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Rare Huge Tubular Papillary Adenoma on the Buttock Demonstrated by Magnetic Resonance Imaging (MRI)

Authors' Contribution:
Study Design A
Data Collection B
Statistical Analysis C
Data Interpretation D
Manuscript Preparation E
Literature Search F
Funds Collection G

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Conflict of interest: None declared

Patient: Male, 35
Final Diagnosis: Tubular papillary adenoma of the buttock
Symptoms: Firm • redness • pain • swelling of the fixed perianal mass
Medication: —
Clinical Procedure: Excision biopsy
Specialty: Surgery

Objective: Unknown etiology
Background: Tubular papillary adenoma is a rare eccrine-derivate dermal adnexal tumor, located in the scalp mostly. Earlier, the sebaceous cyst size was larger than 5 cm in diameter and may be confused with subcutaneous tumor. Cases of the tumor on the buttock with rapid growth are rare, therefore magnetic resonance imaging (MRI) may be helpful to determine their precise size, nature, and invasion of nearby organs for further confirmation.

Case Report: We report on a case of a 35-year-old male with a rapid-growth tumor on the buttock. Initially, he had received drainage by syringe and the amount of drainage was 50 mL. MRI favored diagnosis of sebaceous cyst. As for recurrent tumor, the pathology revealed tubular papillary adenoma.

Conclusions: MRI might play an important role on imaging of soft tissue to exclude some uncertain malignant tumors. This case report indicated a rare case of a large rapid-growing tubular papillary adenoma on the buttock that required further management.

MeSH Keywords: Buttocks • Magnetic Resonance Imaging • Neoplasms, Adnexal and Skin Appendage

Full-text PDF: <https://www.amjcaserep.com/abstract/index/idArt/916438>

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Background

Tubular papillary adenoma has been used to describe a rare eccrine-derivate dermal adnexal tumor, located most often in the scalp. The other reported sporadic locations have been on the eyelid, external auditory meatus, cheek, and chest [1]. Due to its benign clinical appearance, the diagnosis has largely depended on the clinical manifestations and pathology. Therefore, radiological findings of dermal adnexal tumors have not been well explained in the literature; however, even magnetic resonance imaging (MRI) is developing rapidly in this area nowadays. In a previous case report, the authors describe an epidermoid cyst that was larger than 5 cm in diameter that might be confused with other subcutaneous neoplasms [2]. Therefore, MRI might be useful to determine the texture of the soft tissue with the precise size, nature, and invasion of nearby organs if present. Here, we present a case of an uncommon tubular papillary adenoma of the buttock, with rapid growth, that included MRI as part of the diagnostic workup.

Case Report

We reported a case of a 35-year-old male who came to our colorectal outpatient department due to a rapid-growing perianal mass. There was no specific medical history or co-existing disease. According to the patient's statement, the mass has been presented for years, but it grew rapidly with intermittent discharge on the buttock for months. Initially, he went to a local clinical department and the cytology revealed no malignant cells by aspiration. Then, he came to our colorectal outpatient department due to recurrence. Physical examination revealed a firm, red, fixed perianal mass with pain and swelling. All laboratory data was in the normal range and no leukocytosis or bleeding tendency was noted. MRI was done under the suspicion of malignancy and revealed a well-defined cystic lesion around 6 cm in the diameter over the subcutaneous region of right buttock. The MRI showed homogeneous hyperintensity on T1-weighted image (T1WI) (Figure 1), fat-saturated on fat-saturated on T2-weighted image (T2WI) (Figure 2) and no obvious contrast enhancement or fascia invasion on contrast-enhanced MRI scan, thus favoring a diagnosis of a sebaceous cyst. Due to persistent symptoms, we aspirated the mass, which contained viscous, blood-stained fluid of about 50 mL, at our out-patient department. After shrinkage of the mass by aspiration, excision biopsy was performed under regional anesthesia. Grossly, the cyst contained blood-stained fluid about 100 mL with at least 2-mm thickening wall. The microscopic sections show pictures of tubular papillary adenoma composed of tubules and cystic structure in the dermis of the skin tissue (Figure 3). The final pathology reported the diagnosis of tubular papillary adenoma.



Figure 1. A subcutaneous mass of right buttock on T1WI. MRI of the pelvis was performed to identify the texture of the mass. A well-defined cystic mass (size of 6.0 cm) over the subcutaneous region of the right buttock, with homogeneous hyperintensity on T1WI and fat-saturated T2WI, and without obvious contrast enhancement on contrast-enhance MRI.



Figure 2. A subcutaneous mass of right buttock on fat saturated T2WI. The well-defined subcutaneous mass is homogeneous hyperintensity on T2WI without obvious contrast enhancement. Combined with the results of Figure 1, protein-containing lesion is favored.

