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Characteristics and Therapy of Patients with Bartholin's Cysts in An Indonesian Tertiary Hospital

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Abstract

A blocked duct of the Bartholin gland causes mucus accumulation and a fluid-filled sac, i.e., a Bartholin cyst, that can develop into an abscess when infected. This study specifically explored the characteristics and treatment Bartholin cysts or abscesses in patients registered at the obstetrics and gynecology clinic of Dr. Cipto Mangunkusumo National General Hospital, a tertiary hospital in Indonesia. This retrospective and descriptive study utilized data from patients registered at the hospital from July 2021 to July 2023. Bartholin cysts were found to be more common in patients aged 40 to 45 (57.1%) with a non-working status (71.4%), and married (90.5%). Cysts were found to be 1 to 3 cm in size (52.4%) and occured unilaterally (95.2%). Four of the fourteen patients complained of recurring Bartholin cysts. On history and clinical examinations, 20 (95.2%) patients reported the presence of lumps. Antibiotics were the most commonly used treatment, with 15 of 21 Bartholin cyst patients (71.4%) receiving them. Obtaining data on the demographic of patient characteristics is essential when providing appropriate health care. Clinical considerations such as cyst size, patient age, symptoms, and history of recurrent Bartholin cysts or abscesses influence the choice of comprehensive medical and surgical management.

Keywords: Abscess, bartholin, characteristic, cyst, therapy

Introduction

Bartolin's glands are a pair of glands measuring around 0.5 cm which are located at the right and left base of the vaginal introitus. This gland secretes mucus into the duct which opens into the vaginal vestibule and plays a role in vaginal lubrication. Generally, Bartholin's glands are not palpable if there is no obstruction. If there is a blockage in the duct of the Bartolin's gland, mucus will accumulate and cause an enlargement filled with fluid that looks like a sac, called a Bartolin's cyst.[1,2] A Bartolin's cyst can develop into a Bartolin's abscess if it becomes infected. Abscesses can be caused by single or polymicrobial opportunistic organisms, with the most common causes being *Escherichia coli* and *Staphylococcus aureus*.[3]

Bartholin's cyst or abscess occurs in about 2% of women of reproductive age. This cyst most commonly occurs at the beginning of puberty and increases. As we age, Bartholin's abscesses and cysts can cause appearance problems or quality of life problems, such as pain and discomfort when walking, sitting, and sexual intercourse. Even though women are not often affected by Bartholin's cysts, treatment including prevention, early detection, and follow-up is nevertheless crucial to lowering the morbidity rate for those who have the condition. Furthermore, data on Bartholin's cyst cases can differ based on the number of hospital patients and the general population, depending on the database source that is used. Thus, more research on the traits and treatment of patients with Bartholin's cysts is required, particularly at Dr. Cipto Mangunkusumo National General Hospital. This report provides a detailed description

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of the treatment given to RSCM patients who have Bartolin's cysts. This analysis can aid in comprehending the efficacy of particular treatment modalities and serve as a foundation for suggesting the most appropriate course of action in the handling of these instances.

Methods

The research was approved by the Indonesian University Faculty of Medicine Ethics Committee (approval number KET-2687/UN2.F1/ETIK/PPM.00.02/202). The design of this research is a descriptive retrospective study. Sampling in this study was carried out using secondary data, namely medical record data of all Obstetrics and Gynecology patients at RSUPN Dr. Cipto Mangunkusumo in the period July 2021 – July 2023. For this study, a total of 21 research subjects were used between July 2021 and July 2023. The inclusion criteria were a female patient at RSUPN Dr. Cipto Mangunkusumo with a Bartholin's cyst was registered between July 2021 and July 2023. Patient medical records serve as the basis for information on women with Bartholin's cysts. Following the collection of all the data, data editing, coding, and verification are completed. Data analysis was done with SPSS version 22. Analytical and descriptive data were analyzed. categorical scale information, including age, marital status, employment position, size of the cyst, events history, location of the cyst, and clinical complaints. Patient management data is presented on a nominal scale. All of the data are presented as percentages and frequency distributions. Because there were fewer than 50 patients in the research sample, the Shapiro-Wilk test was utilized for the normalcy test.

