CASE NOTE

Hibernoma of the neck: a rare benign tumour

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Hibernoma is a rare benign tumour arising from remnants of fetal brown adipose tissue. Clinically, and on magnetic resonance imaging (MRI), the non–lipoma like hibernoma subtype can look like a malignant tumour. We present a case showing the importance of image-guided preoperative biopsy for the diagnosis of this uncommon tumour, for which excision is curative.

CASE REPORT

A 43-year-old otherwise healthy man presented with a right basicervical and supraclavicular growing tumour (Fig. 1). Although there was no pain associated with the tumour, it had been growing at a regular pace, and the patient had been experiencing symptoms for 2 years. Clinical examination revealed a mobile, soft mass compatible with a lipoma. We found no cervical, supraclavicular or axillary node. An MRI of the neck showed a 76-mm long, well-defined tumour (Fig. 2). On T_1-weighted imaging, it was heterogenous and hypointense to surrounding subcutaneous fat. Intravenous contrast showed a heterogeneous enhancement on T_1-weighted imaging and short T_1 inversion recovery (STIR). We found increased vascularity around the tumour, and there was compression of the jugular and the subclavicular veins. We noted entimetric cervical nodes.

We hypothesized that the tumour was cancerous, like a liposacoma. We

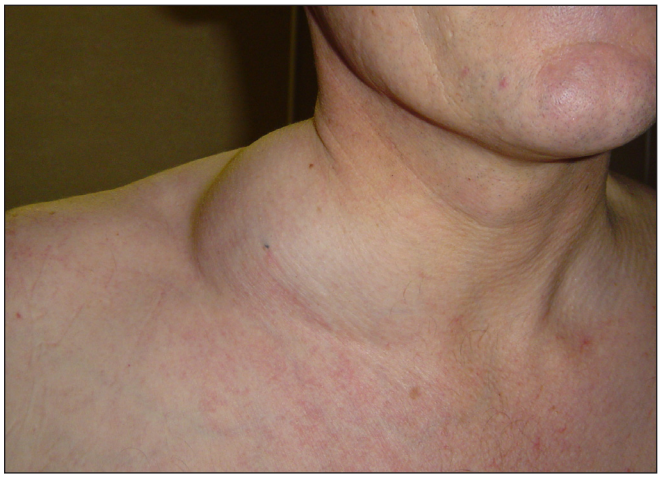

Fig. 1. A large supraclavicular basicervical tumour.

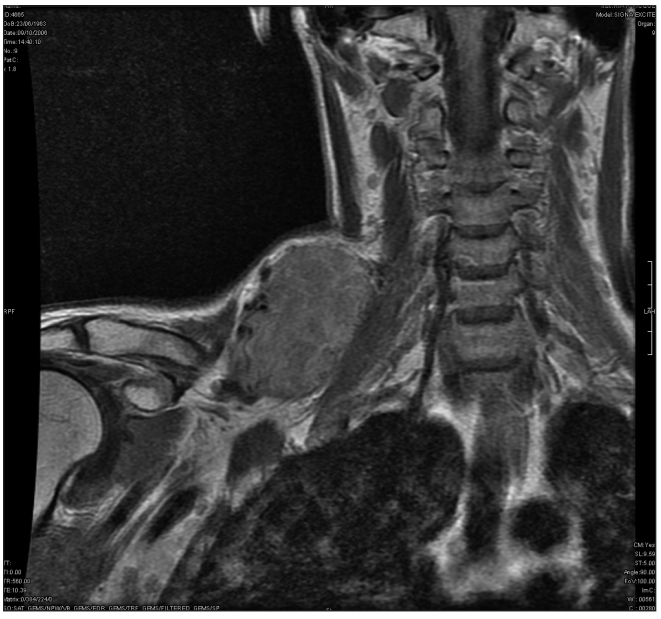

Fig. 2. Frontal magnetic resonance view of a heterogeneous, well-defined lesion with hypervascularity.

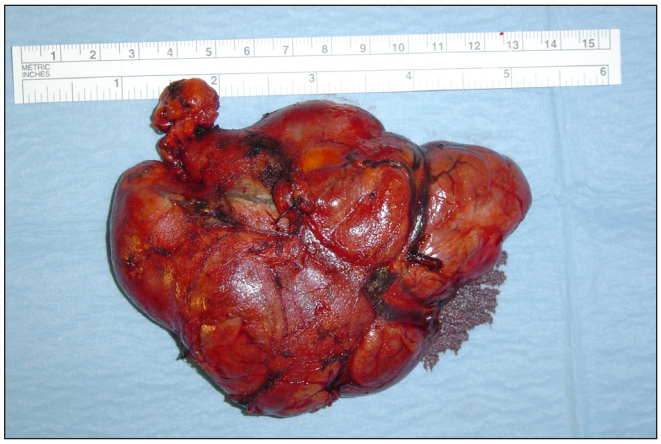

Fig. 3. Macroscopic view of the specimen: note the non–lipoma like hibernoma subtype presents a rich vascularization.

performed a computed tomography (CT)–guided biopsy, inking the needle entry point in case we found a malignant tumour. Pathologic examination led us to diagnose a non–lipoma like eosinophilic variant hibernoma, according to Miettinen's classification.[1] We surgically removed the tumour. Macroscopically, it was a pink, polylobed, hypervascular tumour of 12 × 8 cm in size (Fig. 3). The patient was discharged on the second postoperative day. Two years later, the patient was asymptomatic without any recurrence.

Discussion

Hibernoma is a slow-growing, benign tumour. It is rare and occurs generally in the limbs; 30% of tumours in the largest published series on hibernomas were located in the thigh.[2] Only about 10 cases have been reported in the neck.[3] Patients are generally in the fourth or fifth decade of life, and there is a slight female predominance.[2]

Two histological subtypes have been described.[1] They can be distinguished according to the ratio of multivacuolate adipocytes (seen in the brown fat) and univacuolate adipocytes (seen in normal fat and lipoma). Tumours containing more than 70% multivacuolate adipocytes are generally accepted as non–lipoma like hibernomas.

The non–lipoma like subtype can have 3 histological appearances. The eosinophilic variant is the classical one; the pale and the mixed variants are less common. The non–lipoma like subtype always presents particular characteristics on MRI:[4] heterogeneous, hypo- or iso-intense with hypervascularity. It can sometimes push or compress adjacent structures. Thus, the appearance of non–lipoma like hibernomas on MRI is not diagnostic and may cause confusion with well-differentiated liposarcoma or lipoma variants. At the time of diagnosis, tumour size is generally larger than 10 cm. The CT–guided biopsy is useful for definitive preoperative diagnosis.[5] The needle entry point should be inked to securely remove it and prevent cutaneous permeation in case of cancer. Curative treatment of hibernomas is a complete excision, preserving vital structures. Unlike lipomas, hibernomas present an extensive vascularity that should be treated with care to avoid postoperative bleeding or hematoma. No case of recurrence has been reported.

Conclusion

Even though hibernomas are rare, they should be considered in the differential diagnosis of cervical tumours. The non–lipoma like subtype is not easy to diagnose on MRI alone — usually the first-line examination — because it looks like a sarcoma or secondary lesion. We recommend fine needle biopsy, which allows a positive diagnosis, with a minimal surgical excision, preserving vital structures.

Competing interests: None declared.

References

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