

# Skeletal Metastasis of Unknown Origin: Orthopedic Surgeons Guide to Diagnosis

<sup>1</sup>CKM Lydia; <sup>2</sup>M Farid A; <sup>3</sup>N Aisha MZ ; <sup>4</sup>S Hishamuddin  
Orthopedic Department, Hospital Sultanah Aminah, Johor Bahru, Malaysia

## INTRODUCTION:

Most malignant tumours end up metastasizing to bones and up to 6.6% percent of the malignant tumours have unknown primary sites (1). We present a case of 50 year old lady who was referred to us for left humerus pathological fracture.

## REPORT:

A 50 year old lady with history of ovarian cystectomy was initially referred to us from a district hospital for left upper limb pain and swelling for 1 month. It is associated with significant lost of weight and appetite. She had no history of trauma. Other than painful and swollen left upper limb, her other review of system are unremarkable.

The Xray of her left humerus reveals a lytic lesion with a displaced fracture over the humerus. (fig 1) Based on her blood investigations, which showed raised tumour markers. She underwent a thorough radiological investigation including MRI whole spine and contrast enhanced computed tomography of her thorax abdomen and pelvis which revealed suspicious hypodense lesion of her thyroid with metastasis to bone , liver and lungs. Her MRI spine shows extensive hyperdense lesion of whole spine.

We perform a left humerus intermedullary nailing and obtain intraoperative biopsy. The HPE result from her humerus reveals metastatic adenocarcinoma, suggestive of lung primary from the intramedullary bone.

Patient was subsequently referred to Oncology for treatment of her Lung Adenocarcinoma and is currently on Oral Afatinib. She had a computed tomography of thorax abdomen and pelvis repeated on 8 month and 1 year interval which showed similar degree of extensive skeletal metastasis as noted previously. It has been 1 year since patient has underwent surgery for her left humerus and she has regained back her strength and is able to carry out her daily activities.

## CONCLUSION:

Skeletal metastasis of unknown origin is a common dilemma faced by orthopedic surgeons. They play an important role to identify and treat skeletal metastasis to reduce pain and improve quality of life.



Figure 1