A Clitoral mass in postmenopausal women: a diagnostic dilemma

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Abstract:

Clitoral mass is not commonly encountered in Gynecology practice and the literature is scanty. Clitoral mass can be due to Cancer, Granuloma, epidermoid cyst, peri-clitoral abscess, fibroid and Neuromas[1] and clinical presentation is overlapping making it difficult to diagnose. Clitoral cancer is a form of vulvar cancer, is an unpleasant dreadful malignancy and is very rare. Rare case reports of pyogenic granuloma of the labia and clitoris in postmenopausal women with similar presentation and diagnosed by histopathology requiring excision. Similarly neuromas of clitoris are also a known entity seen mainly after FGM.

Aim : Awareness regarding the rare causes of clitoral mass including malignancy and granuloma with their overlapping symptoms.

Materials & Methods : Prospective observational case report.

Conclusion: A Multidisciplinary approach is important to diagnose and differentiate the clitoris granuloma from that of malignancy. The clinical examination and imaging can be misleading at times and diagnosis is only by histopathology

Clinical Significance: Multidisciplinary team involvement and through counseling is needed. Significance of clitoris is well established as the most vital part in sexual function, there is an urgent need to focus our attention on more and more case reports and reviews on its literature of disease related to clitoris.

Keywords: clitoris, clitoral mass, granulomatous disease of vulva,

Introduction:

Clitoral mass is a rare disease in gynecology OPD and difficult to differentiate from cancer. The uncertainty with the diagnosis of the case made it more interesting requiring lateral thinking especially when data and literature is limited regarding clitoral mass.

Rare case reports of pyogenic granuloma (vascular malformation) of the labia can be multiple, rapidly growing lesions may involve clitoris. It is seen in all age groups but rare in postmenopausal women. Encountered generally after a minor injury or trauma, the vascular lesion grows rapidly in weeks or months and can

present as an erythematous, pedunculated, exophytic, or sessile lesion, with a smooth or lobulated surface. [2, 12] In 63% of the patients it been seen to be associated with systemic disorder like rheumatoid arthritis, hematological malignancies, and inflammatory bowel disease but can be also associated with underlying malignancy .[13] It is diagnosed by histopathology requiring excision and closure as treatment is suggested.[2, 12] Invasive and minimally invasive treatments option include surgical excision, curettage followed by electro cauterization, cryotherapy with liquid nitrogen, sclerotherapy, radiosurgery, silver nitrate cautery, microembolization, lasers, imiquimod, timolol, propranolol, prednisolone, and clobetasol. Photodynamic therapy with 5-aminolevulinic acid has also been used for solitary lesions.[14, 15] However; due to the risk of malignancy surgical management is advised with meticulous dissection to avoid the neurovascular damage of the clitoris.[12]

Verrucous carcinoma of the vulva is a form of squamous carcinoma with unknown etiology that can present as clitoral mass in almost 4.88% of cases. They are characterized by slow-growing, giant size, and less metastasis. Treatment involves extensive excision of the lesion this may involve radical vulvectomy, lymph node followed by reconstruction for the defect. However most of the author suggests surgery as the main treatment option with adequate margin is important because inadequate might lead to local recurrence. Systemic lymph node dissection might not be recommended as routine procedure for surgical therapy.[11]

Clitoral cancer is a form of vulvar cancer, is an unpleasant dreadful malignancy and is very rare both as primary and as secondary. Secondary carcinoma of the clitoris is extremely rare and it can originate from urinary system cancer (bladder, kidney), followed by endometrium and gastrointestinal system.[17] Tumors of clitoris are aggressive in clinical course causing early death. Case reports have shown involvement of young and elderly. Diagnosis is established by histology and immunohistochemistry and needs aggressive surgical care with radiotherapy and chemotherapy with prognosis being very poor.

