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Post Vaccination Morphea in a Child

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CASE REPORT

Pediatric case with rapidly growing hibernoma due to bleeding into the mass

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Abstract:
Hibernomas are benign lesions developing from brown adipose tissue; they grow slowly and are very rare. They are mainly seen in adults and are localized on the scapulas, neck, axilla, thighs, intrathoracic and retroperitoneal fields. 13-year-old boy admitted to our clinic with the complaint of a painless mass that appeared on the left side of his neck two weeks ago. On his physical examination, there was a non-mobile, firm mass of 10 cm localized to the left supraclavicular area. In the superficial tissue ultrasonography of the affected area, the mass was evaluated as a hematoma; in color Doppler ultrasound, it did not show any relationship with arteries or veins. In magnetic resonance imaging, there was a 7x4 cm mass on left supraclavicular region between the skin and muscular tissues that appeared hyperintense on T1 and T2 weighted sequences. Following complete resection, histopathological examination was reported as typical variant hibernoma. The case is presented because of the rarity of hibernomas in children and the difficulty experienced in the diagnosis due to the bleeding into the mass lesion

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Introduction

Most of the head and neck masses seen in children are benign. These lesions can be of congenital, developmentary or inflammatory origin [1]. Hibernomas are rare benign lesions developing from brown fat tissue [2-5]. In adults, they are mostly seen in scapula, neck, axilla, and thigh, intrathoracic and retroperitoneal fields [6]. These tumors have excessive vascularization, they are generally mobile and not painful. Curative treatment for these cases is complete resection [2, 4, 6]. Our hibernoma case underwent complete resection in our clinic. The case is presented due to the rarity of hibernomas in children and to the difficulty experienced in diagnosis because of the rapid growth resulting from bleeding into the mass.

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Case Report

13-year-old boy admitted to our clinic with a mass on the left side of his neck that started 15 days ago and the mass had rapid growth while presenting itself as a swelling without any pain. In his personal history, there was no further disease or trauma. In his physical examination, there was a 10 cm mass localized to the left

