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CASE REPORT

Soft Tissue Fibrosarcoma Neck Mimicking as Thyroid Swelling

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ABSTRACT

Fibrosarcomas are relatively uncommon tumors, commonly arise in the extremities; approximately 10% occur in the head and neck region, most commonly in the sinonasal tract and neck. We hereby report a case of fibrosarcoma in neck clinically mimicking as a thyroid swelling in a 14 years old boy. The patient reported with difficulty in breathing along with stridor at the time of presentation so endotracheal intubation was done to secure the airway. Subsequent ultrasonography guided fine needle aspiration cytology (FNAC) showed atypical cells suggestive of mesenchymal origin. Contrast-enhanced computed tomography scan showed a large heterogeneously enhancing mass lesion in right side of neck with retrosternal extension, while the right lobe of thyroid was displaced superiorly and left lobe was normal. We performed a complete surgical excision of the tumor and histopathological examination showed intermediate to high grade spindle cell sarcoma, favoring fibrosarcoma. Postoperative period was uneventful and the patient was referred to oncology unit for radiotherapy and chemotherapy, but the patient succumbed to the disease 5 weeks after surgery.

Keywords: Mesenchymal, Fibrosarcoma, Head and neck.

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INTRODUCTION

Sarcomas are relatively uncommon tumors, accounting for 1% of all malignancies.[1] They are classified according to the histological tissue from which they are derived. In the head and neck, the most common sarcoma in children is rhabdomyosarcoma; in adults, osteosarcoma, angiosarcoma, malignant fibrous histiocytoma and fibrosarcoma are common. Fibrosarcomas are relatively uncommon tumors, commonly arise in the extremities; approximately 10% occur in the head and neck, most commonly in the sinonasal tract and neck. We hereby report a case of fibrosarcoma presenting as a large neck swelling in a 14 years old boy.

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CASE REPORT

A 14 years old boy presented to our outpatient department with complains of progressively enlarging swelling in the anterior neck for 1 year. There was rapid increase in size of the swelling for the last 3 months with difficulty in breathing and swallowing for 1 month. There was no change in voice. On examination, the swelling was seen in the anterior aspect of neck measuring 15 × 10 cm, extending laterally beyond the posterior border of sternocledomastoid bilaterally, superiorly up to hyoid bone, inferior extent could not be palpated indicating retrosternal extension (Fig. 1). The surface of the mass was smooth; it was firm in consistency and was fixed to underlying structures. The patient was in stridor at the time of presentation, so endotracheal intubation was done to secure the airway. Patient's thyroid profile was normal and fine needle aspiration cytology (FNAC) showed inflammatory cells. The FNAC was repeated with ultrasonography (USG) guidance and it showed atypical cells suggestive of mesenchymal origin. Contrast-enhanced computed tomography scan showed a heterogeneously enhancing mass lesion in right side of neck with retrosternal extension, the right lobe of thyroid was displaced superiorly, left lobe was normal. The larynx and trachea were compressed and shifted to left (Fig. 2). After taking consent and with explained prognosis, the patient was prepared for surgical excision of the mass under general anesthesia. The mass was excised by a 'T' incision in neck with partial sternotomy to excise the retrosternal part (Figs 3 and 4). After removal of the mass, the wound was closed and tracheostomy done. The excised mass (Fig. 5) was sent for histopathological examination which showed intermediate to high grade spindle cell sarcoma, favoring fibrosarcoma (Fig. 6). Postoperative period was uneventful and the patient was referred to oncology unit for radiotherapy and chemotherapy. He was started on a schedule of radiation dosage 60 gray in 30 fractions to be given as 2 grays per day, 5 days a week but only after 1 week of radiotherapy, 3 weeks

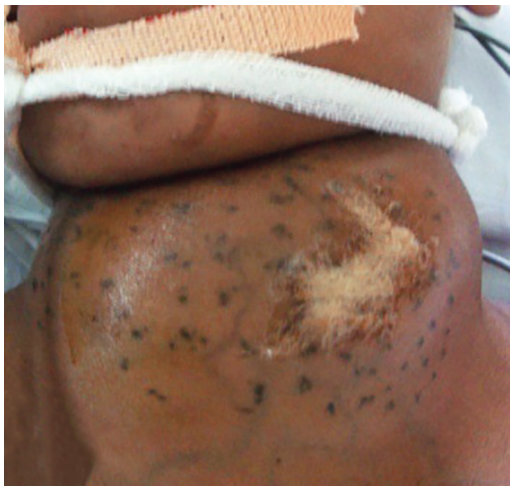

Fig. 1: Neck swelling with venous engorgement

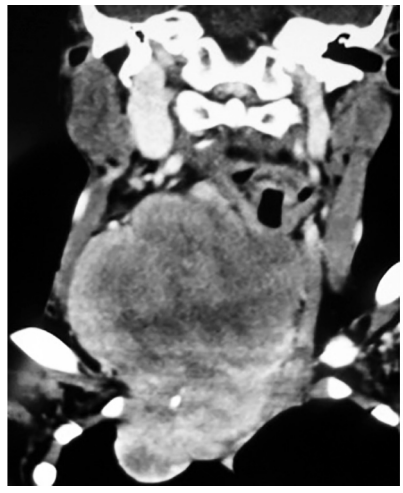

Fig. 2: Contrast-enhanced computed tomography neck—heterogeneously enhancing mass with retrosternal extension

