



## Haemorrhage, as an Oncologic emergency in Recurrent Extremity Soft Tissue Sarcoma

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**Abstract:** malignant tumours may present as surgical emergency and require immediate intervention. obstruction, perforation and bleeding are the common surgical Oncologic emergencies. They may present initially, during treatment or later after treatment as emergency. We present two patients of recurrent extremity soft tissue sarcoma presented with life threatening haemorrhage during a period of five months (nov 2016 to mar 2017). Emergency amputation was done for both the patients to save their life.

**Key words:** soft tissue sarcoma, recurrence, haemorrhage, emergency amputation.**Introduction:** The incidence of cancer is increasing and is becoming the common cause of death. Sarcomas arise from mesenchymal cells. sarcoma accounts for 1% of the cancers in adults and 15% of cancers in childhood, but remain life threatening (1). Soft tissue sarcoma, when diagnosed early is eminently curable and when diagnosed at the time of extensive local or metastatic disease it is rarely curable. Soft tissue sarcoma can occur in any site through the body. extremities are the common site(Table 1).

**Table 1. Anatomic distribution**

Anatomic region	Percentage.
Lower limb	30
Upper limb	15
Intraabdominal Visceral (Gastro intestinal stromal tumours and Uterine Leiomyosarcoma)	21
Intraabdominal (Retroperitoneal)	17
Truncal	10
Head and Neck	5

**Case – 1.** 41 years old male patient was diagnosed as soft tissue sarcoma left arm nine months back. He was treated in a private hospital. The tumour was present on the medial side of arm. The brachial artery was surrounded by the tumour. He was operated in the private hospital. The tumour was bivalved and removed. The postoperative histopathology was Malignant Fibrous Histiocytoma. He did not receive any adjuvant treatment. He defaulted.

He presented with torron bandage in a private hosptential bleeding and compressiital and was referred to us. There was no clinical evidence of regional or distant metastasis. X ray chest was taken to find any lung metastasis. There was no lung Metastasis. Patient was taken up for Surgery. The brachial Artery was exposed proximally for control. Compression bandage removed and there was a torrential bleeding (Fig 1). Vascular clamps applied to the brachial artery and the tumour was examined. The tumour involved two thirds of the arm encasing the brachial artery. Above elbow amputation was done with wide clearance.

Postoperative period was uneventful. CT scan was done to find lung metastasis and there was no lung metastasis. He was advised adjuvant Radiation and Chemotherapy.

**Figure 1&2**





**Case – 2.** 67 years old male was diagnosed as Soft Tissue Sarcoma right leg in our hospital and below knee amputation was done one and half years back. He defaulted. He presented with local recurrence at the stump site and bleeding from the recurrent tumour. X ray chest revealed multiple pulmonary metastasis. He was stable and in view of bleeding, above knee amputation was done. Postoperative period was uneventful. He was advised palliative chemotherapy.

**Discussion:** The incidence of soft tissue sarcoma is 3.4 per 100,000 population (2). Male: female ratio is 1.4:1. the median age of the patient is 59yrs. There is bimodal distribution of the tumour 5th and 8th decade. The environmental causes of the sarcoma are, Ionising Radiation, chemicals like arsenic, vinyl, chronic irritation. Epstein Barr virus and HIV virus causes the tumour. The Genetic factors are Li Ferumoni syndrome, Von Recklingkasan disease. Soft tissue sarcoma is a heterogenous tumour. Histologically there are 100 types of tumour (world Health Organisation classification). The tumour is classified based on the line of differentiation of the cells in the tumour. Common types are Malignant Fibrous Histiocytoma, Liposarcoma, Fibrosarcoma, Malignant Peripheral Nerve Sheath tumour (MPNST) and Synovial Sarcoma.

Soft tissue sarcoma presents as painless mass. The tumour pushes the surrounding tissues. The overlying fascial layers, the muscular fascia, vascular sheath and periosteum acts as barrier. The lymph node metastasis is rare. Sarcoma has predilection to metastasise to lungs. MRI is the imaging modality for evaluating the extremity sarcoma. The extent of the tumour and involvement of Neuro-vascular bundle are assessed. The vascular structure can be better delineated by MR Angiogram. X-ray chest is the initial modality of evaluation. If the X-ray chest is normal, CT scan Chest is done to rule out lung metastasis.

Core needle biopsy is done to confirm the diagnosis. The biopsy site should be in the future line of incision, so that this can be excised later. Open biopsy is done rarely and when repeated core biopsy reported as negative for malignancy. In extremity sarcoma, the Biopsy incision should be oriented longitudinal to the limb. The incision should be within the future skin excision. The tract should be the shortest route. Subcutaneous flaps should not be raised. Fine needle aspiration Cytology (FNAC) is adequate to confirm recurrence.

Surgery is the primary modality of treatment in soft tissue sarcoma. Aggressive enbloc surgical resection is the treatment, when the disease is localised or with limited metastasis. Wide excision of the primary with 1 to 2 cms margin is required to prevent local recurrence. In the extremity sarcoma, limb conservation surgery to be attempted whenever possible.

Whenever the tumour is closer to neurovascular bundle the vascular sheath can be opened and the sheath can be removed with tumour. When the tumour surrounds the vessels the vessels also can be excised with tumour. Artery can be reconstructed with natural (long Saphenous vein) or synthetic graft. The veins can be sacrificed, since collaterals will develop. When the tumour is near the motor nerve the perineurium can be stripped. When motor Nerve is to be sacrificed advanced manoeuvres such as Tendon transfers are considered in collaboration with hand surgeons (3).

Amputations are considered when limb sparing surgery cannot give an useful limb. An ill placed biopsy may result in amputations. Below knee amputations are done for extensive high Grade soft tissue sarcoma of the lower leg and foot. There are no true Anatomic compartments around the ankle foot to do limb sparing surgery. Lesions of the upper leg above knee amputation is done (4). Regional lymphadenectomy is done when lymph nodes are enlarged. Lung is the commonest site of Metastasis. If few metastases are present then Metastatectomy can be done.

Neoadjuvant Radiation, Neoadjuvant Chemotherapy and Hyperthermic isolated limb perfusion helps in down staging locally advanced soft tissue sarcoma. Rastrelli et al used Doxorubicin, high dose Tumour Necrosis Factor- $\alpha$  and Melphalan in Hyperbaric isolated limb perfusion to down stage the tumour (5).

Adjuvant Radiation and adjuvant chemotherapy are given in high grade tumours and tumours with positive margin. Adriamycin and Ifosfamide are the drugs used in chemotherapy. Surgery could also be palliative when there is haemorrhage, pain or infection. Palliative chemotherapy is given in metastatic disease which cannot be resected.

**Conclusion:** When conservation surgery is planned in extremity Sarcoma, strict oncologic policy to be followed. Patients may be referred to higher medical centre if vascular resection is required. The local recurrence may be a source for metastasis or may lead to haemorrhage. The patient compliance to be assessed in these situations.

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