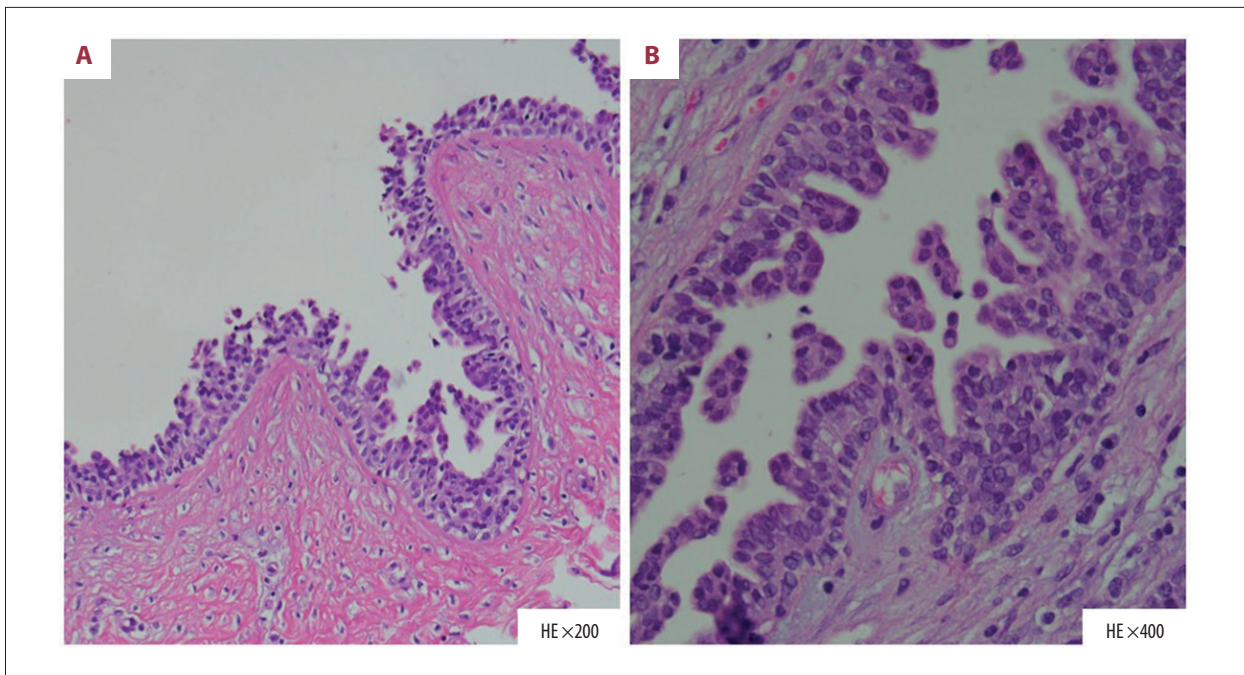


Figure 3. Pathological study on tubular papillary adenoma. Tissue by excision biopsy demonstrated tubular and cystic structures with several-layered epithelial lining (A) hematoxylin and eosin 200× and (B), hematoxylin and eosin 400×.

Discussion

Our pathology report identified tubular papillary adenoma without nuclear atypia and mitotic pictures, that favored benign lesion. In past studies, tubular papillary adenoma presents as a slowly growing, well-circumscribed subcutaneous nodule. Histologically, it has been described as constituted of different-sized tubulars lined by more than 1 layer of cuboidal to columnar cells which show decapitation secretion and papillary projections into the lumen [3]. The differential diagnosis reported for benign adnexal tumor with eccrine sweat gland have been syringocystadenoma papilliferum (SCAP), apocrine gland cyst (AGC), and tubular papillary adenoma. SCAP is mainly composed of cystic structure and glandular papillary proliferation with dense plasma cell infiltrate, with the dilated and convoluted duct leading to diverse-size cystic space, opened to the skin surface [4]. AGC has been defined as unilocular or multilocular cysts without adenomatous proliferation [4]. An imaging study might be helpful in this associated differential diagnosis.

It's rare that tubular papillary adenoma is located on the buttock and with rapid growth. When a tumor is large, it is significant to evaluate the effect to any lymphatic metastasis and nearby organs invasion. Therefore, except for size or location, MRI and computed tomography (CT) are valuable for showing the entire structure (any fistula or adhesion) in comparison with sonography. Furthermore, MRI has also been proven to be an excellent resource for identifying the texture (nature) of

tumor to help in diagnosis. Due to the rapid growth and large size of our case [2], we initially performed an MRI in order to distinguish tubular papillary adenoma from metastatic adenocarcinoma and subcutaneous carcinoma. The MRI with contrast showed homogeneous hyperintensity on T1WI and T2WI and no obvious contrast enhancement with fascia invasion on contrast-enhanced MRI scan, which ruled out malignant tumors and favored sebaceous cyst. Interestingly, eccrine-derivate dermal adnexal tumors might share similar MRI texture to tumors that are slightly hyperintense on T1WI and hyperintense on T2WI compared with muscle. However, benign lesions are mainly homogenous and malignant lesions might show inhomogeneous in T1WI [5]. Furthermore, consistent with the previous study, Galant et al. found in a case-control study that subcutaneous tumors without fascia invasion were significantly inclined to be benign. However, once a tumor invaded the fascial layer, the odds ratio of malignancy for subcutaneous tumor were 6 times that for tumors without evidence of invasion [6]. Interestingly, we reported a case of a tubular papillary adenoma that had rapid growth with a cystic component. However, the underlying mechanism remained unclear and further research is needed in the future.

Conclusions

In conclusion, although the pathology of our case revealed tubular papillary adenoma, which was inconsistent with the patient's previous clinical course, the underlying mechanism

remained unclear. Our case report indicated a rare case of a large tubular papillary adenoma with rapid growth, located on the buttock.

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Conflicts of interest

None.