Few cases of painful neuromas have been reported after FGM or cutting in clitoris resulting in disorganized proliferation growth of the proximal end of traumatized nerves causing severe pain and discomfort know as Post-traumatic Clitoral Neuroma. Treatment is excision of the neuroma in-toto during clitoral reconstruction have shown to decrease pain and improvement in sexual function as well.[3, 18]

Case report:

A 56 years old, debilitating lady presented to the gynecology OPD of KMC Manipal, with pain and dismay, accompanied by her son and was walking with an antalgic gait. She complained of a painful mass in the private area. She gave a history about her visit to a local doctor, where it was diagnosed as an infection and was incised to drain cheesy pus like material and was also treated with antibiotics. She was at ease after the intervention for about a month and a half but the mass reappeared and it was more painful than the previous episode.

She gave a history of this recurrent mass being as almond sized which she noticed for the first time after having continuous itch due to dry skin from a couple of months. There was no history of trauma or history of Bartholin's abscess drainage. She has never noticed any sort of blood discharge. There was no history of trauma and no other swelling on her body anywhere else. There was no history of associated fever, folliculitis or burning micturation. She had no complaints of altered bowel and bladder habits or any symptoms of Crohn's disease and no past history of tuberculosis in her or her family. She had no history of weight loss or loss of appetite.

On examination, she was moderately built and nourished and was a little agitated with the pain. After an oral pain killer she was relaxed and allowed examination. Clinical examination showed the patient in a good general condition with normal vital signs. Abdominal examination showed no tenderness, or mass, and inspection of the perineum showed no anal fistula, ulcer, abscesses, or scarring. On local gynecological examination a firm to hard, palpable clitoral mass involving the clitoral hood of 3x2cm was noted. It was indurated and tender to touch with a small ulcerative area of 1 cm with pus-like deposit on the base of the ulcer. Urethra appeared free from the lesion and there were no abnormalities of vulva or vagina. No associated skin lesions or enlarged lymph nodes were palpable. **(Image 1)**

She was evaluated further and blood investigation revealed normal ESR and other serological markers. To confirm the diagnosis of cancer, a biopsy of the lesion was taken and sent for a histopathological evaluation and also, to rule out infectious cause, a pus culture was sent. **(Image 3)**

MRI pelvis also performed due to high suspicion was suggestive of Vulval Malignancy with FIGO stage II **(Image 2).** MRI showed a bulky clitoris with a lobulated lesion of 2.4x 2.1x 1.8 cm in the right half of the body of the clitoris with no invasion of the urethra, with few subcentimetric ovoid bilateral inguinal lymph nodes.

To our surprise, the histopathology was not consistent with imaging diagnosis that came after 2 weeks. It revealed that the tumor mass contained a fibrocollagenous stroma with dense lymphoplasmacytic infiltrate and suggested a myofibroblastic tumor of unknown etiology. Further immunohistochemistry studies were done, but could not confirm inflammatory myofibroblastic tumor. Pus culture was reported to show infection with heavy growth of E.Coli and Proteus, which was treated with higher antibiotics as per sensitivity pattern by IFD team and she recovered.

Patient was scared of this tumor recurrence and malignancy and after discussion she underwent a wide excision of the tumor and this time the histopathology report suggested a granulomatous infection with tissues showing epithelioid cells, Langhan's giant cells, extensive necrosis with inflammatory debris, suggestive of ulcer with granulomatous inflammation. Further investigations were done to rule out causes of granulomatous infection. Tuberculosis and superficial mycotic infection was ruled out by Genexpert, Mantoux, immunochemistry with Grocott-Gomori Methenamine silver, Periodic acid Schiff, and Ziehl-Neelsen and cultures all reported negative.

However even after repeat biopsy and histopathological evaluation we could not find a cause of the recurrent growth. Patient was therefore counseled and she is now on regular follow up both OPD and telephonic basis and doing good. Surgical wound is healing with secondary intention and no discharge or discomfort after 2year of routine follow-up.

Discussion part:

The case above shows the dilemma in diagnosis still in the modern era. Starting from the diagnosis of cancer to granuloma of various origins was tried to fit in the diagnosis to solve the mystery.

