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A Case Report of a Huge Bartholin's gland cyst , management and literature review

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Abstract: Bartholin's gland cysts are one of the common vulval masses in the reproductive age groups. They are usually small asymptomatic except when left untreated where it may become large or gets infected. This is a case report of a giant Bartholin cyst in a young lady who presented at a clinic with a huge Bartholin's cyst which was successfully treated by excision of the cyst and histopathological examination after complete excision.

Keywords; Bartholin's gland, Bartholin's gland cyst, Bartholin's cyst excision.

INTRODUCTION

Bartholin's glands also called the greater vestibular gland, the female counterpart of the Cowpers glands in the male, is a pair of compound racemose-shaped glands lined by columnar epithelium. Each gland measures about 0.5 cm, with a 2 cm duct lined by transitional epithelium[1], opening into the vestibule, in the groove between hymen and ipsilateral labia minora at around 4-5'O and 7-8'O clock position. Their function is to secrete normal presexual intercourse alkaline mucous vaginal fluid for lubrication during sexual stimulation. These normally non-palpable pea size glands become palpable only if the duct become cystic or gland abscess occur.[2].Bartholin duct cyst or gland abscess is the most common cystic growth in the vulva[2]. Bartholin's duct cyst is common problems in women of reproductive age[1,2]. Bartholin's cyst results from ductal obstruction and secondary bacteria colonization may lead to an abscess of the gland either by way of an acute infection of the cyst or an ab initio infection of the gland results in its abscess[2].

CASE;

Patient was a 27 year old single mother of two who had presented at a fertility clinic to participate in voluntary egg (oocyte) donation programme during which a painless right vulval swelling was discovered. Swelling has gradually increased in size over the last 2 years and affected her sexual lifestyle due to poor body image of her vulval appearance. Mass was located on the right half of the labia majora giving the introitus a serpentine curve with deviation to the left, it measured about 10cm by 8cm, extending from just below the pubic bone to the fourchette, it was not tender, fluctuant with no differential warmth and no change in skin colour. It was soft but tense and subcutaneous with smooth surface. Per speculum and bimanual examination were normal and there was no vaginal discharge. There were no regional lymph node enlargements. A diagnosis of huge Bartholin's cyst was made and she was counselled and she consented to surgical excision two months after the oocyte donation programme.

She had no co-morbidity and an infection screen (HIV 1 & 2, hepatitis B, Hepatitis C and VDRL) done was negative.

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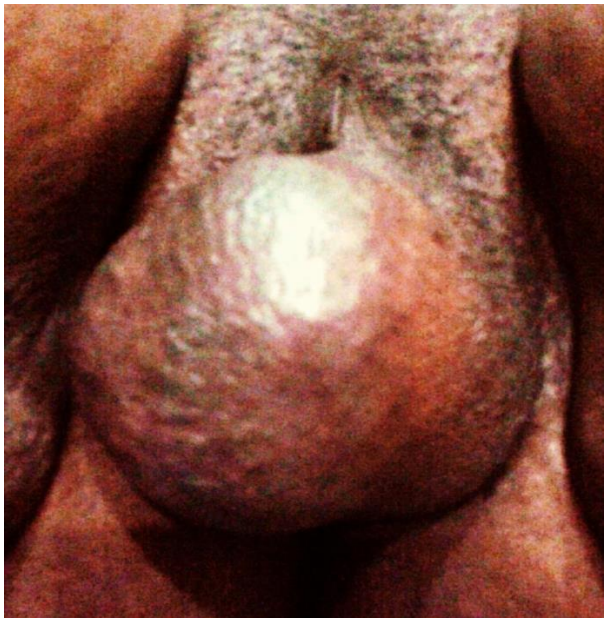
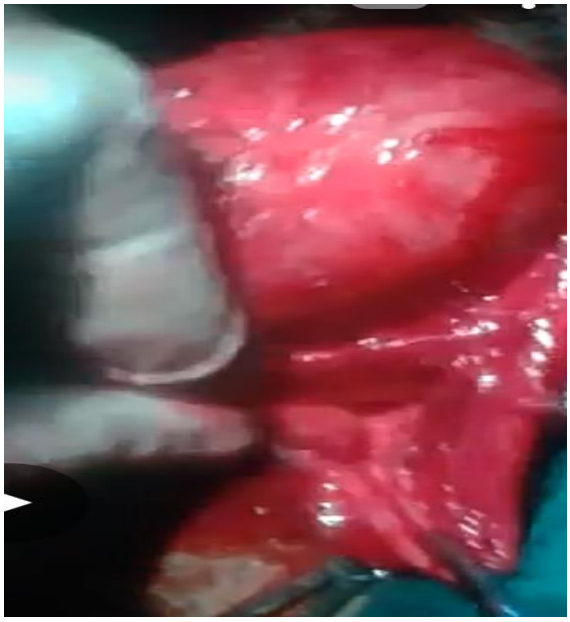
She had an excision of the mass two months after her voluntary participation in egg donation programme at the same clinic at no cost

