

**PREVALENCE, PATTERN OF PRESENTATION AND MANAGEMENT OF
BARTHOLIN'S GLAND CYST/ABSCESS AT USMANU DANFODIO UNIVERSITY
TEACHING HOSPITAL, SOKOTO: A TEN YEAR REVIEW**

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ABSTRACT

Background: The Bartholin's gland cysts and abscesses are one of the common vulva cyst or abscesses in gynaecological practice. Symptomatic cases give significant discomfort to affected individuals and have a negative impact on their quality of life. **Aim of Study:** The study was aimed at determining the prevalence, pattern of presentation and management of Bartholin's gland cysts and abscesses at Usmanu Danfodiyo University Teaching Hospital, Sokoto State. **Material and Method:** This was a ten-year retrospective study of cases of Bartholin's gland cysts and abscesses that were managed at UDUTH from 1st January 2009 to 31st December 2018. **Results:** During the study period, there were 3,924 gynaecological surgical cases managed, among which 81 were Bartholin's gland cysts and abscess (19 were cysts and 62 were abscesses) giving prevalence of 2.02%. The mean age of the patients was 26.3 ± 3.9 years with 44% of them being within the age range of 25 to 29 years. There was previous history of the condition in 52% of the cases. Previous history was the commonest risk factor that was found for the occurrence of Bartholin's gland cyst or abscess and this was followed by previous history of sexually transmitted disease in 40% of the cases. Pain and swelling were the commonest presenting symptoms in 65.3% of cases. The left vulva was the commonest site affected as seen in 70.7% of the patients. Swab culture result were retrieved only in 30 patient and *Escherichia coli* was the commonest organism isolated in 86.7% of the cases. The disease presented commonly in form of abscess as observed in 58 (77.3%) of patients then cyst in 17(22.7%). All the patients had Marsupialisation as the modality of treatment. **Conclusion:** The prevalence of Bartholin's gland cyst and abscess in this study was 2.02%. Left Bartholin's gland was the commonest site affected. *Escherichia coli* was the predominant organisms isolated among the cases managed during the years under review. Marsupialisation remains the mainstay of treatment in low resource setting.

KEYWORDS: Bartholins gland, cyst, abscess, Nigeria.

INTRODUCTION

Bartholin's (Greater vestibular gland) cyst and abscess are common benign vulva conditions encountered among women of reproductive age.^[1] Bartholin's glands are two structures of cuboidal epithelium each the size of a pea located postero-laterally within the vestibular bulb. They are drained by ducts of transitional epithelium to open onto the vestibule between the hymen and labium minus at about 5 and 7 o'clock positions. They secrete clear mucus for lubrication during sexual intercourse.¹ Obstruction of the distal Bartholin's duct may result in retention of the secretions and formation of a cyst.^[1,3] The cyst may become infected and an abscess may develop. However, a cyst does not necessarily have to be present before gland abscess develops.^[1-4]

Approximately 2% of women, mostly in their reproductive age group develop Bartholin's gland

abscess at some point in their life.^[2] They occur at a rate of 0.55 per 1000 person-years and in women aged 35 – 50 years at a rate of 1.21 per 1000 person-years.^[3] The incidence of Bartholin's duct cysts increases with age until menopause, and decreases thereafter.^[5] Clearly identified causes of Bartholin's cysts and abscesses are elusive. However, the risk profile is similar to those of women at risk for sexually transmitted diseases.^[7] Some of the risk factors for Bartholin's cyst/abscess include previous history of Bartholin's gland cyst/abscess, multiple sexual partners, sexually transmitted infection, mediolateral episiotomy and vulva trauma.^[7,9,10]

Polymicrobial and anaerobes are the most common pathogens isolated in Bartholin's gland abscesses.^[3] These include *bacteroides fragilis*, *clostridium perfringens*, and *peptostreptococcus*. *Neisseria gonorrhoea* is the most common aerobic organism

isolate; others include; *Chlamydia trachomatis*, *Staphylococcus aureus*, *Escherichia coli* and *pseudomonas spp.*^[3]

