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Short Report

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A complication of obesity: Chronic lymphedema leading to a vulval mass

***Cynthia Chang*[1]*; *Vinita Angeline Rajadurai*[1,2]**

[1]*Department of Obstetrics and Gynaecology, Liverpool Hospital, Liverpool, New South Wales, Australia.*

[2]*Department of Obstetrics and Gynaecology, Fiona Stanley Hospital, Murdoch, Western Australia.*

***Corresponding Author: Cynthia Chang**
Department of Obstetrics and Gynaecology, Liverpool Hospital, Liverpool, New South Wales, Australia.
Email: cynthia.chang@health.nsw.gov.au

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Short report

We describe the case of a 54-year-old female presenting with a large pedunculated mass arising from the labia minora. Initially suspected to be a papilloma, histopathology confirmed the mass to be benign in nature secondary to chronic lymphedema, likely a massive localised lymphedema (MLL). This case further adds to the literature when considering the broad differentials of vulval lesions, particularly in the context of obesity as a risk factor.

With the rise of the obesity epidemic globally, complications such as obesity-induced lymphedema and Massive Localised Lymphedema (MLL) are also increasing. We describe the case of a labia minora pedunculated mass in an obese patient secondary to chronic lymphedema.

A 54-year-old perimenopausal patient was referred to the outpatient gynaecology clinic for a large (1.5 cm) left labial skin tag. Though present for a year, the patient reported a sudden increase in size over 2 weeks, associated with pain, change in colour and ulceration, with no history of fevers, discharge or bleeding. She had 2 previous vaginal deliveries with no complications, and a normal up-to-date Cervical Screening Test (CST). Her other past medical history included hypertension, for which she was on 5 anti-hypertensive medications, and morbidly obesity (BMI 52, weight 170 kg, height 181 cm)

On examination, there was a vascular stalk visible with a 5 x 5 x 5 cm mass arising from the left labia minora (Figure 1). Mild excoriation and ulceration were noted with some purple colour changes, but no evidence of infection. Three other smaller papillomata (<0.5 mm) were noted on her thigh. After discussion with the gynae oncology team, it was deemed this was likely a benign lesion, and a resection of the mass was performed. Histopathology confirmed reactive changes in the tissue including prominent lobulated arrangement of dilated, congested vascular channels surround by small reactive capillaries with acute inflammatory reaction. There was no evidence of malignancy. These reactive changes were suggestive of chronic lymphatic obstruction, which given the history, was deemed likely related to obesity.

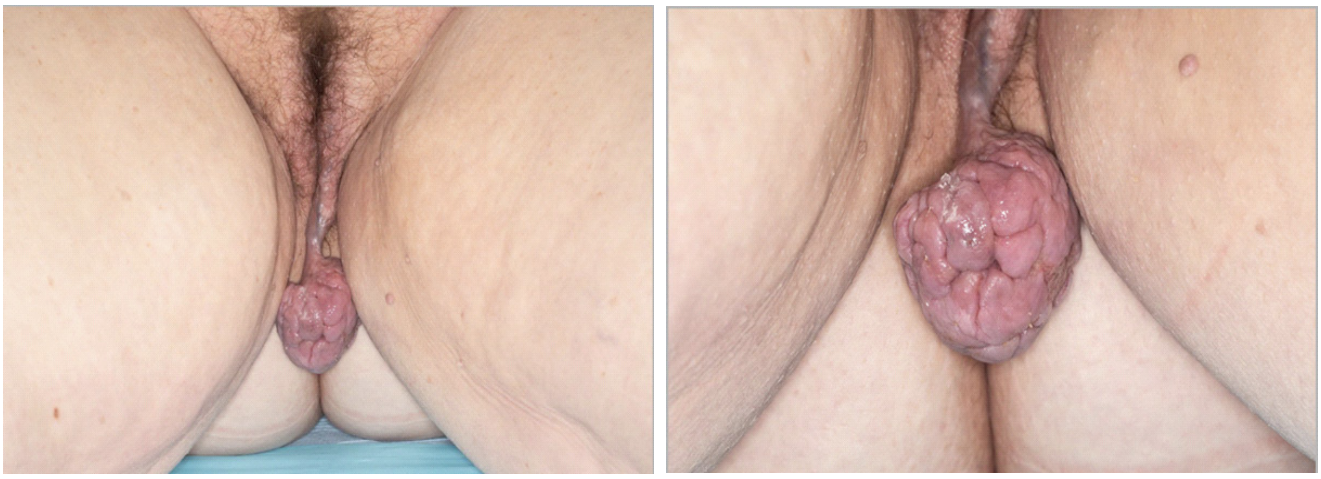

Figure 1: A large pedunculated mass arising from the left labia minora.

Extreme obesity (BMI >40) is as a major risk factor for secondary lymphedema. Obese patients have a higher risk of developing lymphedema following surgery, a phenomenon extensively studied in the literature. However, new evidence hypothesises a direct reciprocal relationship between obesity and lymphedema beside overweight related compression of the lymphatic system as obesity independently decreases lymphatic function and impairs lymphatic transport capacity [1,2]. Chronic interstitial fluid accumulation can lead to fibrosis and chronic inflammation, leading to massive hypertrophy [1].

MLL are pedunculated, slow-growing benign masses in morbidly obese patients due to chronic lymphedema. Few cases have been previously reported in the literature, with masses weighing over 5 kg on average when excised [3,4]. It mostly occurs in the lower extremities, but pubic and genital cases have previously been described [3]. There are no clear diagnostic criteria for MLL, particularly regarding minimal size requirements. It is suspected that the incidence of cases is underreported as cases might not be labelled as MLL but as chronic lymphedema [4]. Previous MLL in the vulva has been described in the literature [3]; however, these cases were not directly linked with obesity, unlike our case. MLL are at risk of progressing to angiosarcoma [3], and thus active treatment is recommended. Weight loss has previously been seen as an appropriate first-line treatment for obesity-induced lymphedema; however, this recommendation is now debated. A previous report has described no improvement to lymphedema following massive weight loss [5], and thus surgical management could be indicated for these cases. Of note, however, a high recurrence rate of MLL has previously been described despite surgical treatment [6], highlighting the need for ongoing monitoring on these patients for recurrence.

Our case illustrates the broad differentials to be considered for vulval masses. Especially given the current obesity epidemic, it is important to be aware of possible complications associated with it, including MLL and its' need for appropriate management and monitoring.

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