Results

Based on data collection in the period from July 2021 to July 2023, Dr. Cipto Mangunkusumo National General Hospital found 21 Bartolini cyst patients. Patient visit times tend to vary each month without any typical pattern. As shown in Table 1, patients with Bartolini's cysts mostly occurred at the age of 40-45 years, namely 12 patients out of 21 patients (57.1%). In that period, 1 patient (4.8%) was found who was less than 20 years old. In this study, Bartolini's cysts commonly occurred in patients who did not work (households), namely 15 patients (71.4%) of the 21 cases, one of whom was still a student. A total of 19 patients out of 21 Bartolini cyst patients were married.

Based on cyst size, most cysts were found with a size of 1–3 cm, namely 52.4% of patients. One patient with a Bartholin's cyst measuring < 1 cm was discovered by MRI examination and no lump was palpable during direct physical examination. Three of the fourteen patients experienced repeated complaints of Bartolin's cysts (table 2). Bartolin's cysts most commonly occurred unilaterally, namely in 20 of 21 patients (95.2%). Based on the history and clinical examination, 20 patients (95.2%) had complaints of lumps, 11 patients (52.4%) had pain, and 7 patients (33.3%) had vaginal discharge (Table 2).

Based on Table 3, the most common treatment given to Bartolin's cyst patients was antibiotics, namely 15 out of 21 patients

Table 1 The Demographic Characteristics of Bartholin's Cyst Patients at Dr. Cipto Mangunkusumo National General Hospital from July 2021 to July 2023

Variable	Categories	n=21	Percentage (%)
Age (years)	<20	1	4.8
	20–30	3	14.3
	30–40	3	14.3
	40–45	12	57.1
	>50	2	9.5
Job Status	Work	5	23.8
	Does not Work	15	71.4
	College Student	1	4.8
Marriage Status	Married	19	90.5
	Not Married Yet	2	9.5

Table 2 The Cyst Characteristics in Bartolin's Cyst Patients at Dr. Cipto Mangunkusumo National General Hospital from July 2021 to July 2023

Variable	Categories	n=21	Percentage (%)
Cyst Size	<1 cm	2	9.5
	1–3 cm	11	52.4
	4–5 cm	4	19.0
	>5 cm	4	19.0
History of Recurrent Events	Recurring Events	4	19.0
	Not Recurring Events	17	81.0
Cyst Location	Unilateral	20	95.2
	Bilateral	1	7.1
Clinical Complaint	Lump	20	95.2
	Pain	11	52.4
	Vaginal Discharge	7	33.3

(71.4%). As many as 12 of the 21 patients were given non-steroid anti-inflammatory drugs (NSAIDs) based on their complaints of pain. In that period, 5 patients (23.8%) received surgical treatment in the form of marsupialization and 2 patients (9.5%) underwent drainage incisions for Bartolin's cysts. A total of 3 patients had no treatment (surgery or medication) because they had no complaints.

Discussion

From the results of the research we can conclude that Bartholin's cysts occur at the age of more than 20 years, At puberty and in children, it is rarely found because the estrogen hormone is not functioning properly, but sometimes cysts can occur due to genetic or hereditary influences.[4] This is due to the characteristics found in this study, where the incidence of Bartolin's cysts can occur at every age level starting from puberty, up to the most common occurrence at the age of 40–45 years. In this study, Bartolin's cysts did not occur in postmenopausal patients. This research data also shows that 90.5% of cyst patients are married while 9.5% of patients are unmarried. This is comparable to Tjokorde's research, which found that 81.7% of patients with Bartholin's cysts were married.[5] Aghajanian et al.'s case-control study revealed that women with higher parity had a lower incidence of Bartholin's cysts.[5] However, no other study with a more robust design has been able to demonstrate or elucidate

Table 3 Management of Bartholin's Cyst Patients at Dr. Cipto Mangunkusumo National General Hospital from July 2021 to July 2023