Marsupialisation, which involves elliptical excision of part of the cyst wall,^[1] is the main stay surgical treatment for Bartholin's cyst and abscess as opposed to excision of the gland which is mainly reserved for recurrent cases.^[1,4]

Marsupialisation is simple, fast, safe and ensures some functional activity of the gland since adequate drainage is provided.^[9,13,14] It has low rate of recurrence between 3 – 6% and minimal complication in good hands.^[14,15] Gland excision has also been recommended as the primary surgical procedure in cyst and abscesses in women over the age of 40 years because of possibilities of adenocarcinoma of Bartholin's gland.^[1] Complications associated with marsupialisation include haematoma formation, infection, and dyspareunia.

Bartholin's gland abscess constitutes a significant presentation to the gynaecologists. Adequate knowledge of diagnosis, safe and effective treatment operation are imperative to ensure a good quality of life for sufferers. The aim of the study was to determine the prevalence, pattern of presentation and management of Bartholin's gland cysts and abscesses in the Usmanu Danfodio University Teaching Hospital, Sokoto State, Nigeria.

METHODOLOGY

This was a retrospective cross-sectional study on cases of Bartholin's cyst/abscess managed at UDUTH between 1st January 2009 and 31st December 2018. The list of cases of Bartholin's gland cyst/abscesses during the study period was obtained from medical record office, gynaecological ward admission record, and theatre records. Out of 81 cases, 75 folders were available for analysis and retrieval rate was 92.6%. The case files were retrieved from the central library and relevant information on socio-demographic characteristics, mode of presentation, risk factors, site of the disease, parity, and management were obtained. The total number of gynaecological surgical cases during the study period was also obtained.

The information obtained was analyzed using SPSS version 22. Tables and figures were used to display the results.

RESULTS

There were 3,924 gynaecological surgical cases managed during the study period, of which 81 were for Bartholin's gland cysts or abscess giving a prevalence of 2.02%. The mean age of the patients was 26.3 ± 3.9 years and 44% of them were within the age range of 25 to 29 years. The majority of patients were Hausa and Muslim. Most were unemployed and 62.7% had tertiary level of education. The socio-demographic characteristic of cases is summarised in Table 1.

Table 1: Socio-demographic characteristics of the cases.

Characteristics	Frequency	Percentage (%)
Age		
20 to 24 years	26	34.7
25 to 29 years	33	44.0
30 to 34 years	11	14.7
35 to 39 years	5	6.7
Tribe		
Hausa	40	53.3
Yoruba	10	13.4
Igbo	15	20
Others	5	6.7
Religion		
Islam	45	60
Christianity	30	40
Others		
Occupation		
Unemployed	42	56
Civil servant	17	22.7
Business	4	5.3
Student	12	16
Educational status		
No formal education	3	4.0
Primary	4	5.3
Secondary	19	25.3
Tertiary	47	62.7
Marital status		
Married	59	78.7
Single	15	20

Divorced	1	1.3
Parity		
Para 0-4	66	88
Para 5 & above	9	12

The previous history of the disease was the commonest risk factor that was found for the occurrence of Bartholin’s gland cyst or abscesses and it was followed

by previous history of sexually transmitted diseases. This is shown in figure 1.

