The Royal Liverpool and Broadgreen University Hospitals NHS Trust

Increasing International sarcoma awareness

Will Harrison-ST3 Registrar, CR Chandrasekar-Consultant Orthopaedics

Sarcomas are malignant tumours of the connective tissue which forms the bulk of the human body. However, sarcomas are rare constituting about **1% of all cancers**. Sarcomas can occur anywhere in the body and it can also occur in any age group. **Sarcomas form 14% of childhood malignancies** –this is more significant for countries with young population and lower life expectancy.

Benign lumps and bumps are far more common than sarcomas. Metastatic bone tumours are also more common than primary bone sarcomas. **The three subgroups of sarcomas are primary bone sarcomas, soft tissue sarcomas and GIST (Gastrointestinal stromal tumours).**

Sarcomas are best managed by a Multi-disciplinary team (MDT) in a specialist centre. It is important to identify red flag features for a sarcoma and refer early to a specialist centre for comprehensive multimodality treatment. **Early diagnosis and appropriate treatment can save lives.**

Delays in diagnosis, wrong diagnosis, unplanned excisions and inappropriate treatments are not uncommon due to lack of public and professional awareness of sarcomas. In many countries, lack of pathology, radiology, radiotherapy and chemotherapy facilities hamper the provision of best possible care. Many countries in the sub Saharan Africa do not have radiotherapy facilities and often sarcomas seen when cure is impossible.

Increasing sarcoma awareness among medical professionals

Even in the developed countries like the United Kingdom, there are currently no designated modules on the undergraduate medical curriculum on sarcomas and there are fewer than 20 designated centres treating sarcoma patients. Even in the designated sarcoma centres, only a few students get the opportunity see sarcoma patients and work with experienced sarcoma clinicians. This results in **many medical students graduating with little or no knowledge of sarcomas** and even after graduation, the opportunities, time and desire to learn more about sarcomas are scarce. This often results in delayed and even incorrect diagnoses of sarcomas, inappropriate interventions and poor outcomes, as **'what the mind does not know, the eyes cannot see.'**

In a UK survey of a group of teenagers and young adults with cancer, 42% of those with soft tissue sarcoma said they visited their family doctor more than five times before they were referred to hospital. The mean number of physician visits before referral to a specialist unit for bone or soft tissue sarcoma was 4.85 in an American study. Between 19% and 53% of new patients with soft tissue sarcomas referred to sarcoma centres are following inadequate initial excisions, and 59% have residual sarcoma on re-excision.

It will be useful to have Sarcoma education in the Undergraduate curriculum –but the reality is the lack of priority and awareness. There is the option of having **e-learning module** provided by reputed medical journals accessible to all interested medical professionals with the ability to learn at their own time and space (see the BMJ learning module). Voluntary incentive based education is also another option to increase sarcoma awareness. (e.g. prizes and funded fellowships)

We are hoping to encourage sarcoma awareness among SICOT members, young surgeons and trainees by inviting them to participate in the International Sarcoma awareness project in December 2014 if there is sufficient interest.

Why Should You Take Part?

- To increase your knowledge and awareness of sarcomas.
- you will receive recommended reading links and an assessment questionnaire.
- Upon completion of the study you will receive a certificate for your e-portfolio/CV.
- Selected participants will be invited to attend a short term funded clinical observership at a UK sarcoma centre.

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Lumps, Bumps and Sarcomas

Key Points You Need to Know

Primary Bone Sarcomas

Red Flags!

- Bone pain
- Bony swelling
- Night pain
- Analgesia resistance

Soft Tissue Sarcomas

Red Flags!

- Any swelling which is :
- More than 5cm in size
- Increasing in size
- Deep to deep fascia
- Recurring (after previous operation)
- Painful

-Bulk of the human body is formed of connective tissue like fat, muscle, fibrous tissue and bone

-Soft tissue and bony swellings [lumps and bumps] are common in all age groups, occurring anywhere in the human body

-Most lumps and bumps are benign [lipoma, ganglion, sebaceous cyst, osteochondroma etc.]

However it is important to identify malignant lumps and bumps and not to presume that all lumps and bumps are benign.

