available in this part of the world. It has a low cyst or abscess recurrence rate. Jacobi ring and a novel use of plastic tubing for abscess drainage create two fistula tracts for drainage unlike the single tract created by Word catheter.^{17,18}

Needle aspiration of a Bartholin cyst or abscess has a recurrence rate of 38%.¹ It may provide temporary relief.⁷ However it can be carried out with alcohol sclerotherapy in which following aspiration of gland content, 70% alcohol is injected into the cavity and then drained out after 5 minutes. Complications include hematoma, tissue necrosis and scarring.^{10,12}

Carbon dioxide laser can be used to excise, ablate a Bartholin cyst or abscess or may be used to create opening in the vulvar skin for the cyst to be drained. Single laser treatment gave cure rate for Bartholin cyst as high as 86.6%¹⁹, 88.56%²⁰ and 95.7%.¹¹ Recurrence rate is low when used to treat a cyst but higher when used for an abscess; however, the procedure is expensive.¹⁰

Silver nitrate can be used to ablate the Bartholin gland affected by a cyst or abscess. A stick of silver nitrate is inserted into the cavity following incision and drainage. It causes the cyst cavity to form a small solid lump that may fall off on its own or is removed after 2-3 days. It is associated with low recurrence rate (3.8%) and was found to be an effective, simple, inexpensive outpatient treatment of Bartholin gland diseases.²¹ Complications include chemical burns of the labial and surrounding mucosa with hemorrhagic or purulent discharge.¹⁰

Recurrence is the most common complications arising from treatment of Bartholin cyst or abscess. Others include cosmetic scarring, delayed wound healing, bleeding, necrotizing fasciitis and toxic shock syndrome.

This study was designed to review cases of Bartholin gland disease managed at ESUT Teaching Hospital, Parklane, Enugu, with the aim of determining the frequency of the diseases, the age group affected and the treatment modalities with their attendant complications.

Aim

To review the presentation, treatment and outcome of Bartholin abscesses in ESUT Teaching Hospital

Objectives

The objectives were to determine the:

- Prevalence
- Major presenting features and
- Recurrence rate of Bartholin abscess in ESUTTH Enugu

2. Materials and Method

This was retrospective study of all patients managed for Bartholin abscess in ESUTTH from 31ST December 2022 to 1st January, 2018. There were 2,728 gynaecological admissions during the period and 26 patients had Bartholin abscess. Data was collected using a proforma from the admission register in the gynaecology ward and patients' case notes. Relevant data obtained from the case notes include age, parity, presenting symptoms, prior history of vulvar surgery or Bartholin gland disease, type of treatment for present disease and complication noted. The data were analyzed by simple percentage. These data were analyzed to yield frequencies and percentages, and presented in tables using Statistical Product and Service Solution (SPSS) version 25.0.

3. Results

Two thousand, seven hundred and twenty-eight gynaecological admissions were recorded over the period out of which 26 were Bartholin abscesses. This gave a prevalence of 0.95% (95:10,000 admissions) of gynaecological admission in the center. Majority of the patients 16(61.5%) were aged 20-29 years, 15(57.69%) were nulliparous and 14(53.85%) were married. Twenty-six (100%) had swelling, although four patients (15.38%) were incidental findings. All the patients had marsupialization and only 2 cases re-occurred.

Table 1 Distribution of the patients based on their biodata

Characteristics	Frequency	Percentage (%)
Age (years)		
Less or equal to 19	2	7.69
20-29	16	61.53
30-39	8	30.76
40 and above	0	0
Total	26	100
Parity n=26		
Nulliparous	15	57.69
Primiparous	6	23.08
Multiparous	5	19.23
Marital status (n=26)		
Single	12	46.15
Married	14	53.85

All the patients 26(100%) had vulval swelling, but 4(15.38%) were incidental findings. 11(42.3%) had pain.

Table 2 Presenting clinical features

Clinical feature	Frequency	Percentage (%)
Vulva swelling	26	100
Pain	11	42.30
Incidental finding	4	15.38
Dyspareunia	12	46.15
Discomfort in sitting or walking	10	38.46
Previous gland disease	6	23.07

This shows the distribution of the patients based on the treatment option received. All the patients had marsupialization

Table 3 Treatment option offered

Treatment	Frequency	Percentage
Incision/drainage	0	0
Marsupialization	26	100
Word catheter	0	0

This shows the number of recurrences recorded. Only 2 cases (7.7%) had recurrence.

Table 4 Recurrence rate

Treatment	Frequency	Percentage
Incision/drainage	0	0
Marsupialization	2	7.7
Word catheter	0	0

4. Discussion

The aim of this study was to review the presentation, treatment and outcome of Bartholin abscesses in ESUT Teaching Hospital. From the study the prevalence of the condition was 0.95%.

Bartholin abscesses and cyst account for 2% of all gynaecologic visits per year.^{2,4,22} The prevalence is equally reported as 2%.^{3,12} A study of asymptomatic women using MRI gave a prevalence of Bartholin gland cysts as 3.3%.³

All patients in this study were aged between 18 and 34 years which agrees with values from other reports.^{1,2} This may be due to gradual involution of the gland in women over 30 year of age.² Swelling of the gland in women older than 40 years should raise a suspicion of malignancy.³ A report from Ilorin showed the occurrence of Bartholin abscess in 5 girls aged between 8 and 16 years.⁶ This varies from the observation in this study, and the variation might be due to differences in lifestyles of the studied tribes.

Most of the women affected in this review were nulliparous (57.69%) with similar rate of occurrence in primiparous and multiparous women. This result differs from a report in Lisbon where 33% of the women studied were nulliparous.¹⁹ Women of high parity were at lowest risk of Bartholin abscess occurrence.^{23,24} Four of the women reviewed (15.38%) were pregnant. They presented with Bartholin gland abscesses in their first trimester which were managed surgically.

The commonest feature on presentation was vulva swelling or lump (100%), which was present in all cases. It was an incidental finding in 15.38% of cases discovered in the course of evaluating them for other gynecological disorders. Dyspareunia (46.15%) and vulva pain (42.30%) were the next most common complaints in patients with Bartholin abscess.

All the patients 100% were treated with marsupialization with a recurrence rate of 7.7%. Marsupialization was performed more frequently possibly because most practitioners were familiar with the procedure or because of the low recurrence rate associated with its use. Most authors advocate the use of marsupialization as an alternative to fistulation using Word catheter,² or for treatment of recurrent abscesses or cyst.^{4,8} Word catheter accomplishes the same result as surgery with minimal or no trauma.⁸ Other modalities for treatment of Bartholin abscess or cyst were not used here because of non-availability of the needed equipments and non-familiarization with the skill required for these procedures.

The recurrence rate of 7.7% following marsupialization is closer to what was reported,^{4,8} but much lower than 24.5% reported in some studies.^{10,14} However, a systematic review of literatures pertaining to the management of Bartholin gland diseases by Wechter showed no recurrence after marsupialization and the recurrence rate following other modalities of treatment varied from 0% to 38%.¹²

Various studies have tried to compare the different treatment modalities for Bartholin abscess,^{14,18,25-29} including a systematic review, which showed that marsupialization was associated with low recurrence rate as was found in our study.¹²

5. Conclusion

Bartholin abscess was a rare disease in ESUTTH, and marsupialization was an effective method of treatment with minimal recurrence.

Recommendation

Marsupialization is recommended as an effective management option for Bartholin abscess.

Compliance with ethical standards

Disclosure of conflict of interest

There was no conflict of interest

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