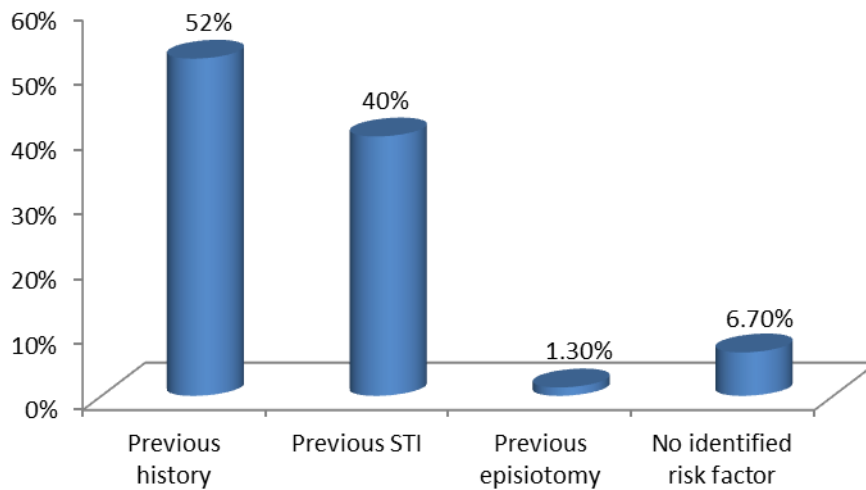


Figure 1: Risk factors for Bartholins abscess/cyst.

Pain and swelling were the commonest presenting symptom in 65.3% of cases. The left vulva was the

commonest site affected as seen in 70.7% of patients. This is shown in figure 2.

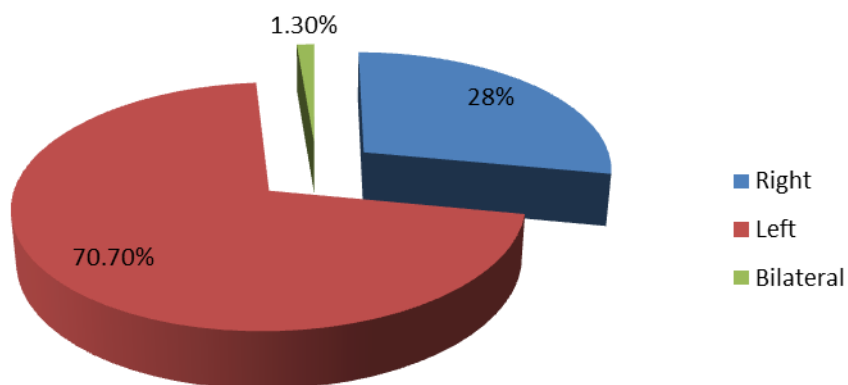


Figure 2: Site of affection of Bartholins cyst/abscess.

The commonest presentation was pain and vulva swelling in 68% of the cases. This is shown in figure 3.

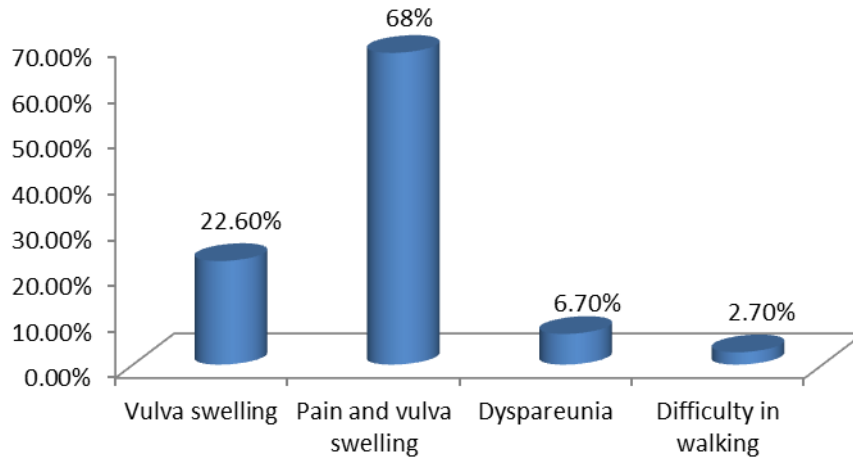


Figure 3: Mode of presentation of Bartholin's cyst/abscess.

Swab culture results were retrieved only in 30 patients, and *Escherichia coli* was the commonest organism isolated in 86.7% of the cases. The disease presented

commonly in form of abscess as observed in 77.3% of patients and 22.7% were cyst. All the patients had Marsupialisation as the modality of treatment.