Surgery was done under spinal anaesthesia with patient placed in lithotomy position and a urethral Foley's catheter in situ. The pubic region including the thighs, vulva and vagina was cleaned with chlorhexidine solution and draped. She had pre-operative intravenous antibiotics with ceftriaxone 1gram stat. A vertical elliptical vertical incision was made and the skin flaps were reflected. The large cystic swelling was exposed and separated by blunt and sharp dissection on all sides and completely excised en bloc. The resultant defect in the right vulval region was repaired in two layers using polyglactin 910 number 0 and skin closed with polyglactin 910 number2/0.

The excised tissue was sent for histopathological examination. It weighed 450grams. Cut section of the tissue showed uniloculated cyst with a smooth inner surface which was greyish brown in colour. Microscopic examination showed the cyst lined by cuboidal to columnar epithelium and the cyst wall showed very few chronic inflammatory cell collections. Histological diagnosis was Bartholin's cyst.

Postoperative period was uneventful and the patient recovered fast and was discharged same day on oral analgesics and antibiotics for seven days with advice on sitz bath for a week. She was seen at one and 3weeks surgery with no complaint and good wound healing. There has been no report of recurrence for 3 year now





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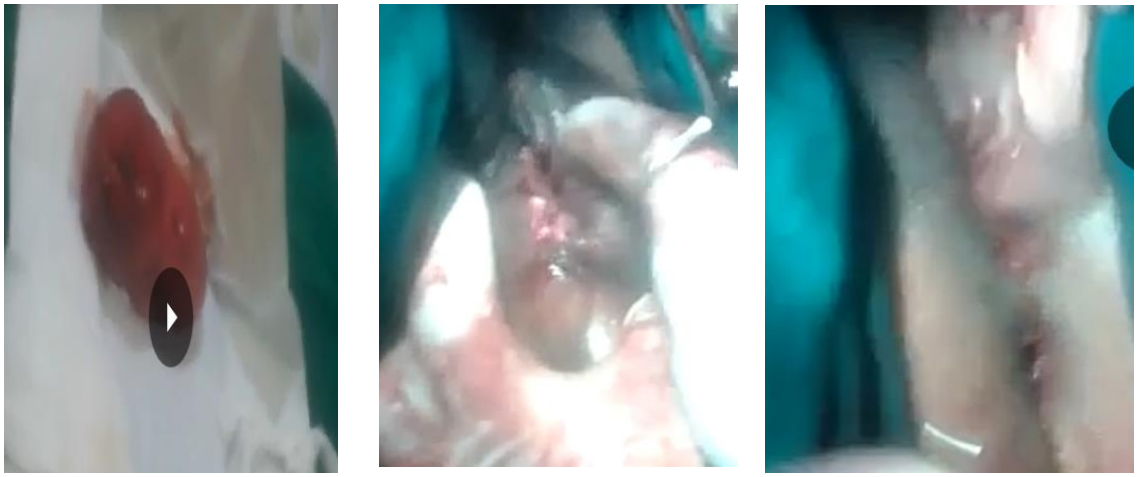

Images (1) Huge Bartholin's cyst, (2) Intra-operative exposure of cyst capsule , (3) Excised cyst, (4) and (5) post –excision vulva reconstructed.

DISCUSSION

Bartholin's cysts and abscess are the most common types of Bartholin's gland masses[3]. Bartholin's gland cysts occur following dilatation of the duct preceded by blockage of the duct opening. Blockage of the ductal ostium of the ducts leads to accumulation of secretions and cystic distension of the ducts which can progress to an increased large sized-gland and rarely may become huge or gigantic. Other possible causes include; infections, iatrogenic occlusion from sutures from a prior vulvovaginal surgery, congenital narrowing and scarring from vuvovaginal surgeries[1,2]. An obstructed Bartholin's duct can become infected and form an abscess which are three times more common than cysts,[2,3]. Women in the reproductive age group are likely to develop Bartholin's abscess. Abscesses appear most likely in women at risk for sexually transmitted infections[1].Two percent of women develop a Bartholin's duct cyst or gland abscess at some time in life. Bartholin's duct cyst or gland abscess is the most common cystic growth in the vulva. White and black women are likely to develop Bartholin's cyst or abscess than Hispanic women and women of high parity having a lower risk[2].