Variable	Categories	n=21	Percentage (%)
Antibiotics	Yes	15	71.4
	No	6	28.6
NSAIDs	Yes	12	57.1
	No	9	42.9
Marsupialization	Yes	5	23.8
	No	16	76.2
Drainage Incision	Yes	2	9.5
	No	19	90.5
No Treatment	Yes	3	85.7

the connection between married status, parity, and cyst incidence.[5] Not all cases of Bartholin's cyst result in complaints. The patient may not be aware of small, uninfected Bartholin's cysts since they frequently cause no symptoms. Bigger cysts may give rise to lumps and pain, particularly during sexual activity, sitting, and walking.[6,5] In this study, the most frequent complaint of Bartholin's cyst patients was a lump, namely 95.2% complained of pain in 52.4 % of patients, and complaints of vaginal discharge in 33.3% of patients. This is by the literature which states that one of the complaints that can arise in Bartholin's cyst patients is a lump.[5] In this study, no patients complained of discomfort, but 52.4% of patients complained of pain. The complaint of pain was probably caused by the patient coming during an acute exacerbation where there was an infection of a pre-existing Bartholin's cyst.[5,7] Data on the largest cyst size is 1-3 cm, namely in 52.4% of Bartholin's cyst patients. This study is by the literature which states that the size of cysts varies, with the average Bartholin's cyst measuring 1-3 cm.[5] The literature states that cysts can be up to the size of a chicken egg.[5] In this study, 4 patients found cysts that were more than 5 cm in size.

Management of Bartholin's cyst patients involves surgery, with drainage incisions mostly used in 90.5% of patients. The literature states that there are various treatment modalities for Batholin cysts, including incision and drainage, word catheter installation, marsupialization, silver nitrate ablation, CO2 laser, and excision.[5,8] Incision and drainage is a relatively easy and quick procedure to reduce symptoms and there is a low risk of complications, but this procedure is not recommended because the possibility of recurrence is quite high. Management of Bartholin's cysts and abscesses depends on size, age, symptoms, and history of recurrence.[1,9] Small cysts without inflammation generally do not cause any symptoms; This asymptomatic cyst does not require special treatment; You can conservatively use sitz baths and analgesics.[1,9] If further treatment is needed, surgery is the modality of choice. Incision and drainage with a Word catheter is a very common treatment because it is easy, cost-effective, does not require a long time, and the recurrence rate is relatively low.[3] Drainage incision without a word catheter is not recommended because the recurrence rate is high.[1] It is important to choose a comprehensive treatment based on clinical considerations and patient consent. [10,11] The most common treatment in this study was conservative antibiotics 71.4% and analgesics 57.1%. The antibiotics gave good results and the patient's complaints decreased after 1–2 weeks of evaluation.[12] The antibiotics given must be able to work on *Staphylococcus Sp*, *Streptococcus Sp,* or aerobic gram-negative enteric bacteria such as *Escherichia coli*. The antibiotics commonly given in this study were metronidazole, doxycycline, or clindamycin which were given for 7 days. The first-line antibiotic choice for Bartolin's cyst is an antibiotic recommended for aerobic and anaerobic bacteria in the genital tract, such as ampicillin, clindamycin, cephalosporin, or metronidazole. This treatment option should be limited to women who have a high risk of recurrence, pregnancy, widespread cellulitis, and sexually transmitted infections. Other clinical factors that need to be considered are the presence or absence of vaginal discharge and the possibility of sexually transmitted infections in the patient. Antibiotics for empiric treatment of sexually transmitted infections are recommended, given in doses commonly used to treat gonococcal and chlamydial infections. Ideally, antibiotics should be given immediately before incision and drainage.[13] Surgical management of Bartolin's cyst patients is marsupialization in 23.8% of patients and drainage incision is performed in 90.5%. In this study, marsupialization was primarily performed on patients with recurrent symptoms. In clinical practice, understanding the demographic characteristics of these patients can aid physicians in diagnosing and managing Bartholin's cysts. Identifying high-risk age groups is essential to implement appropriate preventive and therapeutic measures. The management of Bartholin's cyst is influenced by several factors, including cyst size, the severity of symptoms, and the history of recurrence. The authors propose that conservative treatments, such as antibiotics and analgesics, can yield satisfactory outcomes, particularly for cases with mild or no significant symptoms. However, for more complicated or recurrent cases, surgical intervention, including marsupialization, may be required. It is important to note that this study has several limitations, including a small sample size and a focus on a specific patient population. Further, larger and prospective studies are needed to confirm these findings and to enhance the understanding of Bartholin's cysts.

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