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Case Report

A RARE CASE REPORT ON TUBULAR APOCRINE ADENOMA

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ABSTRACT

Tubular apocrine adenoma, the apocrine variant of papillary tubulopapillary hidradenoma, is a rare well-circumscribed, intradermal benign tumor, with tubular structures showing apocrine differentiation. It usually presents as a slow-growing well-circumscribed nodule. The most common site of involvement is the scalp, although it has also been reported to occur at other sites like face, neck, axilla, trunk, upper and lower extremities. The present study describes a case of 76-year-old female who presented with swelling on back. An excisional biopsy was performed which on histopathological examination shows multiple irregular-shaped tubular structures lined by two layers of epithelial cells focally. On histopathology, the case was diagnosed as tubular apocrine adenoma.

Keywords: Hidradenoma, Tubular apocrine adenoma, Syringocystadenoma papilliferum.

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INTRODUCTION

Tubular apocrine adenoma is a rare and benign sweat gland tumor, most commonly found as nodular solitary lesion on the scalp and other hair-bearing areas where normal apocrine glands are abundant [1,2]. Tubular apocrine adenoma can be a component of various sweat gland tumors and can also morphologically overlap with other sweat gland neoplasms. It usually presents as a solitary lesions and is sometime associated with nevus sebaceous and/or syringocystadenoma papilliferum [3]. It usually presents as a slowly growing, well-circumscribed dermal, or subcutaneous nodule. Microscopically, it is composed of variably-sized tubules lined by two or more layers of apocrine-type cells: Cuboidal to columnar with abundant eosinophilic cytoplasm and uniform round-to-oval nuclei, many cases show cyst formation with papillae or pseudopapillae protruding into the lumen. The characteristic features are various sized dilated tubules with intraluminal papillary projection and apocrine decapitation secretion [4].

CASE REPORT

A 76-year-old woman came to Department of Surgery with complaint of swelling on the back from 2 years. The swelling was insidious in onset, progressively increasing in size, and non-tender. There was no swelling on other parts of the body. There was no history of any trauma associated with it. The physical examination showed that the patient was healthy with no contributary past medical and family history. On clinical examination, swelling measuring 5 cm×4 cm was seen on upper back which was well-defined, nodular, firm, and non-tender, and overlying skin was normal. The patient then underwent excisional biopsy and specimen was sent for histopathology. The specimen was fixed in 10% formalin solution and subsequently embedded in paraffin wax. Sections were made and stained with hematoxylin and eosin.

On gross examination, a white globular soft-tissue piece measuring 5 cm×5 cm×1.5 cm. On cut section, it was homogenous white and solid. On microscopy, hematoxylin and eosin-stained multiple sections studied showed irregularly shaped variable-sized tubular structures in the dermis. The tubules were lined by two layers of epithelial cells. The peripheral layer consisted of cuboidal or flattened cells and luminal layer was composed of columnar cells. The tumor tissue was surrounded by mature adipose tissue (Fig. 1). Histopathological features were diagnostic of tubular apocrine adenoma (Fig. 2).

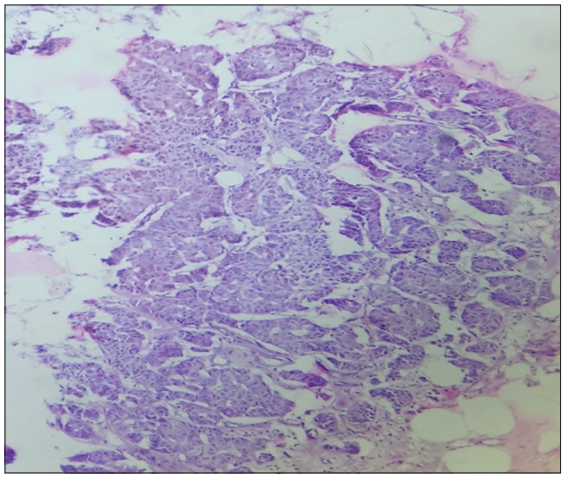

Fig. 1: Irregular shaped tubular structures in a case of tubular apocrine adenoma (H and E, ×40)

DISCUSSION

Adnexal tumors can be classified into four types, namely apocrine, eccrine, follicular, and sebaceous. Tubular apocrine adenoma is a relatively rare benign adnexal tumor subcategorized under apocrine gland tumors according to the WHO classification of skin tumors [5].

The tumor has a female predominance (2:1), a wide age range (18–78 years), and usually presents as a well-defined nodule most often located on the scalp and occasionally on other sites including face, axilla, and anogenital area [6]. Most of the lesions are <2 cm in size, non-tender, and slightly mobile with no significant overlying skin changes.

Histological features of tubular apocrine adenoma are characterized by a well-demarcated, unencapsulated neoplasm located in the dermis, sometimes extending in the subcutis. It is composed of scattered neoplastic cell nests that contain round, oval, or irregular tubules, lined by two-layer or multilayered epithelium. The inner layer is formed by cuboidal or columnar epithelial cells that often show decapitation secretion and the outer layer is composed of basal cells or myoepithelial cells. The stroma is minimal and fibrous in nature, with paucity of inflammatory cell infiltrate [7].

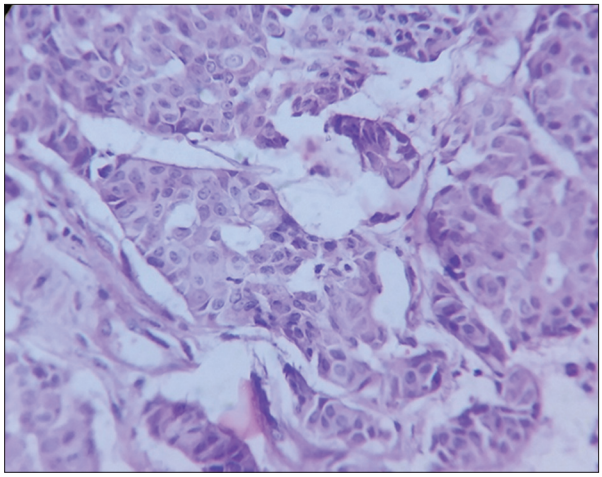

Fig. 2: The peripheral layer of cuboidal and luminal layer of columnar cells (H and E, ×400)

Tubular apocrine adenoma needs to be differentiated from syringocystadenoma papilliferum, which shows cystic invaginations and papillary projections. Another differential is apocrine cystadenoma with more dilated, cystic spaces rather than tubules. Differential diagnosis also includes apocrine adenocarcinoma which can be distinguished from apocrine adenoma by lack of infiltration of surrounding tissues, the absence of cellular atypia, and the presence of myoepithelial cells in the latter [8].

Although tubular apocrine adenoma is a benign neoplasm, however, it may be locally aggressive sometimesas evidenced by reports of calcification, luminal bridging, cellular atypia, and perineural invasion [9]. These cases need a close follow-up. Treatment of tubular apocrine adenoma is complete surgical excision [10].

CONCLUSION

Tubular apocrine adenoma is a rare benign adnexal tumor which presents as a swelling and can be diagnosed on histopathological examination. Complete excision is recommended to prevent recurrence.

AUTHOR'S CONTRIBUTION

Neetika Kaushal carried out the case presentation, literature review, and draft of the discussion. Priyanka Pandey participated in draft design and review abstract. Both the authors read and approved the final case report.

CONFLICT OF INTEREST STATEMENT

Neetika Kaushal and Priyanka Pandey declare that we have no competing interests.

FUNDING

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CONSENT

Consent has been taken from the patient for this case report.

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