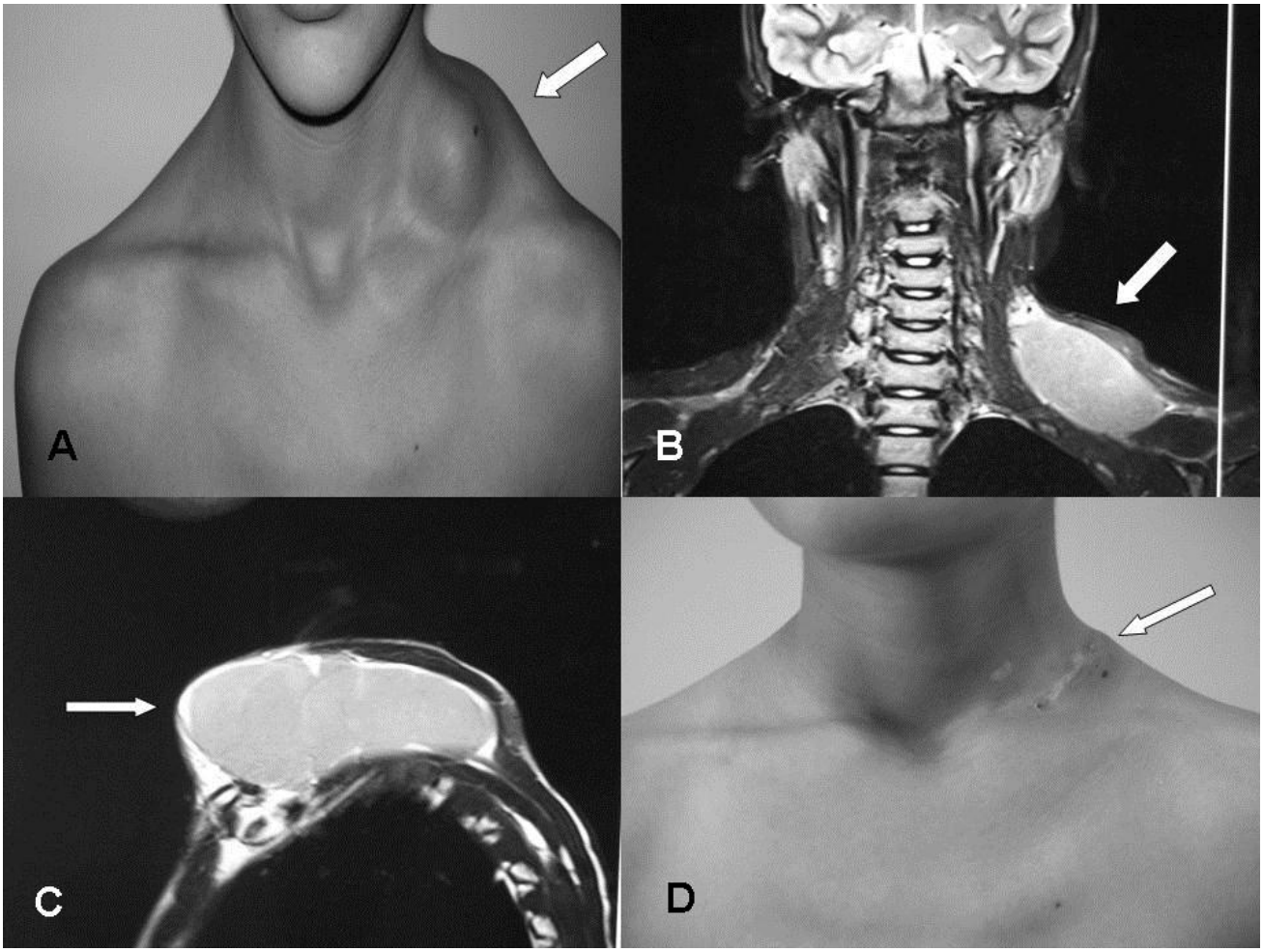

Figure 1. Very rapidly growing lesion on the left supraclavicular region (A) giving a hyperintense appearance on MRI (B, C), was resected completely with surgery (D).

supraclavicular field; the mass had a firm texture and it was not mobile (figure 1A). In the superficial tissue ultrasonography (US) of the region, the mass was measured as 9x3 cm, it had regular borders with mixed-echoic fluid collection; this appearance was interpreted as a hematoma. In color Doppler US, the lesion did not have any relationship with arteries or veins. In magnetic resonance imaging (MRI) of the mass, it was localized to the left supraclavicular region, it was between the skin and the muscular tissue, had a dimension 7x4 cm, it was thought to have a capsule and appeared hyperintense on T1 and T2 weighted sequences (figure 1B, 1C). On computer tomography (CT), within the superior part of the supraclavicular region, located on the posterolateral side of the sternocleidomastoid muscle, there was a cystic mass lesion of fluid density, measuring 2.5x5x8 cm with relatively regular borders and without significant septation. Following the required surgical preparation, a 7 cm long left supraclavicular incision was performed under general anesthesia. 50 ml of blood was aspirated from within the adipose tissues. Following this, soft tissue of 7x4 cm was excised together with the surrounding fatty tissue (figure 1D). The lesion was pathologically examined. Macroscopically, it measured 7x3.5x0.6 cm, it was gray-brown in color and its surface was irregular and cavitary. Microscopically, within the vessel-rich fibrous tissue, there were rare mature lipocytes, their

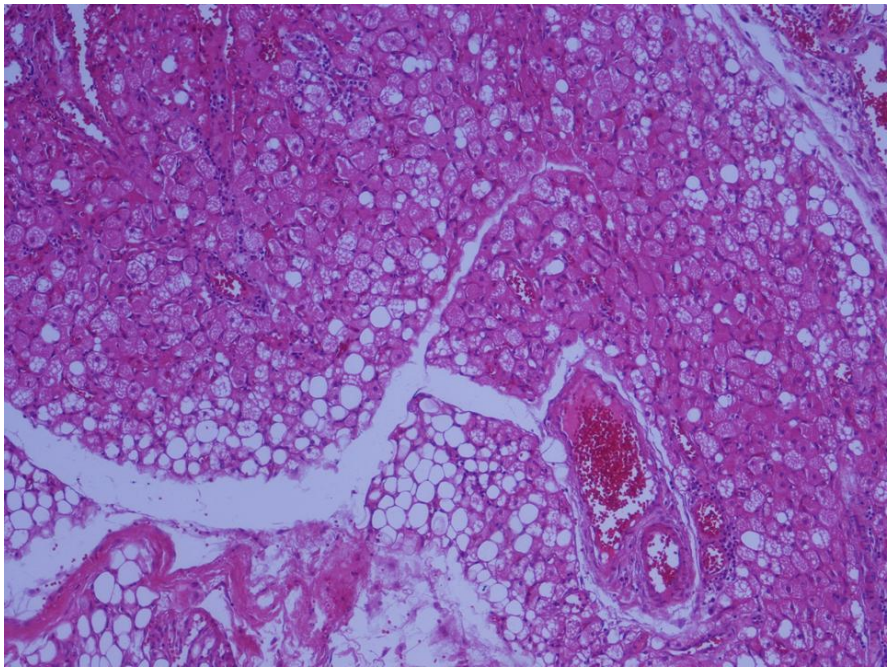

Figure 2. The appearance of the brown fat tissue cells with eosinophilic and pale cytoplasm, central nuclei together with rare mature lipocytes in between (Hematoxylin-eosin x 100).

nuclei were centrally located, their cytoplasms were vacuolar, eosinophilic and pale, immunohistochemically the lipocytes gave a positive reaction with S-100 (figure 2). Pathological examination of the tissue was reported as typical variant hibernoma. The patient did not develop any complications after the operation; he is being followed up in the third postoperative month without any findings of recurrence.

