

A GP's guide to benign vulvar lesions

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Vulvar lesions may cause pain but are often asymptomatic. Identifying the type of lesion and the appropriate treatment course is an important role of the GP.

Various lesions of the vulva are seen by GPs during routine examinations and when assessing women with symptomatic vulvar lumps. Although many lesions are asymptomatic and do not require treatment, some lesions can cause symptoms when sitting or during coitus. Also, women may be concerned that the lesions are cancerous, which leads them to present to their GPs for assessment and reassurance.

Benign vulvar lesions can be classified several ways:

- as common or uncommon (Box)
- of epithelial or connective tissue origin (Table)
- by their appearance – many are similar in appearance to skin lesions in other parts of the body and their management is identical.

KEY POINTS

- Women are often embarrassed to discuss vulvar problems with their GPs.
- Careful and sensitive examination is required to determine the exact location of the lesion.
- Determining the location of the lesion can assist with diagnosis.
- Treatment, if needed, may require referral of the patient to a specialist.

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Epithelial lesions

Epithelial lesions include benign cysts and squamous non-neoplastic proliferations.

Benign cysts

Mucinous cysts

Mucinous cysts usually occur in adults (Figure 1). They can present anywhere on the vulva but are most commonly found in the vestibule, which extends from the clitoris to the fourchette and laterally from the hymenal ring to the labia minora. The major and minor vestibular glands are located on the lateral part of the vestibule.

The bilateral major vestibular glands, better known as Bartholin's glands, are situated at about the four and eight o'clock positions on the vulva and vary in size from 1 to 10 cm. These glands contain a clear and sometimes mucoid material and mucinous cysts are caused by a blockage in a gland's duct.

The number of minor vestibular glands varies from one to more than 100 and they are also found in the vestibule. Mucinous cysts are also caused by blockage of the ducts of the minor vestibular glands or embryological remnants of the urogenital sinus. They form a subepithelial mass and contain mucinous material. Occasionally they are pedunculated. Treatment, if necessary, is by complete excision.

Mucinous cysts tend to occur in women of reproductive age and may be bilateral. They have a tendency to become infected and in sexually active women the possibility of *Chlamydia trachomatis* and gonococcal infections needs to be excluded. In woman over 40 years of age these cysts should be considered as possible carcinomas until proven otherwise. Mucinous cysts are lined with transitional cell epithelium including areas of squamous metaplasia and Bartholin's gland acini are also present in the wall

COMMON AND UNCOMMON LESIONS OF THE VULVA

Common

- Skin tags
- Epidermoid cysts
- Varicose veins
- Angiokeratoma
- Vestibular papillomatosis
- Hymenal remnants
- Condyloma acuminata
- Hydradenitis suppurativa

Uncommon

- Syringoma
- Hydradenoma
- Fibroma
- Lipoma
- Neurofibroma
- Haemangioma
- Molluscum contagiosum

of the cyst. Treatment of women with Bartholin's duct cysts is by marsupialisation or complete excision.

Epidermoid cysts

Epidermoid cysts are the most common of the vulvar cysts and may be one of four types – sebaceous, keratinous, tricholemmal or epidermal inclusion cysts. They tend to occur as nodules in the hair-bearing areas and may be singular or multiple.

Consideration of the anatomy of the vulva helps explain why cysts are found in various locations. The labia majora have sebaceous, apocrine (scent) and eccrine (sweat) glands, erector pili muscles, specialised nerve cells (Meissner's and Vater-Pacini corpuscles), blood vessels and nerves, but the inner aspects lack hair and sebaceous glands. The labia minora also lack hair but contain sebaceous and eccrine glands, and lack subcutaneous fat.

Epidermoid cysts are painless and usually about 1 cm in size, although they can be larger. These cysts, of which sebaceous cysts are the most common, are mobile and often tethered to the surface skin. They contain greasy yellow-white material, which can exude through a punctum (the opening of the structure tethering the cyst to the surface epithelium). Sebaceous cysts are lined by keratotic squamous epithelium. If the cyst ruptures into the surrounding tissues, the contents cause a foreign body-type granulomatous reaction. Sebaceous cysts may also become infected by any skin or coliform bacteria and cause pain. Under these circumstances, treatment with antibiotics and excision are required.