-This will result in earlier diagnosis of sarcomas and save lives

Key Resources

UK Guidelines for the Management of Bone Sarcomas
http://www.hindawi.com/journals/srcm/2010/317462/

UK Guidelines for the Management of Soft Tissue Sarcomas
http://www.hindawi.com/journals/srcm/2010/317462/

Link to BMJ module
http://learning.bmj.com/learning/module-intro/lumps--bumps--and-sarcomas--a-guide-.html?moduleId=10050381&locale=en_GB

If you are interested in taking part in International Sarcoma awareness project please contact Sarcoma.Awareness@rlbuht.nhs.uk

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Primary Bone Sarcomas

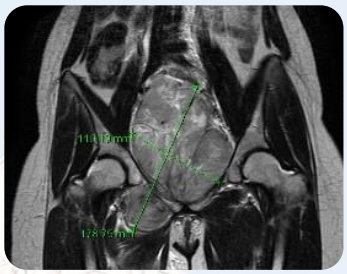
4 Types of Primary Bone Sarcomas:

Osteosarcoma

Ewing's Sarcoma

Chondrosarcoma

Spindle cell sarcoma

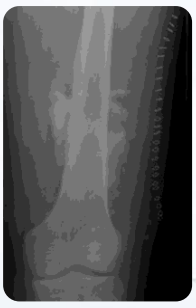


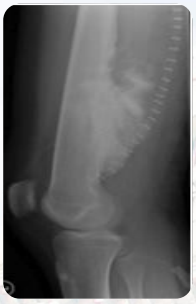
Ewing's sarcoma of the pelvis -MRI

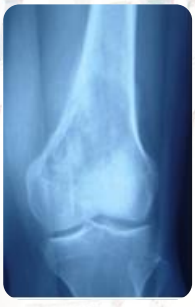
Red Flags!

- Bone pain
- Bony swelling
- Night pain
- Analgesia resistance

Osteosarcoma of the distal femur







Features suggestive of a malignant bone lesion on a plain radiograph

1) Ill defined boundaries
2) Mottled appearance
3) Periosteal reaction
4)Lytic or sclerotic lesion

- **Metastatic bone tumours more common than primary bone tumours**
- **Osteosarcoma** and **Ewing's sarcoma** are the most common in second decade - unexplained hip and knee pain in children and adolescents should not be ignored
- **Chondrosarcoma** peak age is 45-60 years and predominantly affects the axial skeleton
- **Red flags** prompt referral to a **regional centre**
- **Osteosarcoma/Ewing's sarcoma** - treatment includes neo-adjuvant chemotherapy followed by surgery in
  - [Limb salvage in 90% of extremity sarcomas]
- Surgery is primary treatment for **chondrosarcomas**

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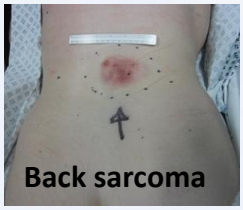
Soft Tissue Sarcomas

Soft Tissue Sarcomas can occur in any part of the body, in any age group – more common in adults

Benign lumps (e.g. lipomas, ganglions, epidermal inclusion cysts etc.) are more common than soft tissue sarcoma and are usually:

- Small
- Painless
- Slow growing
- Superficial

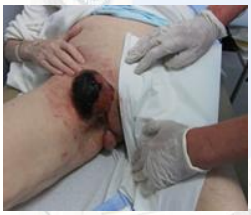


Back sarcoma

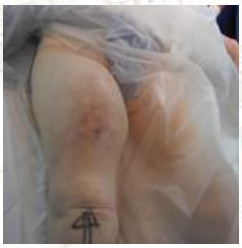
Red Flags!

Any swelling which is
More than 5cm in size
Increasing in size
Deep to deep fascia
Recurred after previous operation
Painful

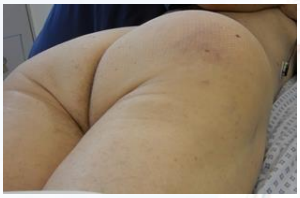
- **Red flags prompt referral to a regional centres**
- **Thigh and buttock are common sites**
- Commonly spread to lungs and rarely to liver, bone and lymph nodes
- Soft tissue sarcomas are treated by **wide surgical excision** followed by **adjuvant radiotherapy.** Some soft tissue sarcomas may need pre- operative chemotherapy or radiotherapy
- **The principal role of chemotherapy is in the palliation of advanced disease.** It is increasingly adapted to treat certain histological sarcoma subtypes**.** Targeted therapies and novel chemotherapy agents are changing the sarcomas management.
- **Five year survival** of sarcoma patients is about **60%**
- **Soft Tissue Sarcoma prognosis is dependent upon:**
  Age, Grade, Size, Depth, type and Presence of metastasis at diagnosis
- **Early diagnosis** [i.e. small tumours] **can improve survival** - hence it is important to know about sarcomas



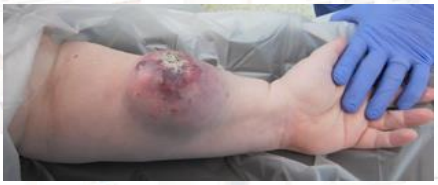
Groin sarcoma



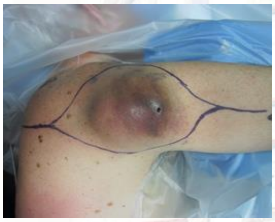
Thigh sarcoma



Buttock sarcoma



Forearm sarcoma



Upper arm sarcoma