After menopause Bartholin's glands duct disorders are uncommon and should raise suspicion of neoplasia if found.[4] Carcinoma of the Bartholin's glands(usually an adenocarcinoma) is rare and incidence approximates 0.1 per 100, 000.[4]

Bartholin's cysts are small and asymptomatic except for mild to moderate discomfort during sexual arousal. Large or infected gland causes severe vulval pain that makes walking sitting or engaging in sexual activity uncomfortable[4]. Tenderness over the mass with or without fever is a feature of an abscess which is absent in a Bartholin's cyst.[1] On examination, while skin around a Bartholin's cyst usually appears normal that of an abscess may be warm, tender, occasionally surrounded by erythema and oedema and in large cases may expand into the upper labia. The differential diagnosis of Bartholin's duct cyst include Bartholins's abscess, epidermal inclusion cyst, Skene's duct cyst, hidradenoma cyst of the canal of Nuck ,[2] lipomas, epidermoid cysts, hidradenitis suppurativa, [5]. The anatomic location of the mass usually gives it away.[1,2,3]

Clinical examination is usually enough to make a diagnosis, deep seated or giant Bartholins's masses may require high definition ultrasound or MRI evaluation [67,8]

Traditional surgical techniques employed include simple drainage, marsupialiozation, and use of a Word catheter or Jacobi ring and gland excision. Newer treatment modalities include carbon dioxide laser ablation, alcohol sclerotherapy and silver nitrate application

Simple incision and drainage or needle aspiration may provide transient relief from symptoms [9].Simple drainage is no longer an effective treatment modality as recurrence is the rule unless a permanent drainage is established [9].

Marsupialization is safe, easy to perform, and lubricating function of the gland is preserved.[2,6]. A randomized prospective study of 83 women who had marsupialisation revealed discharge at the surgical site, labial oedema, recurrence and scar formation as the most frequent post operative complains.[10] However in the presence of an abscess, marsupialization is less preferred to the use of a Word catheter.

Word catheter is a more popular treatment option in the United States.[1]After drainage of contents of cyst or abscess the word catheter is inserted into the cyst cavity with its bulb inflated.[1]Immediate pain relief occurs upon drainage of pus if present. The word catheter just like the Jacobi ring is left inside for about 4 to 6 weeks for drainage and re-epithelization of the cyst. Word catheter and the Jacobi ring had similar treatment outcome with greater patient satisfaction with rings. Premature dislodgment before tract re-epithelialisation were also reported.[11]

Word catheterization has the benefit of being less traumatic to the patient in comparison to marsupialisation, the associated higher incidence of re occurrence and non availability in developing nations is its limitation .[1]

Indications for glandular excision include; none response to conservative attempts at establishing a drainage tract or in ruling out adenocarcinoma in menopausal women with an irregular nodular Bartholin's glands or a huge Bartholin's cyst.[4]

Newer treatment modalities for Bartholin's gland cyst and abscess include the use of carbon dioxide laser, silver nitrate and needle aspiration with 70% alcohol sclerotherapy. Carbon dioxide laser can be used for vaporizations or glandular capsule excision with the benefit of ease, quick healing time and minimal scar tissue formation.[12]. A review of 127 patients with Bartholin cysts who had CO2 laser vapourization, a cure with a single laser treatment was seen in only 86.6%[13]. Experience with management of huge or giant-sized cysts with CO2 laser ablation is not available in literature.

Marsupialization and silver nitrate application to the treatment of Bartholin's glands cyst and abscess showed equal efficacy with silver nitrate favouring complete healing with less scar formation.[10]

The most appropriate treatment approach for bigger sized cysts is not identified according to the current literature.[14]

Giant Bartholin's cyst has been reported in several case reports. In this case marsupulization, CO2 laser ablation, sclerotherapy are not feasible because of the bigger size of the cysts. Excision and pelvic floor repair of the dead space was done for the patient presented with good outcome. Thus, excision of the entire diseased Bartholin's gland and duct is the definitive procedure of treatment for this case.

Complications of the management of Bartholin cyst and abscess include dyspareunia, recurrence, infection, scarring haematoma formation and slow healing.[3,4].A case of rectovaginal fistula was reported following Bartholin gland excision.[15] .None of these complications occurred in the case presented. Excision of the diseased gland in women above 40 years is a safe practice despite the rare risk of adenocarcinoma of the Bartholin's gland [3].

CONCLUSION

Bartholin's cyst presents as a vulval mass but rarely does it grow so big as to become huge or gigantic. Symptoms may vary in level of discomfort experienced which is usually a direct function of the size. Diagnosis is usually clinical as its location gives it away. Ultrasound and MRI may be an adjunct for such rare gigantic Bartholin's mass. Treatment modality for a huge Bartholin's cyst may vary from the most of the tradition approaches to the everyday Bartholin's cyst. Surgical management with complete cyst excision under antibiotic coverage is the most suited and definitive treatment with a histological assessment of tissue.

Consent

A written informed consent was obtained from the patient for publication of this case report.

Conflicts of Interest

No conflict of interest declared.

Authors' Contributions

Chidinma Nwogu performed the surgery, wrote and drafted the manuscript.

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