Inclusion cysts may be due to trauma and in-folding of the skin edges as sometimes happens as a result of tears or episiotomy

TABLE. PHYSICAL COMPARISONS BETWEEN VARIOUS BENIGN VULVAR LESIONS

| Diagnosis | Appearance | Size | Location |
|----------------------------------|-----------------------------|---------------------------------------|-------------------------------|
| Epithelial lesions | | | |
| Mucinous cysts | Thin-walled cyst | Up to 3 cm | Vestibule |
| Bartholin's duct cyst | Cyst | 1 to 10 cm | 4 and 8 o'clock |
| Epidermal inclusion cysts | Yellow cysts | 1 to 2 cm | Labia majora and outer minora |
| Condyloma acuminata | Warty surface | Variable | Variable |
| Seborrheic keratosis | Brown-black waxy nodules | 1 to 2 cm | Labia majora and outer minora |
| Skin tags | Flesh-coloured pedunculated | 1 to 3 mm | Variable |
| Molluscum contagiosum | Umbilicated lump | 1 to 10 mm | Variable |
| Connective tissue lesions | | | |
| Fibroma | Dermal lump | Variable | Variable |
| Lipoma | Lobulated dermal lump | Variable, occasionally reaching 20 cm | Labia majora |
| Vascular abnormalities | | | |
| Varicose veins | Reddish-blue soft lumps | Variable | Variable |
| Haemangioma | Reddish lump | Variable | Variable |

during childbirth or from the fusion of epidermal structures during embryogenesis. Treatment, if necessary, is by complete excision of the cysts.

Benign squamous non-neoplastic proliferations

Condyloma acuminata

Condyloma acuminata are benign lesions that occur secondary to infection with human papilloma virus (HPV) types 6 and 11, and form cauliflower-like warty growths on the vulva, the perineum and perianally (Figure 2). Frequently many lesions are present, and they form confluent growths and have fibrovascular cores lined by acanthotic, hyperkeratotic and/or parakeratotic squamous epithelium. If left untreated, 10 to 15% of the lesions will spontaneously regress; however, others persist or they may increase in number. Immunocompromised patients may have extensive lesions throughout the lower genital tract. Flat condylomata also occur on the vulva and are associated with infection with HPV types 6 and 11.

Treatment options for patients with condyloma acuminata include:

- podophyllotoxin 0.15% cream – applied twice daily for three consecutive days followed by a treatment-free period of four days and, if residual warts are present, further courses continued for a total of four weeks
- imiquimod cream – applied once daily on three nonconsecutive days per week until there is complete clearance of the warts or for a maximum of 16 weeks
- destructive treatments with liquid nitrogen cryotherapy, cautery or lasers
- surgical excision.

In the case of extensive lesions, shaving them from the underlying skin with a scalpel leads to less scarring than excising each lesion. However, both methods can cause considerable intraoperative blood loss.

Vestibular papillomatosis

Vestibular papillomatosis is a normal variant of the vulvar skin between the posterior fourchette and the hymen. Multiple tiny filamentous projections of epithelium lining the vestibule are distributed in an orderly fashion.

Vestibular papillomatosis is not induced by HPV infection as was previously thought.

Hymenal remnants

Varying in size and shape, hymenal remnants can be a normal occurrence after childbirth. The remnants do not usually cause any symptoms but can become swollen and painful. When this occurs surgical removal may be required to enable pain-free coitus.

Squamous papillomas and seborrhoeic keratoses

Both squamous papillomas and seborrhoeic keratoses (also known as basal cell papillomas) form wart-like proliferations. Seborrhoeic papillomas are pigmented and have a waxy appearance.

Skin tags

Skin tags or acrochorda are soft flesh-coloured structures, frequently found on the vulva and tend to be more common in obese patients and those with diabetes. Skin tags present as sessile or pedunculated polyps that have a vascular central core and they can bleed if pulled off. Excision after the vascular pedicle has been ligated is a simple procedure. These lesions can be both irritating and painful.

Hidradenitis suppurativa

Hidradenitis suppurativa is an inflammatory condition involving the follicular epithelium. It is frequently found in obese patients



Figure 1. Mucinous cyst of the vulva in the less common site on the labia majora.

IMAGE COURTESY OF PROFESSOR E. MCKAY, BRISBANE.



