

MALIGNANT MUSCULOSKELETAL TUMOUR

簡介

- ◆ 惡性骨腫瘤大致可分為三類：骨瘤、軟組織肉瘤及皮膚瘤。
- ◆ 最常見的原發性骨瘤是骨肉瘤和軟骨肉瘤。骨肉瘤是兒童和青少年最常見的，其特徵是惡性細胞會產生類骨質和未成熟的骨細胞，發作部位多為長骨幹兩端，尤其是在遠端股骨、近端脛骨和肱骨。
- ◆ 軟骨肉瘤通常病變於軟骨，發作部位多為股骨、盆骨和肱骨近端，影響成年人居多。
- ◆ 繼發性骨腫瘤是惡性細胞由體內原發部位擴散到骨的結果，最常見的原發部位包括肺、腎、乳房、前列腺、腸胃和甲狀腺。
- ◆ 軟組織肉瘤的種類很多，超過八十種，最常見的是脂肪肉瘤、骨纖維肉瘤、滑液肉瘤、惡性纖維組織細胞瘤和橫紋肌肉瘤。

病徵

- ◆ 局部腫脹是一個非常顯注和初期的病徵
- ◆ 疼痛在骨瘤是已知的病徵。約有三成的軟組織肉瘤病者會感覺疼痛，甚至會因疼痛而在熟睡中被驚醒



診斷方法

- ◆ X光檢查
- ◆ 磁力共振掃描 (MRI)
- ◆ 可在電腦掃描、超聲波造影或X光作輔助下，抽取組織作化驗
- ◆ 如懷疑有擴散，可做肺部電腦掃描和骨掃描
- ◆ 正電子發射斷層掃描 (PET)也可能用作取代以上掃描



治療

- ◆ 治療惡性肌肉骨骼腫瘤需要跨學科的醫療團隊的共同參與、合作，如骨科醫生、腫瘤科醫生、兒科腫瘤醫生、放射治療醫生、及病理學醫生，不但提升病人存活率，也可以保存了病人的肢體和其功能
- ◆ 腫瘤切除和軟組織瓣重建都是常見的前期手術，如有需要，皮瓣、骨移植或全關節置換術均可用作保存肢體的功能。現今的電腦導航系統，可幫助醫生於手術時準確地找出入點，從而保存關節
- ◆ 要醫治骨肉瘤，除了手術外，化療亦會安排在術前和術後，而對於軟骨肉瘤，手術就是主要的治療方案
- ◆ 繼發性骨腫瘤的治療就截然不同。只有百分之一至二的病人可受惠於切除手術，大部分病人反而需要舒緩手術，如骨折處理
- ◆ 切除手術是常用於醫治軟組織肉瘤，術後放射治療的安排，則取決於術後殘餘腫瘤的多少。化療相對地是較少用的治療方案

手術前的準備

- ◆ 健康評估及檢查
 - 血液檢驗
 - 心電圖
 - 尿液分析
 - 上述掃描檢查
- ◆ 麻醉科及骨科醫生評估
- ◆ 簽署手術同意書
- ◆ 病人需戒煙，並學習深呼吸運動，以減低術後肺部感染
- ◆ 病人教育，包括術前術後的護理和需要時靜脈加壓系統的使用

手術後護理處理

- ◆ 傷口及引流
 - 應保持傷口敷料乾爽及完整
 - 術後的引流可幫助傷口排出瘀血，待瘀血量減至最少便可拆掉
 - 傷口的縫釘或線，通常在十四天後可拆除
 - 會密切監察皮瓣的情況，如皮瓣溫度和靜脈瘀血擁塞
 - 所有傷口處理都要諮詢醫護人員，包括暗瘡



止痛方法

- 自控止痛機 (PCA)
 - 股骨導管止痛法
 - 口服止痛藥或止痛針
- 麻醉科醫生會為你選擇適合的止痛方法



自控止痛機

患肢的護理

- 有些指定病人需要下肢帶上靜脈加壓系統，可促進血液循環，預防下肢深靜脈血栓
- 用枕頭墊高患肢以助消腫
- 一般情況下，術後患肢需休息一段時間。沒有手術的肢體，要多做強化肌肉運動，避免關節僵硬
- 病人可由護士或物理治療師協助下床坐椅或使用助行器步行



併發症

1. 傷口感染: 傷口紅腫、痛楚或有不正常滲液
2. 皮瓣壞死
3. 關節鬆脫
4. 內固定器移位
5. 下肢深靜脈血栓

出院後護理

- ◆ 傷口敷料必須保持乾爽及完整，如有紅腫、疼痛、滲液等有可能是發炎徵狀，應立即求診。
- ◆ 回家後要繼續運動練習。
- ◆ 必須按時覆診。
- ◆ 均衡飲食能提供身體所需的能量。
- ◆ 看牙醫或手術時，請通知醫生體內有內置金屬，以便須要時處方抗生素


