Haemangiopericytoma

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HAEMANGIOPERICYTOMA is a comparatively rare tumour. It was first described by Stout and Murray in 1942. Ever since its first description, the tumour has been described to be arising from various parts of the body by Ault (1952), Begg (1954), Black (1954), Thompson *et al.* (1954). Goodman (1955) described a case where orbit was involved. However, the tumour has been rather infrequently reported from otolaryngologic centres. Gill and Mehra (1968) reported a case of this lesion occurring in the nose.

In view of the paucity of literature on the subject, the present account is documented for a lesion we encountered in the post-auricular region, since, to the best of our knowledge no description in the literature exists for the occurrence of this entity at this site.

Case Report

H.S., male, 26, presented with the complaint of a swelling in the right post-auricular region for 4 years with serosanguinous discharge for the last $1\frac{1}{2}$ years. The swelling $1\frac{1}{2} \times 1\frac{1}{2}$ in. in size had gradually increased to the present dimensions from an initial small size equal to that of a gram seed. The swelling, painless initially, has become frequently painful in the last 2 months. There was no history of any trauma or discharge from the ear. On clinical examination, the swelling was found to be located approximately 1·25 cm. from the post-auricular sulcus. It was hemispherical with well defined margins and had a diameter of about 4 cm. (Fig. 1). Skin over the swelling was normal in its upper part whereas in the lower part, the skin was tense, pinkish in colour with an ulcer of about $\frac{1}{4} \times \frac{1}{4}$ cm. in size. The margins of the ulcer were irregular and the base was covered with granulation tissue. Serosanguinous discharge was coming out of this ulcer. The skin was fixed to the swelling. There was no local rise of temperature. The swelling was tender to touch, was firm in consistency and was not transilluminant and not reducible. It was adherent to deeper structures. Ear examination did not reveal anything significant. There was no lymphadenopathy.

Treatment

The tumourous swelling was exposed by giving a cruciate incision in the skin and the mass was curretted out. The mass was granular and bled profusely. It was firm in consistency and was not easy to cut. The skin flaps were left unsutured. The material was examined histopathologically.

On microscopic examination H. & E. stained sections (Fig. 2), the material was found to be neoplastic in nature. It was found to be composed of spindle cells and polyhedral cells with prominent nuclei and eosinophilic cytoplasm.

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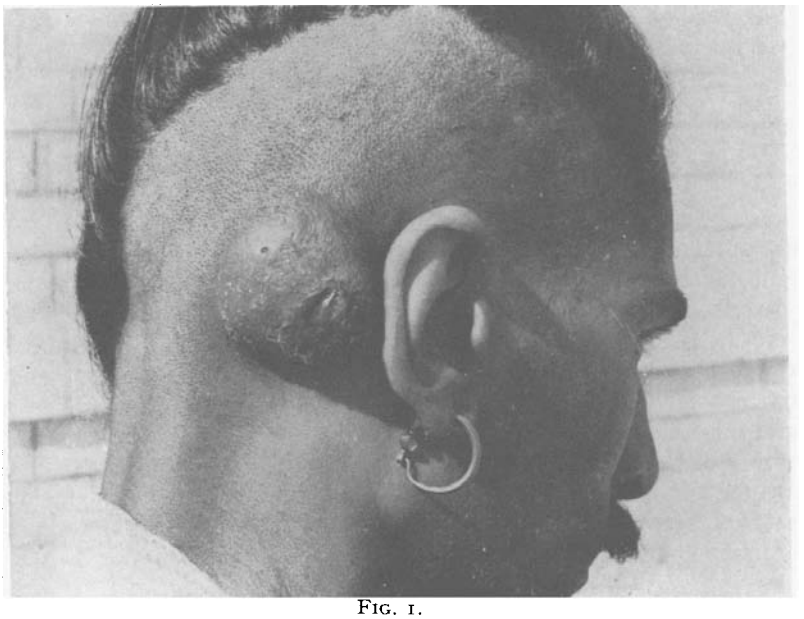


FIG. 1.
Clinical photograph of the patient showing the site of the tumour.

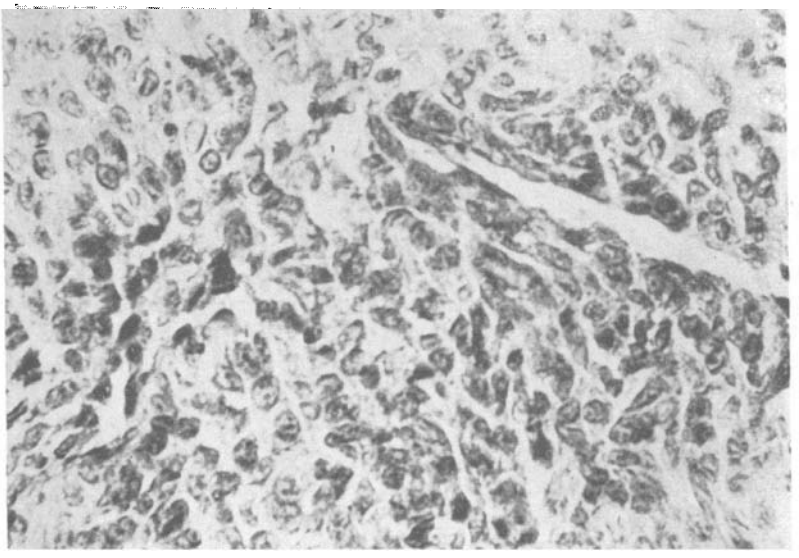


FIG. 2.
The microphotograph of the dissection in tumour (× 10 H. & E.) showing vascular spaces in the midst of a uniform group of cells.

