A solitary painful nodule

A 40-year-old man presented with a painful swelling over his left arm of 5 years' duration. The pain used to increase on exposure to cold and direct pressure. No other family member had a similar disorder. On examination, a solitary, dusky blue, soft to firm, tender, mobile, non-compressible nodule, 1.5 cm in diameter, was present over the anterolateral aspect of the left arm (Figure 1). No other lesions were found elsewhere. Systemic examination was unremarkable.

Histological examination of the skin biopsy specimen showed multiple ectatic channels lined by a single layer of endothelial cells surrounded by monotonous cells with round darkly staining central nuclei and scanty eosinophilic cytoplasm. At places, the tumor contained myxoid stroma (Figures 2 & 3).

WHAT IS YOUR DIAGNOSIS?

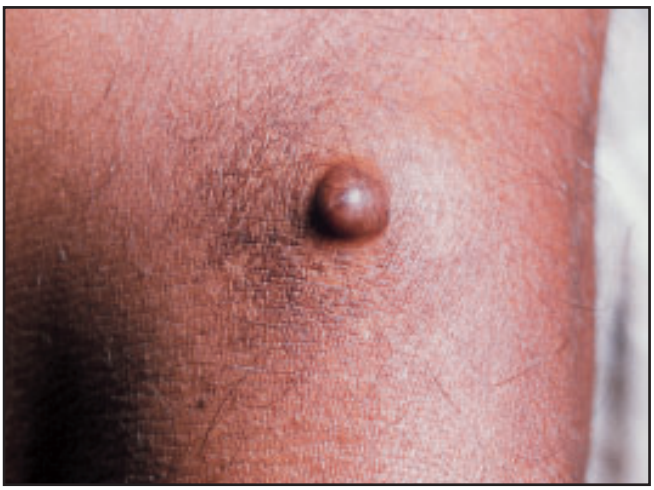

Figure 1: A solitary dusky blue nodule over the left arm

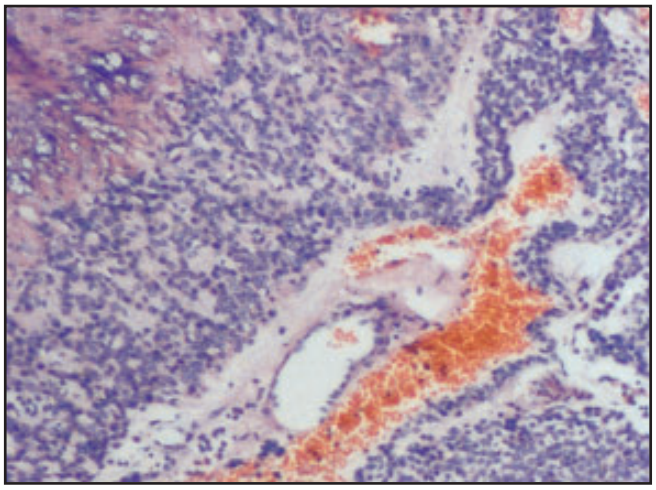

Figure 2: Endothelial lined spaces containing red blood cells interspersed with tumor cell masses and myxoid stroma (H & E x 40)

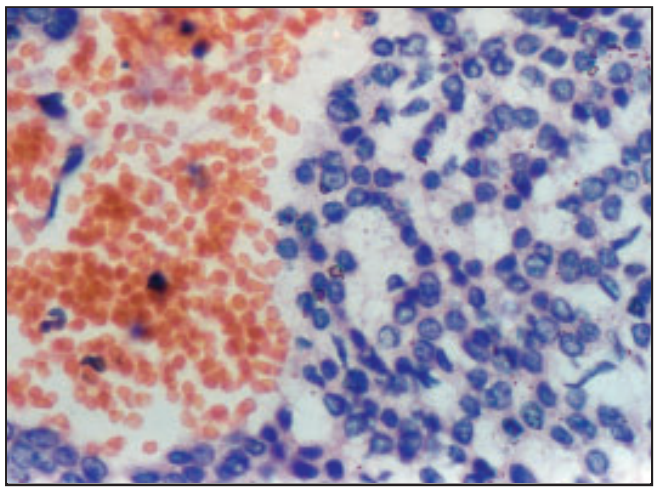

Figure 3: Endothelial lined blood spaces and monotonous cells with rounded darkly staining central nuclei and scanty eosinophilic cytoplasm (H & E x 200)

Diagnosis: Glomus tumor

DISCUSSION

Glomus tumor is one of the painful tumors of the skin.[1] It is relatively uncommon. It is variously regarded as a hamartoma or a neoplasm of the neuromyoarterial glomus, which consists of dilated vascular channels surrounded by proliferating glomus and nerve cells (Suckquet-Hoyer canal), and plays an important role in temperature regulation. Glomus tumors may be solitary or multiple; the latter may be further divided into regional or disseminated, which are usually familial or congenital.[2] Other variants such as plaque types[3,4] and patch type[5] have been described.

Solitary glomus tumors are usually seen in adults equally commonly in both sexes, except for subungual glomus tumors, which show a female preponderance.[6] The lesion is a solitary, dusky blue to purple nodule of size varying from 1 to 20 mm. Its usual location is the subungual region (in the digits) and the extremities, but it can occur anywhere in the body, including the head, neck, penis, and mucosa. Pain in the lesion may be provoked by direct pressure, change in skin temperature or at times may be spontaneous. The multiple glomus tumors are larger, situated deep in the dermis and are less restricted to the extremities (rarely subungual). They may be widely scattered and may not be painful.[7]

Histologically, the glomus tumor is characterized by dilated vascular spaces surrounded by sheets of uniform round cells with central nucleus and scanty cytoplasm resembling glomus cells.[1] Three patterns may be recognized: 1) sheets of cells resembling glomus cells, 2) dilated vascular channels surrounded by glomus cells, and 3) spindle shaped smooth muscle cells blending with glomus cells, respectively classified as solid glomus tumors, glomangioma and glomangiomyoma.[8] The histological features in our case were that of a glomangioma.

This condition has to be differentiated from other painful tumors of the skin such as eccrine spiradenoma, where two populations of cells and focal ductal differentiation are seen, and from leiomyoma and neuromatoid hyperplasia.[8] Multiple glomangioma has to be differentiated from blue rubber bleb nevus.[9]

Treatment of this condition consists of surgical excision, laser ablation and sclerotherapy.[9] If the tumor is not removed in toto, local recurrence usually occurs.

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