

## Ductal Apocrine Adenoma in A Male Breast – A Case Report



### Medical Science

**KEYWORDS :** MALE BREAST, DUCTAL APOCRINE ADENOMA, BENIGN

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### ABSTRACT

*We describe a rare case of ductal apocrine adenoma of the breast in a 65-year-old man. The patient presented with a lump in his left breast for 10 months duration. A hypoechoic nodule was detected on ultrasound. Microscopic examination of tissue from an excisional biopsy revealed a well defined lesion composed of benign glands with abundant granular, eosinophilic cytoplasm and apical secretion, consistent with an apocrine adenoma. After extensive review of literature, only 2 cases of ductal apocrine adenoma in the male breast has been reported.(1) A 14-year old boy was reported to have an apocrine adenoma associated with gynecomastia.*

### CASE DESCRIPTION :

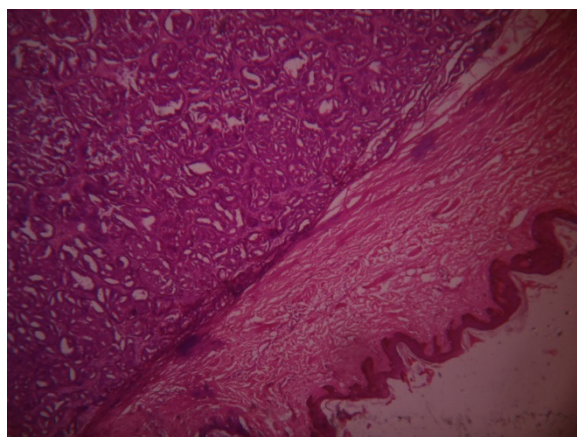
A 65-year-old man without significant past medical history noticed a tender lump in his left breast of 10 months duration. The mass was gradually increasing in size to attain the present size. Physical examination showed a breast lump measuring 3x2 cm in size. The skin over the breast, nipple and areola was normal. The mass was not fixed to the underlying structures. No regional nodes made out. An ultrasound revealed a hypoechoic nodule in the left breast. All other lab parameters were normal.

The mass was then excised with the overlying skin, nipple and areola and sent for histopathological examination.

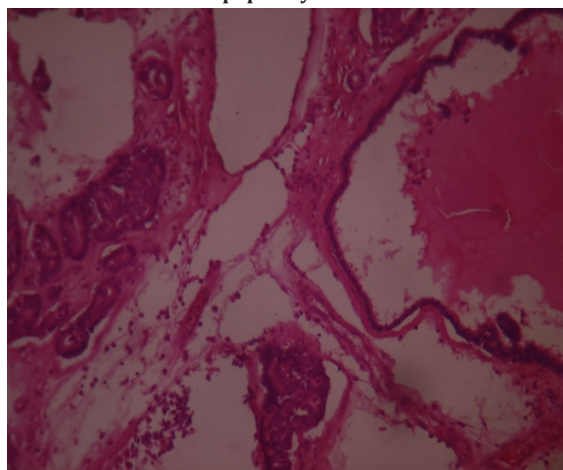
On Gross examination, we received a skin covered mass with overlying nipple and areola measuring 8.5x5x3 cm, External surface shows a raised nodule beneath the nipple and areola. Cross section of the mass revealed a fleshy lesion measuring 3x2.5x2.5 cm beneath the nipple and skin with creamy white areas. The tumour is 0.5 cm from the deeper and surrounding margins.



**Fig-1, Gross picture showing skin with an underlying fleshy and creamy mass.**



**Fig 2 – H & E stain, 10 x magnification. Picture shows a lesion with tubular and papillary structures.**



**Fig 3 – H & E section, 40 x. Shows cystic and tubular glands lined by apocrine cells.**

Microscopic examination revealed a well-circumscribed group of glands, a few of which were minimally cystically dilated. Some areas reveal a papillary pattern. The cells have abundant granular, eosinophilic cytoplasm and apical luminal blebbing (“snouts”). Nuclei are round and uniform. No atypia was made out.

**DISCUSSION:**

Pure apocrine adenomas of the breast are extremely rare. Apocrine glands have both a secretory and a ductal component. The secretion empties into the infundibulum of the hair follicle. The cells that make the secretion are columnar with copious granular eosinophilic cytoplasm and the nuclei are located in the base of the cell. The secretion is produced when the apical portion of the cell is cleaved into the glandular lumen. The secretory cells are surrounded by myoepithelial cells which are surrounded by the basal lamina zone. The apocrine duct is lined by cuboidal epithelial cells that form a double layer. The apocrine tumours which can arise in the breast are Apocrine Adenoma, Apocrine Ductal Adenoma, Complex & Mixed Apocrine Adenoma, Apocrine Carcinoma, Apocrine Ductal Carcinoma, Complex & Mixed Apocrine Carcinoma. The Differential diagnosis include Sclerosing adenosis with apocrine metaplasia, Apocrine adenosis and Apocrine carcinoma. The histological features to differentiate apocrine adenoma from carcinoma are infiltrative pattern of growth, large vesicular nuclei with prominent nucleoli and absence of myoepithelial layer.

Costa described this lesion in a 14-year-old girl in 1974 and it was the first described case of its kind in the literature (2). De Potter et al reported the case of a 14-year-old boy with a firm, enlarging nodule in his left breast with features of apocrine adenoma (3).

Apocrine adenomas have been reported arising in a variety of sites including the breast, (1-5) perianal region, (6,7) eye-

lid, (8) and axilla. (9) Their appearance has similarities to the apocrine metaplasia commonly seen in fibrocystic change of the breast but they are well-circumscribed tumors with closely packed tubular and papillary structures. They are not distinctive by mammography or physical examination and should be managed as any other breast mass. The focus of apocrine-type proliferation present in our case fits the criteria for pure breast adenomas outlined by Hertel et al in 1976 (4). The criteria require the lesion to be homogenous throughout; to be sharply demarcated from the surrounding breast tissue; to have only epithelial proliferative elements; and to have a minimal, supportive stromal component. Apocrine metaplastic changes have been associated with gynecomastia. Gynecomastia is characterized by ductal epithelial proliferation, which is then susceptible to undergoing apocrine metaplasia. However, a pure proliferation of apocrine epithelium is rare, even in the most common of proliferative breast lesions in women. It is understandably even more remarkable to find a pure apocrine adenoma in a male. Female hormones lead to gynecomastia, as demonstrated in patients with alcoholic liver disease and those who have been treated with drugs such as stilbestrol. Dilley et al suggested that androgens might then play a role in the development of apocrine metaplasia in the hormonally stimulated breast tissue (5).

Apocrine adenoma is considered to be a benign lesion, and its relationship to invasive apocrine carcinoma remains unclear. A few follow-up studies have suggested that apocrine adenoma may be a predictor for the subsequent development of carcinoma (6-8).

**REFERENCE**

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