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FIG. 3.

The microphotograph (×10) reticulum stain of the section of tumour highlighting the perivascular arrangement of the tumour cells.

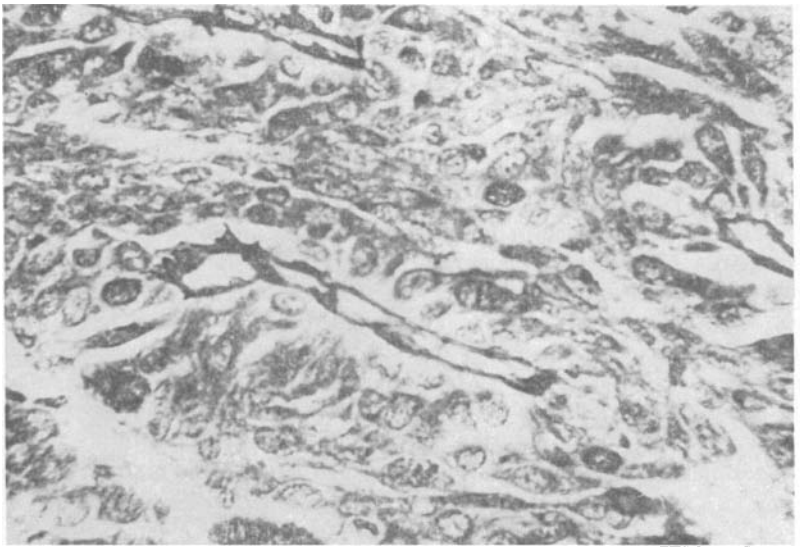


FIG. 4.

A Magnified picture of Figure 3 (×45) illustrating the perivascular cuffing by pericytes.

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The masses of cells were disposed around delicate vascular spaces which showed at most places only a single-layered normal endothelium. The reticulum stain (Figs. 3 and 4) clearly brought out the relationship of these cellular masses with the capillary basement membrane which were found to be entirely perivascular. These features helped to characterize the tumour as that of haemangiopericytoma.

Discussion

Haemangiopericytoma, a richly vascular tumour, is an uncommon lesion that may arise anywhere in the body. In most cases, however, the growth develops (subcutaneously or intramuscularly) in the superficial tissues of the head and neck.

There is no sex or age predilection. Unlike glomangiomas, a haemangiopericytoma is seldom painful and its size varies within wide limits. The growth is nearly always well demarcated and may be partially or completely encapsulated. It is fairly resilient and frequently lobulated. Generally it grows moderately slowly. Sometimes, however, the growth rate is rapid and according to Stout, approximately 12 per cent of the cases metastasize via the blood stream and less frequently by way of lymphatics. Unfortunately, the behaviour of a haemangiopericytoma cannot be predicted solely by the study of its histological appearances. Indeed a puzzling feature is the paucity or absence of mitotic activity in almost all metastasizing variants (Kennedy and Fischer, and Stout).

Microscopically, haemangiopericytoma is characterized by a rich vascular tissue consisting of endothelial channels surrounded by round, or fusiform sometimes vaguely defined, pale staining cells with prominent vesicular nuclei. According to Evans (1961) the histological picture, however, shows considerable variations but nevertheless presents three main structural characteristics.

(1) Numerous vessels lined by an ostensibly normal endothelium separated from the tumour cells by a connective tissue collar of varying thickness; (2) proliferating parenchyma cells disposed as whorls or mantles around the connective tissue cuffs of the vessels which may be obvious or inconspicuous; (3) A distinctive reticulin pattern that outlines the vessels and tends to encompass each cell or small group of cells. Nowhere in a haemangiopericytoma is there evidence of epithelial or mesothelial differentiation.

Haemangiopericytoma is generally regarded as a specific tumour composed of cells which originate from pericytes situated in external mural layers of vessels. The histogenesis of haemangiopericytoma, however, is still obscure and wants clarification. Experimental studies have revealed a possible genesis from pericytes. Despite its close relationship to the glomus tumour, a hamartoma, haemangiopericytoma is a true neoplasm exhibiting a capacity for progressive growth and occasionally an aggressive disposition. Whether a glomangioma ever transmutes into a haemangiopericytoma is so far not known.

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