A rare case report published by Narendra et al from KMC oncology team in 2010 of extrarenal malignant rhabdoid vulval tumor in a 50-year-old lady who came with complaints of a vulval growth from past 3-months associated with pain and was managed with surgery and radiotherapy.[3]

Wiebren et al, published a case report on an aggressive nature of rare verrucous carcinoma of clitoris in a 79 years old lady with history Lichen planus.[4]

Nilima et al published a case report in the year 2020 of clitoral squamous cell cancer in a 68 years old female who presented to the hospital with complaints of vulval swelling and itching and with lymph node involvement. The lady was diagnosed in the advance stage which made the management of the case a challenge to the oncology team.[5]

Ji-Won Min et al, reported the first case of the GCT of the clitoris in postmenopausal women in Korea. A 45-year woman presented with a mass lesion over the left side of clitoris developing over 2 years. Surgical complete resection was done for her and histo-pathology showed it to be a granular cell. There was no recurrence in one year follow up time.[6]

There have been rare reported cases of epithelioid hemangioendothelioma, arteriovenous hemangioma, congenital hemangiopericytoma, angiokeratoma, nevus lipomatosus cutaneous superficialis, squamous cell carcinoma, plexiform schwannoma, and Paget's disease of the clitoris.

A case report and review of pyogenic granuloma of vulva in a post menopausal lady published in 2011. They discussed that although pyogenic granuloma is common to occur due benign vascular proliferations

of the skin and mucous membranes, they are relatively rare on the vulva. They presented a case report of postmenopausal multiparous women who presented with a history of foul smell and bleeding multiple lesions at vulva. Like our case she gave a history of itching but no pain. After complete excision, histopathological features suggestive of pyogenic granuloma. [7]

Claudio Guerrieri et al in 2019 published a case report in the international journal of gynecological pathology in regards to vulvar Silicone Granuloma in a 51 year old multiparous lady following a labia majora augmentation surgery using silicone-based liquid injection. It's a type a foreign body granuloma when silicone is used with the intention of enhancing the labia majora as a part of esthetic procedure.[8]

Ahmad et al discussed a rare idiopathic condition of vulvitis granulomatosa. It is a part of anogenital granulomatosis and is a form of noncaseating granulomas and associated lymphedema. They discussed a 57 year multiparous lady post hysterectomy with no evidence of crohn's disease presented with labial induration associated with swelling of the skin of the groin. She was treated with oral hydroxychloroquine with significant improvement.[9] Vulvitis granulomatosa has also been reported with Melkersson-Rosenthal syndrome.[10]

Abdulcadir et al discussed a case series of 7 women with clitoral neuroma post trauma due to female genital mutilating surgeries, of which 6 were diagnosed with neuroma during clitoral reconstruction surgeries and one case diagnosed before the surgery. 6 of the operated cases presented with pain while the last case discussed also had a complaint of swelling at the genital region. Post surgery all the patients were relieved of pain. [2]

Yukiko et al discussed a case of secondary adenocarcinoma of clitoris presented with pain and swelling at the clitoris, from the uterine cervical cancer involving the vagina, parametrium and obturator lymph nodes. She was treated initially with radiotherapy and later underwent surgical excision of clitoral mass. [16]

Strength:

The main strength of the study was the follow up and the regular discussion among the multidisciplinary team working over the case.

The rare case report discussed can add to the knowledge and help to alleviate anxiety both among doctors and patient

Limitations :

The limited knowledge in regards to clitoral pathology makes it difficult and needs more time to make a diagnosis.

There were difficulties in counseling patients who are anxious about the growth being cancerous especially with limited literature.

Consent:

Written informed consent was obtained from the patient for publication of this case report and any accompanying images.

Conclusion:

Multidisciplinary team involving a Psychology team and through counseling is needed to correct the delusions. Significance of clitoris is well established as the most vital part in sexual function, there is an urgent need to focus our attention on more and more case reports and reviews on its literature of disease related to clitoris.

Conflict of Interests:

The authors declare that they have no conflict of interests.image

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Contribution from Authors

Dr. Swati kanchan the main author and corresponding author was mainly indulged in patient care along with the other authors and writing and formulating the case report.

Dr. Shripad hebbar as the specialist clinician taking patients care, coordinating source and checking final data validity and executing fundamental changes in conjunction with the checking the write up.

Dr. Keerthi Kyalakond, Dr. Sai Bhavana[4]most efficiently and effectively collected the data from histopathology follow-up of the patient and helped compile the case report.

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