Introduction

Bone secondary is the commonest cause of skeletal tumour. The incidence is likely to increase, as cancer patients now survive longer. It will become one of the major medical and social problems in the future. Morbidity is substantial, and includes pain, fracture, neurological deficit and forced immobilization. Currently, the goal of management in most cases is palliation of pain and restoration of functional status. Patients are encouraged to stay in the community. The aim can only be achieved by the collaboration of all specialties taking care of these cancer patients.

Principles of management of bone secondaries

Pain, pathological fracture, cord and cauda equina compression, hypercalcaemia and bone marrow suppression are some of the common sequelae of bone secondaries. Theoretically, we should search for preventive measures to minimize the chance of new deposition and offer curative treatment whenever possible. Bisphosphonates, the potential candidate to prevent the new occurrence of skeletal metastasis, may have its role in breast cancer, multiple myeloma and prostate cancer. There are still a number of unsolved issues such as the best time to treat, optimal doses, duration of treatment.

Generally speaking, once patient develops bone metastasis, the prognosis is grave. Whether complete resection of solitary metastasis will improve the survival or provide cure is quite controversial. Special situations, such as solitary bone secondary from renal cell carcinoma, curative wide resection may help (after resection of solitary metastasis, the expected five-year survival rate is 35%). Recently, the life expectancy of oncology patients has improved considerably because of advances in treatment. In future, aggressive resection and reconstruction of bone metastases may give better outcome in certain diseases and patient groups. Therefore, the prognosis of bone metastases as defined by the primary or other characteristics (e.g. from breast or from lung, single or multiple) is a very important point in treatment planning. However, we should be aware that the prognosis may change as time goes on.

Up to present, palliation is still the mainstay of management of bone metastases. Hence, the general condition of patient, patient's symptoms, patient's life expectancy and currently available modalities such as irradiation, hormonal therapy, chemotherapy, drugs (analgesics, bisphosphonate) and options of orthopaedic treatment should all be taken into consideration in planning of patient management.

The Role of Orthopaedic Surgeons

When a patient is diagnosed as having bone metastasis with unknown primary, the histology of the bone lesion is essential in identification of the primary. This can be obtained by either closed needle biopsy under image guidance or by open biopsy. For multiple bone lesions, the most accessible site with least risk of complication is chosen for biopsy. Sometimes histological diagnosis may be necessary and not to be omitted in patients with a known primary. By just assuming the lesion coming from the known primary site one may miss the diagnosis. We did encounter a patient with history of cervical cancer suffering from bone secondaries from another primary lung cancer. Another patient with history of lymphoma had pathological fracture of femur. It was later confirmed to be osteogenic sarcoma. We recommend that histological diagnosis should be obtained in all doubtful cases.

Pain in bone secondaries is a major source of suffering for these terminally ill patients. Pain can be related to the tumour expansion, inflammation, nerve irritation or biomechanical problem. Irradiation certainly has its role in some of these aspects. In case of biomechanical weakening of bone, surgical stabilization for both fracture and impending fracture is one way to palliate symptoms.