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Intranodal palisaded myofibroblastoma presenting as lymphadenopathy of the groin

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DESCRIPTION

A 69-year-old lady was referred to the general surgeons for the assessment of a left groin mass. An ultrasound scan was requested, which confirmed a well-defined hypoechoic ovoid mass (3.8 × 2.9 × 2.7 cm) suspicious of soft tissue sarcoma or lymph node metastasis. She was then referred to a plastic surgeon as an outpatient. She presented with a 3-month history of a painless left groin mass increasing in size. There were no other masses palpated and other than lethargy and a recent cough, she had no other symptoms. She had no family history of malignancy, but did have a history of Bowen's disease on the right shin excised 3 years previously under the care of the dermatologists. Her previous medical history included mitral valve prolapse, spinal osteoarthritis and a partial thyroidectomy.

A fine-needle aspiration cytology was performed which showed occasional spindle cells and fibromyxoid stroma suspicious of malignancy. She was subsequently booked for a staging CT scan, which only showed this abnormal lymph node of 3.2 cm diameter within the left groin. A decision was therefore made to proceed with an excision biopsy with intraoperative contact cytology and frozen section, which suggested a malignant spindle cell tumour of uncertain histogenesis. Owing to these cytological findings the procedure was understandably extended to a left groin block dissection.

Postoperatively the lymph nodes underwent further studies including immunohistochemistry, with the histopathological features suggesting benign disease favouring an intranodal palisaded myofibroblastoma (IPM).

IPM is a rare primitive haemorrhagic spindle cell tumour, a mesenchymal tumour first described in 1989.¹ IPM usually presents as a painless, slow-growing inguinal mass, most commonly affecting the ages between 45 and 55 years, with a male–female ratio of 2:1 and a lack of ethnic predilection.² In terms of macroscopic appearance the IPM cut surface shows areas of haemorrhage.²

The differential diagnosis of IPM includes a variety of soft tissue tumours, such as Kaposi sarcoma, schwannoma, spindle cell carcinoma, spindle cell melanoma, leiomyoma, leiomyosarcoma, dendritic reticulum cell tumour and inflammatory myofibroblastic tumour.^{1–3}

Five microscopic features are seen which help us differentiate IPM from leiomyoma and leiomyosarcoma (figure 1).^{1,2}

Figure 1 Histology showing the typical microscopic features of intranodal palisaded myofibroblastoma (×20 H&E).

- ▶ Compressed remnants of lymphoid tissue at the periphery
- ▶ Spindle cells with nuclear palisading
- ▶ Intraparenchymal haemorrhage and erythrocyte extravasation
- ▶ Amianthoid fibres
- ▶ Intracellular and extracellular fuchsinophilic bodies that stain positive for smooth muscle actin.

Electron microscopy demonstrates features of myofibroblasts and smooth muscle cells and it shows a low proliferative index of Ki-67.^{2,3} Immunohistochemically, IPM is positive for Vimentin, smooth muscle actin and cyclin D1 and negative for S100, glial fibrillar acidic protein, CD34 and desmin, differentiating it from schwannoma and Kaposi sarcoma.^{1,2}

Despite being rare with only around 50 reported cases in the English literature,³ it is very important to be aware of the existence of such a tumour. It will aid in providing a differential diagnosis of primary and secondary malignant mesenchymal neoplasms of the lymph node and will prevent unnecessary surgical overtreatment. Hence, IPM should always be considered when investigating solitary inguinal lymph nodes with an unknown primary.

Key messages

- ▶ IPM is a benign primitive haemorrhagic spindle cell tumour
- ▶ The differential diagnosis of IPM includes a variety of benign and malignant soft tissue tumors
- ▶ Despite being rare, it is important to be aware of the existence of such tumors in order to avoid surgical overtreatment

Competing interests None.

Patient consent Obtained.

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