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SPINDLE CELL SARCOMA: RARE BUT NOT TO BE IGNORED

Surgery

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ABSTRACT

Spindle cell sarcoma of the lower limb is a rare tumor. It remains a diagnostic as well as a therapeutic challenge to identify and successfully treat a case of spindle cell sarcoma as the tumor can be notorious sometimes. The current study presents a case of spindle cell sarcoma with clinical, imaging and pathological examination. A 20-year-old female presented to the surgery OPD of Rajendra Institute of Medical Sciences, Ranchi suffering from a mass on the posteromedial aspect of her left leg for approximately four years. Imaging examination by leg computed tomography angiogram scan revealed a large thrombosed arterio-venous malformation. The patient underwent wide local excision of the mass. Pre operative fine needle aspiration cytology examination revealed benign spindle cell mass. The swelling was excised under anaesthesia. Post op histopathological examination was done which revealed spindle cell sarcoma

KEYWORDS

spindle cells , mesenchymal tissue, arterio-venous malformation, painless

INTRODUCTION

Spindle cell sarcomas are soft-tissue tumors that can start in the bone, commonly seen in the arms, legs or pelvis. Sarcomas can be found almost anywhere in the body. About 50-60 percent of soft-tissue sarcoma cases occur in the arms and legs, 40 percent occur in the back and chest, and 10 percent occur in the head and neck and generally presents as a large painless and rarely painful soft tissue mass [1]. Soft-tissue sarcomas are rare in adults, accounting for less than 1 percent of all new cases of cancer. As this tumor is very rare, there are lack of basic information regarding the incidence of tumor, its distinctive clinical characteristics, treatment outcome and disease specific prognostic factors [2] . Unlike carcinoma, sarcoma develops from mesenchymal tissue, seen more in the young, and is often vascular. Its rate of growth is rapid and if malignant spreads via the blood vessels. Prognosis for such a cancer is worse than carcinoma. And specifically talking about spindle cell sarcomas they have shown to have 30% mortality. The three types of spindle cell sarcoma are namely Pleomorphic Undifferentiated Sarcoma (also known as Malignant Fibrous Histiocytoma), Fibrosarcoma, Leiomyosarcoma . Spindle cells make up part of the body's natural healing process in response to injury. Normally, once the area being repaired has healed, spindle cells will stop dividing to prevent the build-up of these cells. However, spindle cell sarcoma forms when these spindle cells begin to divide uncontrollably, creating a mass of cells that forms a tumour. Although the diagnosis can be confirmed by histopathology, it remains a diagnostic challenge sometimes. Radiological modality of choice is MRI due to high specificity and sensitivity [3] . The differentials include osteolytic osteosarcoma, metastatic carcinoma and aneurysmal bone cyst. The treatment ranges from surgery to chemotherapy and radiotherapy. The gold standard for such a case is complete surgical excision [4] . But the malignant ones need chemotherapy and radiotherapy as well apart from surgery. Chemotherapeutic agents of the popular MAP regime including methotrexate , doxorubicin (also known as adriamycin-A) and cisplatin-P are indicated here. Other chemotherapy drugs that can be used, most commonly if the cancer returns or if the other drugs are not well tolerated, include Ifosfamide , Etoposide, Gemcitabine, Docetaxel.

CASE STUDY

A 20 year old female presented to the RIMS surgery OPD with complaints of swelling over posteromedial aspect of left calf for four years, and had difficulty in walking. The swelling gradually progressed in size and was painless. On inspection the swelling was of around 5x5 cm in size and of irregular shape. It was non mobile and was fixed to the overlying skin. It was firm to hard in consistency. On clinical examination she had no clubbing, pallor, icterus, cyanosis, edema, koilonychia and lymphadenopathy. Other past medical and surgical history was unremarkable. A thorough personal history questionnaire revealed no clinically significant information. A fine needle aspiration cytology biopsy was performed on the swelling which revealed spindle cell swelling of benign variety . A computed tomography peripheral angiography of the leg showed a large thrombosed arterio-venous malformation involving posteromedial aspect of left leg and popliteal fossa .

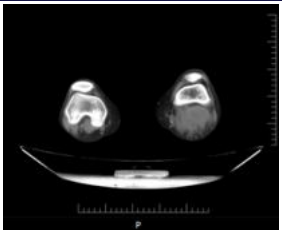

Figure 1(a)

Figure 1(b)

Figure 1(a) and (b) are two different sections of the CT angiography scan of the leg showing hyperdense lesion on the posterior aspect of the left leg.

Wide local excision under anaesthesia was performed on the swelling , simultaneously preserving the gastrocnemius-soleus muscle complex for proper movement around the knee joint. The specimen on goss examination measured about 5x3.5x4.5 cm, whose cut surface was grey-white, firm and fibrous. On microscopic examination of the histopathologic specimen, multiple sections of it showed sheets of oval to spindle cells with fine chromatin, inconspicuous nucleolus and moderate cytoplasm with rare mitosis. It revealed no significant cytological atypia/ mitosis/ necrosis.

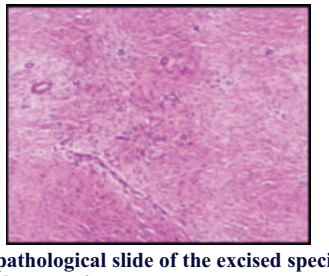

Figure 2. histopathological slide of the excised specimen showing spindle cells with no atypia.

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