Discussion

Hibernomas are rare, slow-growing, benign lesions of brown fat tissue [2, 3, 5]. It is thought to originate from the differentiation of mesenchymal cells, migration of fat tissue or of its ectopic localization [7]. They constitute 1.1% of all adipose tissue tumors [8]. Hibernomas are most often seen during the third decade of life without any obvious gender preference. A study analyzing 170 hibernoma cases showed the age distribution as 2-75 years. Most of these cases were adults and only 9 of them were in the pediatric age group [5]. Our patient was 13-years-old.

Hibernomas typically present as painless, slow-growing, mobile masses. They can generally appear in any location where brown fat is present; but they are mostly located on the back, periscapular and interscapular areas, neck, axilla, shoulder, thorax or retroperitoneum [2, 6]. Their dimensions are frequently 5-10 cm [2, 4]. These lesions have a significant increase in vascularization [3, 6]. They are differentiated from lipomas with this characteristic; thus, needle biopsy performed for diagnostic purposes can cause bleeding. Our case presented with a rapidly growing mass (within 15 days) on the left side of his neck. The exploration showed that there was bleeding into the mass and that the hematoma that had formed resulted in its rapid growth generating symptoms. This created a difficulty at the time of diagnosis and necessitated an explorative surgical procedure.

In the diagnosis of such cases, computerized tomography (CT), MRI and angiography can provide useful information [2]. Radiologically, following the administration of contrast material during CT and MRI, it is seen as a well-defined

mass with medium signal intensity localized between subcutaneous fat and muscle tissues [2]. MR examination identifies fat intensity whereas MR angiography identifies vascularity [9]. In order to establish the diagnosis in our case, we performed superficial tissue US, Doppler US, CT and MRI. In US, there were findings correlating with hematoma. The relationship of the lesion with vascular structures was evaluated both with Doppler and US and no such relationship was documented. In MRI, there was a hyperintense lesion of 7x4 cm located on the left supraclavicular region subcutaneously and it was thought to have a capsule. As there was hyperintense appearances on both T1 and T2 weighted sequences of MRI, a CT exam was ordered to obtain more detailed information about the nature of the lesion. Despite all the examinations, definitive diagnosis could not be established at the preoperative stage. The diagnosis could only be established after the histopathological examination of the specimen that was completely resected during surgery.

Pathologically, 4 different types of hibernomas have been defined. These are; typical, mixoid, spindle cell and lipoma-like variants. Among these, typical is the most commonly seen variant. Typical variant hibernoma has three subtypes as eosinophilic cytoplasm type, pale cytoplasm type and mixed type bearing both types of cells together [5]. Our case was reported as mixed type variant hibernoma that contained both eosinophilic cytoplasm and pale cytoplasm cells. As was the case for 85% of the hibernomas [5], our case also had positive reaction with S100 protein immunohistochemically.

As they are benign tumors, surgical treatment of hibernomas will be curative [4, 8]. Following complete resection, recurrence or metastasis has not been reported [5]. Our case is being followed up in the third postoperative month without any findings of recurrence.

In conclusion, hibernomas can be seen in all age groups, so they should be kept in mind during the differential diagnosis of slow-growing and painless masses. Because of the significant increase in vascularization, there might be bleeding into the mass and this can result in rapid growth of the lesion. Such a hematoma can create difficulties in the diagnostic process. The suggested treatment for these cases is surgery. Following surgery, care should be given to avoid a possible hematoma.

REFERENCES

1. Eren Gujar S, Gandhi D, Mukherji SK. Pediatric head and neck masses. Top Magn Reson Imaging 2004; 15: 95-101.
2. Da Motta AC, Tunkel DE, Westra WH, Yousem DM. Imaging findings of a hibernoma of the neck. AJNR Am J Neuroradiol. 2006; 27: 1658-1659.
3. Peycru T, Tardat E, Schwartz A, Dufau JP, Benois A, Durand-Dastes F. Hibernoma of the neck: a rare benign tumour. Can J Surg. 2009; 52: 52-53.
4. Khoshnevis P, Kharazm P, Kaviani A, Moradi A. Hibernoma of the neck: A case report and a review of the literature. The Internet Journal of Surgery 2006; 7: 2.
5. Furlong MA, Fanburg-Smith JC, Miettinen M. The morphologic spectrum of hibernoma: A clinicopathologic study of 170 cases. Am J Surg Pathol 2001; 25: 809-814.
6. Dursun M, Agayev A, Bakir B, Ozger H, Eralp L, Sirvanci M, et al. CT and MR characteristics of hibernoma: six cases. Clinical Imaging 2008; 32: 42-47.
7. Udwadia ZF, Kumar N, Bhaduri AS. Mediastinal hibernoma. Eur J Cardiothorac Surg. 1999; 15: 533-535.
8. Moretti VM, Brooks JS, Richard DL. Spindle-cell hibernoma: A clinicopathologic comparison of this new variant. Orthopedics 2010; 33: 52-54.
9. Ong SY, Maziak DE, Shamji FM, Matzinger FR, Perkins DG. Intrathoracic hibernoma. Can J Surg. 2002; 45: 145-146.