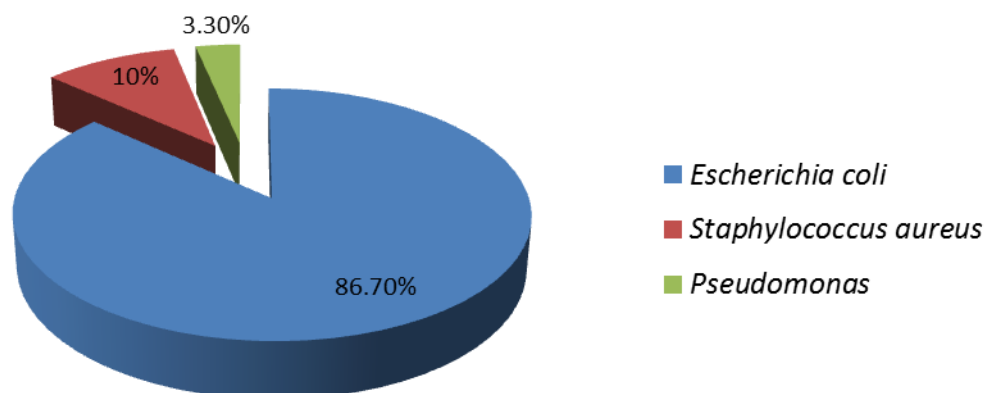


Figure 4: Organisms isolated from swab culture.

DISCUSSION

Bartholin's gland cyst is a common cyst growth of the vulva.^[16] Bartholin's abscess results from an acute infection of the cyst or an ab initio infection of the gland.^[1,2] The prevalence of Bartholin's cyst and abscess in this study is similar to the prevalence of 2% reported by other studies.^[7,15,17-19] An incidence of 1.4% was seen in Portharcourt^[2] and 1.78% was reported in Abakaliki.^[6] The mean age of the patients of 26.3 ± 3.9 years is similar to that reported in abakaliki.^[6] All the patient in the study were within the reproductive age group and that was similar to what was observed in study from Portharcourt.^[2] The majority of patients were Hausa and Muslims which is in keeping with geographical location of the study area.

The previous history of the disease as the commonest risk factor followed by previous history of sexually transmitted diseases is comparable to other studies.^[2,6,7,20] Majority of patients in this study presented with Bartholin's abscess and only 23% had Bartholin's cyst. This is similar to what was found in previous studies.^[9,17] This could be because most Bartholin's cysts are asymptomatic and ignored by patients until it becomes infected and hence produces symptoms. Although Bartholin's cyst or abscesses are common in non-pregnant women, they do occur in pregnancy as found in 9.3% of our patients. Huge recurrent Bartholin's abscess in pregnancy was reported in Zaria.^[21]

The diagnosis of Bartholin's gland cyst and abscess are usually clinical and most of patients in the study

presented with vulva pain and swelling which is in keeping with the trend from other reports.^[5,22]

Left vulva was the commonest site affected found in this study and is similar to many studies done in Nigeria and developed countries.^[2,5,6,21] However, this is contrary to a study that reported 50% on the right, 42.9% on the left and 7.1% bilateral.^[23] Although only 30% of patients had documented culture and *Escherichia coli* was isolated in 86.7% of them. This is contrary to several studies that reported poly-microbial nature of the disease.^[2,7-10,15-17,21]

The entire patients had marsupialisation. This is the most common treatment option available in my centre. This is similar to what was reported in Portharcourt, Abakaliki, and Zaria.^[2,6,21]

CONCLUSION

Bartholin's gland cyst and abscesses is a clinical gynaecological condition that constitutes a significant presentation to the Gynaecologists. Bartholin's cysts are asymptomatic and ignored by patients until it becomes infected and hence produces symptoms. Although several options of management are available, marsupialisation remained the main stay of treatment of Bartholin's gland cyst/abscess especially in low resource setting.

RECOMMENDATION

General health education, awareness campaign may improve health seeking behaviour especially in those that have Bartholin's gland cyst and it help in early presentation before it is being infected. Retrieval of the results of requested investigations especially culture and sensitivity of the pus drained in Bartholin's abscesses are imperative in improving the management of Bartholin's gland abscess and hence quality of life of the patients.

CONFLICT OF INTEREST

We declare no conflict of interest.

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