APOCRINE GLAND CARCINOMA IN AXILLA
(Report of a case)

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Carcinoma of the apocrine glands is rare. A few tumours have been reported from the axilla and fewer still from the nipple, vulva and eyelid. The true origin of these tumours is obscure and they along with eccrine gland carcinoma are grouped together as tumours of sweat gland. Miller[3] reviewed published case records of 34 acceptable sweat gland carcinomas arising from different sites of the body, and added five of his own. Out of these 39 tumours, only six were located to the axilla. We have been able to trace in the literature another case report of an apocrine gland carcinoma situated in the axilla (Kipkie & Haust,[2]) thus bringing the total to 7. We feel that another case report of this tumour located in the axilla should prove a valuable addition.

Case Report

A 52-year-old woman was admitted to the surgical wards of the Medical College Hospital, Patiala, with the complaint of a gradually enlarging painless mass in the left axilla for 12 years. There was no history of loss of appetite or weight.

On physical examination, there was a non-tender firm mass in the left axilla having ill-defined margins and measuring 12.5 x 10 cm. It was nodular and fixed to the overlying skin but not to the deeper structures. There was no palpable lump in either of the breasts. The axillary, cervical and inguinal lymph nodes were not enlarged. All the routine investigations including a skiagram chest were normal, except for slight microcytic hypochromic anaemia. A provisional diagnosis of a lymphosarcoma or a sebaceous gland adenoma was made.

Under generalanaesthesia, an elliptical incision was made in the left axilla and the growth along with the overlying skin was excised. The patient made an uneventful recovery.

Gross appearance

A non-encapsulated, skin-covered piece of tissue measured 11 x 10 x 4 cms. Its cut surface showed circumscribed, irregular, bluish, translucent areas varying in diameter from 1 cm. to 6 cm.. some of them showing necrosis and cystic degeneration. Two lymph nodes measuring 1.5 x 0.5 cm. and 1 x 0.5 cm. were dissected out from the tumour mass (Fig. 1).

Microscopic Examination

Paraffin sections stained with haematoxylin and eosin show islands of epithelial cells growing in sheets and cords with an attempt at acinus formation, embedded in broad sheets of mucinous stroma and separated from each other by fibrous septa of variable thickness (Fig. 2). These epithelial masses are situated in the lower dermis and in the subcutaneous area. The covering epithelium is intact- (Fig. 3). The cytoplasm of the tumour cells is moderately abundant and strongly eosinophilic with large oval to rounded nuclei having distinct nucleoli and showing a fair number of mitotic figures. In areas

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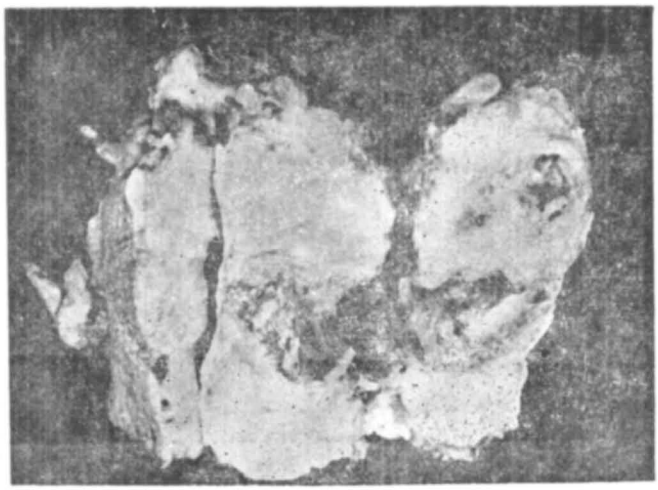

Fig. 1

Photograph of the specimen showing areas of cystic degeneration and necrosis

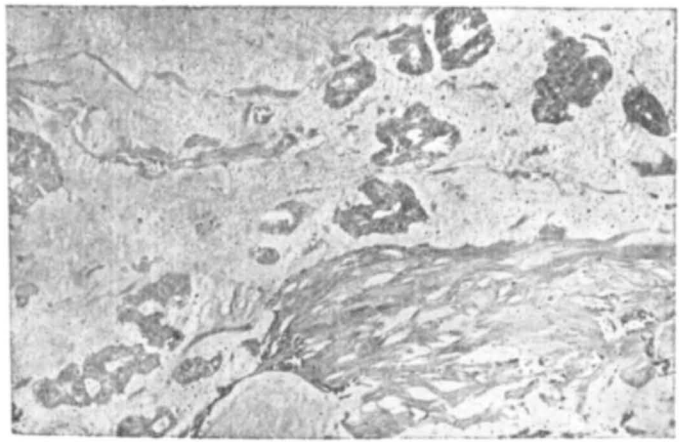

Fig. 2

Photomicrograph. Islands of epithelial cells showing an attempt at acinus formation, embedded in broad sheets of mucus. H & E x 70

Fig. 3

Photomicrograph showing intact covering epithelium and tumour cells embedded in mucus, situated in the lower dermis. H & E x 70

where the cells are better preserved, a remarkable resemblance to the cells of normal apocrine glands can be made out and they seem to be secreting by means of decapitation. When stained by Gomori's method for inorganic iron, the tumour cells show intracellular bluish pigment in abundance. The secretory material is slightly P. A. S. positive. Sections from the included axillary lymph nodes show reactive hyperplasia. A histological diagnosis of an adenocarcinoma of apocrine gland origin was made.

Discussion

According to Kipkie and Haust[2], the prerequisite criteria for the diagnosis of apocrine gland carcinoma are (1) origin in an area where apocrine glands normally occur, (2) presence of glandular cells having strongly eosinophilic cytoplasm and secreting by means of decapitation and (3) the presence of intracellular iron-positive pigment. The histological features in our tumour conform to those described above. Apocrine gland carcinomas usually are slowly growing and dedifferentiate rather late. The first case of sweat gland carcinoma was described by Thierfelder in 1870 on the forehead; and the first case in the axilla was reported by Moriconi in 1931. Subsequently, three more tumours situated in the axilla were reported by Stout and Cooley (1951) and one tumour each by Elliott and Ramsay (1956); Kipkie and Haust (1958) and Miller (1967). These tumours except that described by Kipkie and Haust[2], which was diagnosed as carcinoma of apocrine gland, were labelled as sweat gland carcinoma, which scientifically is not correct. The tendency should rather be to separate, wherever possible, sweat gland tumours of the eccrine and apocrine type. Not only do they differ from one another in origin but their distribution, histology, staining properties and secretion are entirely different and it should always be possible to make the distinction morphologically.

Summary

An apocrine gland carcinoma arising in the axilla of a 52-year-old woman has been described. The necessity of separation of this tumour from carcinoma arising from the eccrine sweat gland is emphasized. The relevant literature on the subject has been reviewed.

Mr. O. P. Khosla prepared the photomicrographs.

REFERENCES

1. Elliott, G.B., and Ramsay, D.W.: Sweat gland carcinoma. Ann. Surg., 144:99, 1956.
2. Kipkie, G.F., and Haust, M.D.: Carcinoma of apocrine glands. A.M.A. Arch. Dermat 78:440, 1958.
3. Miller, W. L.: Sweat gland carcinoma-A clinico-pathologic problem; Am. J. Cl. Path. 47:767, 1967.
4. Moriconi, L.: Adenocarcinoma delle ghiandole sudoripare. Policlinico (Sez. Chir). 38:634, 1931.
5. Stout, A.P., and Cooley, S.G.: Carcinoma of sweat glands. Cancer. 4:521, 1951.
6. Thierfelder, F.A. (1870): cited by 3.