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An unusual lesion in the right place

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The patient

A 65-year-old woman presented in our department with a three-year history of a new, slowly growing asymptomatic lesion on her vulva. The physical examination revealed a 10 mm sized, well-circumscribed white to skin-colored elevated firm nodule with a smooth surface on the left labia majora of her vulva (Figure 1). There was no family history of similar lesions.

The lesion was excised. Histopathologic examination revealed a well-circumscribed tumor located in the dermis with no connection with the overlying epidermis. Within the tumor a complex network with anastomosing papillary structures and tubules as well as glandular areas was observed. The epithelial lining consisted of an inner layer of monomorphic, columnar cells with eosinophilic cytoplasm and nipple-like projections on the surface surrounded by a layer of myoepithelial cells (Figure 2).

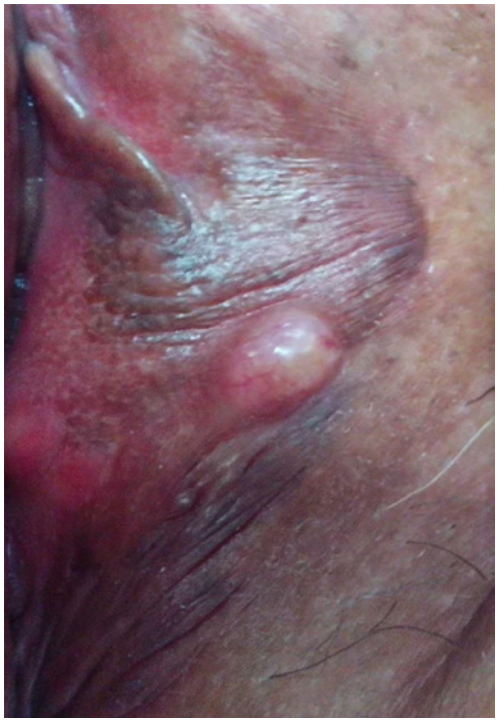

Figure 1. A well-circumscribed, flesh-colored, dome-shaped nodule on the left labia majora of the vulva. [Copyright: ©2016 Theodosiou et al.]

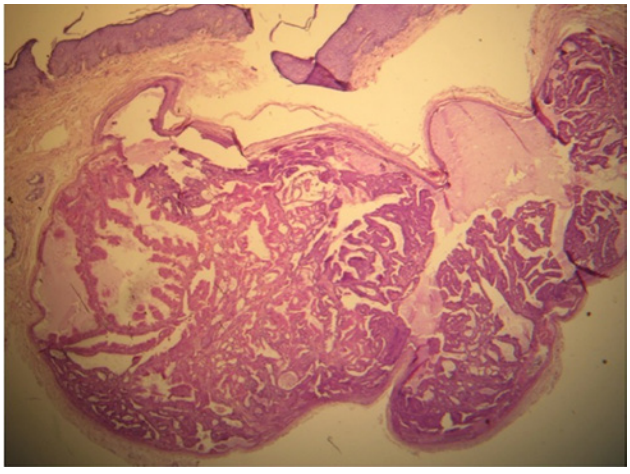

Figure 2. Cystic tumor with papillary and glandular areas. [Copyright: ©2016 Theodosiou et al.]

What is your diagnosis?

Diagnosis

Hidradenoma papilliferum

Clinical course

As HP is considered a benign appendageal tumor and was totally excised, no further diagnostic or therapeutic procedures were performed.

Answer and explanation

Hidradenoma papilliferum (HP) is a rare benign appendageal tumor occurring mainly in the anogenital region of adult women [1,2].

Since Werth first described hidradenoma papilliferum (HP) in 1878, numerous cases have been described, including more than 30 cases of ectopic localization [3].

The most common appearance is that of a solitary, asymptomatic, well-circumscribed, skin-colored or pinkish nodule or nodulocystic lesion measuring, in most cases, from 0.5—1 cm. Larger lesions, measuring up to 10 cm, are rare. The tumor is slowly growing. However, rapid growth, possibly accelerated by trauma, has been occasionally described. Rare symptoms include pain and drainage [1-4].

The tumor primarily affects almost exclusively the vulvar and anogenital region of middle-aged women [5]. The labia majora and labia minora are almost equally affected, together accounting for almost 90% of the cases. The rest involve the fourchette, clitoris, perianal area and perineum [1-5]. Ectopic lesions developing on the eyelids, orbit, auditory canal, nose, breast, chest and abdomen have been reported [6-14]. Cases in men have been described [12].

HP can only be diagnosed by histological examination, because the right diagnosis is almost never made clinically.

HP is usually partly cystic and has both papillary and glandular areas. Within the tumor, a complex network with anastomosing papillary and tubules as well as glandular structures is observed. The epithelial lining consists of an inner layer of secretory cells and an outer layer of myoepithelial cells. The inner layer consists of monomorphic, cuboidal or columnar cells with clear or eosinophilic cytoplasm demonstrating focal "decapitation secretion" [1-6]. In some cases, remnants of anogenital mammary-like glands may be seen adjacent to the HP [1]. The mitotic index is variable, but even high mitotic index does not predict a more aggressive behavior [15]. Oxyphilic metaplasia, though rare, can lead to a misdiagnosis of malignancy [16].

The histogenesis of HP remains unclear. Histopathologic and ultrastructural findings have demonstrated that the differentiation of HP is more closely related to apocrine secretory epithelium [17]. From its histopathologic similarities to intraductal papilloma of the breast, an accessory mammary-like gland has also been speculated as another candidate source [1,18,19]. The location of the anogenital HP is thought to mirror the distribution of anogenital mammary-like glands [1,18,19].

From this point of view, cases of ectopic HP involving the eyelid and the external auditory canal are viewed as examples of adenomas with papillary architecture arising in Moll's glands and ceruminous glands, respectively [9,20].

Konstantinova et al have recently conducted a clinicopathological study of 264 tumors detailing various changes in the tumor and adjacent anogenital mammary-like glands (AGMLG) with emphasis on mammary-type alterations. The study showed that the histopathological changes in HP run a broad spectrum comparable with that in the mammary counterpart and benign breast disease [21].

The presence of HPV DNA in the lesion tissue has been identified in a few cases. However HPV does not appear to play a causative role to the pathogenesis of HP [16,22].

The differential diagnosis of HP includes apocrine hidrocystoma, Bartholin gland cyst and syringocystadenoma papilliferum.

Malignant transformation is extremely rare. There are five documented cases of ductal carcinoma in situ (DCIS) arising within a pre-existing hidradenoma papilliferum in the peer-reviewed literature [23-25]. Another two cases of invasive carcinomas arising from HP (malignant perianal papillary hidradenoma, vulvar adenosquamous carcinoma) have been reported [26,27].

The treatment of choice is total excision. Recurrence is unusual and commonly attributed to incomplete excision of the primary tumor.

In conclusion, we present a case of HP, which is a rare tumor of the anogenital region. Diagnosis is based on histopathology due to the lack of specific clinical features. Surgical excision is therefore required for definite diagnosis and cure.

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