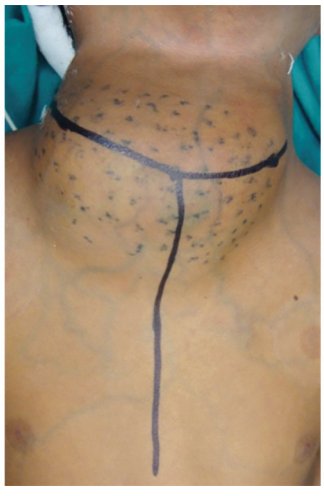

Fig. 3: Surgical incision/approach

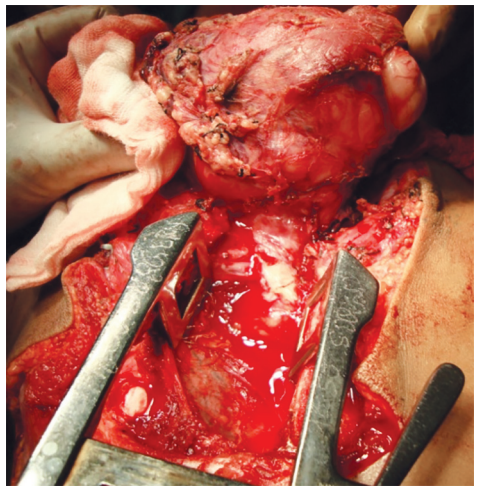

Fig. 4: Peroperative partial sternotomy

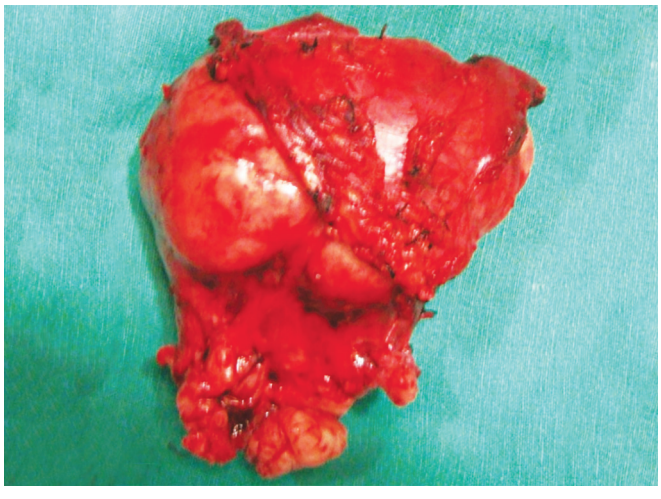

Fig. 5: Excised tumor mass

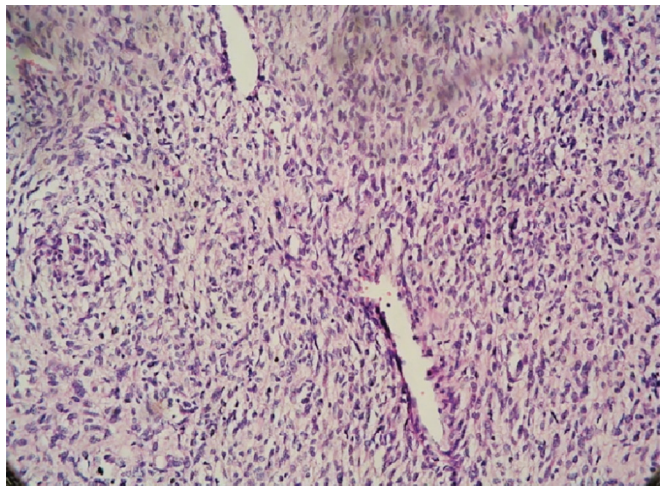

Fig. 6: Microphotography showing fibrosarcoma

after the surgery, he was again admitted in the hospital with massive right sided pleural effusion and cytology of the pleural fluid showed malignant cells. He succumbed to the disease after 2 weeks of admission.

DISCUSSION

Fibrosarcoma is a malignant tumor of fibroblast origin. It may arise at any site, most commonly in the extremities. Occurrence in head and neck is rare accounting for less

than 5% of fibrosarcomas of all the sites.[2] The mean age for the occurrence of fibrosarcoma is between the 2nd and 6th decade with equal gender distribution.[3] Fibrosarcomas most commonly manifest as painless, gradually enlarging masses. Radiological examination of the affected zone reveals the sizes, eventual calcifications, bone involvement and the pulmonary radiography, the presence of secondary lesions. High resolution computed tomography identifies the specific tumor sizes, local extension and the presence of secondary lesions. The best imaging investigation for soft tissue tumors is magnetic resonance imaging (MRI). It provides information about the size of the lesion, tumor structure, and local extent, neural and vascular involvement. In the present case, only CT scan was done to assess the size and extent of the tumor. The diagnosis of fibrosarcoma is confirmed by histopathology and immunohistochemistry. Fibroblastic and poorly differentiated sarcomas, such as fibrosarcoma, myxofibrosarcoma and pleomorphic malignant fibrous histiocytoma display no specific marker, but immunohistochemistry may be useful to rule out other tumors, such as nonmesenchymal malignant tumors or sarcomas with a specific line of differentiation.[4] The main therapy for soft-tissue sarcomas consists of complete surgical excision with a cuff of normal tissue. In the case of tumors of the head and neck, this is difficult to achieve because of the proximity of large vessels and other important structures. Adjuvant radiotherapy is recommended for large tumors, high grade sarcomas and close or positive margins.[5,6] Tumor size and grade are important prognostic factors affecting survival. Local recurrence rate has been reported to be 10 to 30%. The lung is the most frequent target for secondary determinations.[6] In this case, because, the tumor presented as a mass mimicking a thyroid swelling, it was misdiagnosed as physiological goiter of adolescence and it could not be diagnosed at an early stage which led to occurrence of secondaries in the lung later.

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