如有任何查詢，請與你的主診醫生聯絡。

以上資料由瑪麗醫院矯型及創傷外科提供。



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惡性骨骼肌肉腫瘤須知 MALIGNANT MUSCULOSKELETAL TUMOUR

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Introduction

- ◆ There are three types of malignant tumour, bone tumour, soft tissue sarcoma and skin tumour.
- ◆ The most common primary bone tumour includes osteosarcoma and chondrosarcoma. Osteosarcoma produces malignant osteoid (immature bone) from tumor bone cells and usually occurs at distal femur or proximal tibia, commonly in teenagers.
- ◆ Chondrosarcoma is malignant tumour of cartilage and usually occurs at pelvis, femur or proximal humerus, commonly in adults.
- ◆ Secondary bone tumour is a type of bone metastasis; the most commonly primary origins are lung, kidney, breast/prostate, gastro-intestine and thyroid.
- ◆ *Soft tissue sarcoma* can be differentiated into more than 80 types; most common types are liposarcoma, fibrosarcoma, synovial sarcoma, malignant fibrous histiosarcoma (MFH) and rhabdomyosarcoma.

Signs and Symptoms

- ◆ Local swelling is a significant and the first symptom.
- ◆ Pain is a well-known symptom in bone tumour, but only accounts for about 30% of soft tissue sarcoma patients. Patients may be waken up by pain during deep sleep.



Diagnostic Tests

- ◆ X ray
- ◆ Magnetic Resonance Imaging (MRI) scan
- ◆ Tru-cut biopsy under computed tomography scan (CT), ultrasound image (USG) or X ray scan
- ◆ CT lung and bone scan for suspected metastasis
- ◆ Positron emission tomography scan (PET) may be used to replace the above imaging



Treatment

- ◆ A multi-disciplinary team approach would be employed for treatment of malignant bone tumour. Orthopaedic surgeons, clinical oncologists, paediatric oncologists, radiologists and pathologists all work together not only improve patients' survival, but also retain the function of the affected limb.
- ◆ Excision and reconstruction is often the preferred treatment for the early stage bone tumour. Flap, bone graft or total joint replacement may be needed for limb salvage. Computerized navigator is now used in selected cases to confirm the bone cut more accurately in order to retain the joint.
- ◆ For osteosarcoma, chemotherapy would be given before and after operation. Surgery is however the major consideration of treatment for chondrosarcoma.
- ◆ It is really a different picture for secondary bone tumour, only 1-2% patients would have benefit from excision. Most of them would rather have

palliative surgery for fracture or impeding fracture if indicated.

- ◆ Excision is usually the treatment for soft tissue sarcoma. Depending on the extent of residual tumour, post surgical radiation therapy may be helpful, chemotherapy is seldom used.

Pre-operative Preparation

- ◆ Investigation
 - Blood tests
 - Electrocardiogram
 - Urinalysis
 - Imaging as stated above
- ◆ Assessment by anesthesiologist and orthopaedic surgeon
- ◆ A written consent is required
- ◆ Quit smoking and practice deep breathing exercise to prevent postoperative chest infection
- ◆ Patient education on pre- and post-operative care and usage of sequential compression device (SCD) if indicated

Post-operative Care

- ◆ **Management of wound and drain(s)**
 - Dressing must be kept dry and intact
 - Wound drainage is necessary for removing exudate from wound to prevent hematoma and promote wound healing, it will be removed when the output is minimal
 - Sutures or clips will be generally taken off on day 14



- Close monitor on flap condition, e.g. local temperature and venous congestion
- Consult medical staff for management of any minor wound, including acnes

Pain relief measures

- Patient Controlled Analgesia (PCA)
- Femoral Catheter Infusion
- Oral analgesics or injection

Anesthesiologists will select the most appropriate pain relief measure for you



PCA

Care of Operated Limb

- SCD pump improves circulation and prevent deep vein thrombosis in selected cases



- Elevation of the operated limb with pillow can reduce swelling
- Operated limb is normally kept immobilized for a period of time. Maintenance and strengthening exercise on unaffected side would be provided to prevent joint stiffness

- Patient can sit out of bed and practice walking exercise with assistance by nurses or physiotherapists if allowed

Complication

1. Wound infection: redness, swelling, painful or abnormal discharge
2. Flap necrosis
3. Implant loosening
4. Dislocation
5. Deep Vein Thrombosis

Advice on Discharge

- ◆ Wound care at home would be provided. Wound should be kept dry and clean. If it becomes red, swollen, painful or wet, this may signify infection. Seek medical advice immediately.
- ◆ Continue the physiotherapy exercise at home.
- ◆ Attend follow up as scheduled.
- ◆ Balanced diet is recommended to boost your energy.
- ◆ Present the implant card to the dentists before any dental procedure or check up for prophylactic antibiotics.

Should you have any queries, please consult your doctor-in-charge

Information provided by Department of Orthopaedics & Traumatology, Queen Mary Hospital