Figure 2. Condyloma acuminata.

and is rare before puberty. Anogenital lesions are common in patients with hidradenitis suppurativa and are found in the genitocrural folds, mons pubis, labia majora, perianal skin and buttocks. Tender nodules form, soften and then become abscesses. Spontaneous discharge of these abscesses is uncommon but multiple sinuses, induration and scarring often results from this condition. Treatment involves weight reduction, good hygiene, long-term antibiotics and often surgical interventions.

Molluscum contagiosum

Molluscum contagiosum is caused by a DNA poxvirus with an incubation period of between one week and six months. The lesions may be multiple, between 1 and 10 mm in size and form discrete umbilicated papules that undergo spontaneous regression. Reports on the incidence of molluscum contagiosum vary between 0.3 and 18% for patients with HIV infection.

True naevi

True naevi, usually of the intradermal type, can be found on the vulva. The main concern with pigmented lesions is the possibility of melanoma and so if a naevus has an irregular border and a variable colour, a biopsy is indicated.

Connective tissue lesions

Connective tissue lesions of the vulva are less common than those derived from the epithelium and include leiomyomas, lipomas, neurofibromas and haemangiomas. Treatment, if necessary, involves complete excision.

Vulvar fibromas occur as sessile or exophytic projections usually on the labia majora. They vary in size but when pedunculated can reach 10 cm or more and cause discomfort or pain especially when sitting or during coitus. They are composed of dense collagen and fibroblasts. Treatment is by local excision.

Vulvar leiomyomas may be sessile or pedunculated. They tend



Figure 3. Haemangioma.

IMAGE COURTESY OF PROFESSOR E. MCKAY, BRISBANE.



Figure 4. Oedema of the vulva in a patient with severe pre-eclampsia.

IMAGE COURTESY OF PROFESSOR S. KHOO, BRISBANE.

to enlarge during pregnancy and in women receiving hormone treatment. They are usually firm, painless nodules in the labia and contain firm white whorled smooth muscle tissue.

Lipomas of the vulva may be sessile or pedunculated and are soft, rounded and lobulated. They are most frequently found in the labia majora. Unlike sebaceous cysts, there is no connection with the overlying skin, so there is no punctum to help differentiate between the two. Histologically, they are formed by mature fat cells and fibrous tissue. Treatment, if necessary, is by excision.

Vascular abnormalities

Vascular abnormalities include varicose veins, angiokeratomas and haemangiomas.

Vulvar varicose veins

Four per cent of women have vulvar varicose veins, which are often asymptomatic. They usually occur during pregnancy because anatomical and physiological changes associated with pregnancy result in pelvic venous congestion and resolve about six weeks after delivery. These veins do not have valves and therefore are susceptible to the development of varices.

Up to one-half of vulvar varicosities arise from an incompetent great saphenous vein, which drains the superficial and deep external pudendal veins and posteromedial tributaries. Patients should be examined standing up because lying down frequently decreases the size of the varicosities and makes them more difficult to see. Complications include superficial and deep thrombophlebitis, ulceration and haemorrhage.

Angiokeratomas

Angiokeratomas are common non-neoplastic vascular proliferations. Lesions are between 2 and 10 mm in size, located on the labia majora and are often multiple in number. Initially, they are cherry

red but later become black in colour. Angiokeratomas are usually asymptomatic but may cause pruritus and rarely bleed.

Haemangiomas

Haemangiomas of either capillary or cavernous type are more common in children but can be found in adults (Figure 3). Both capillary and cavernous lesions are well-demarcated lesions that are asymptomatic or are incidental findings on examination. They are of various size and require explanation and reassurance but do not usually need treatment. However, sometimes trauma causes bleeding, which may be heavy. Such bleeding can be controlled by suture, excision, laser

therapy, sclerosing agents or cryotherapy depending on the size of the lesion and the amount of bleeding.

Vulvar oedema

Vulvar oedema may occur secondary to medical conditions such as congestive heart failure, obesity, portal hypertension, contact dermatitis, sexually transmissible infections or some tropical diseases, or after surgery (Figure 4). A diagnosis can be reached by obtaining a clinical history and performing a thorough examination including a careful examination of the inguinal lymph nodes.

Conclusion

Vulvar lumps and cysts can cause symptoms when a woman is sitting or during coitus, or raise concerns that the lesions may be cancerous. Benign vulvar lesions are similar in appearance to skin lesions in other parts of the body and can be classified as being of epithelial or connective tissue origin. Their management is identical to other benign skin lesions.

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COMPETING INTERESTS: None.

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