

Module 8: Tumor

Case presentation: *Spinal tumor*

Minor compression fracture and radiographic evidence of a missing pedicle suggestive of an infiltrative metastatic process affecting the thoracic or lumbar spine without a history of neoplastic disease

Participants should discuss the typical history and presenting features of metastatic disease as it affects the spine. Make participants aware of the fact that a significant number of patients present with spinal pain without a known history of malignant disease.

They should be able to identify the “red flags” such as nocturnal pain and neurological dysfunction, and request and interpret appropriate radiographic and laboratory investigations. Discuss the differential diagnosis and the relative incidence of primary and secondary neoplastic disease of the spine.

Have an understanding of the process of staging and assessing the prognosis of patients presenting with metastatic spinal disease and an unknown primary.

Discuss the prognostic implications relating to the nature of the tumor, visceral involvement, number of metastatic sites, etc. Also emphasize the need to have a multidisciplinary approach to the staging and work up of these patients with medical oncologists and radiotherapists to optimize patient outcomes.

Participants should have an understanding of the relevant prognostic and staging tools available (Tokumashi Score, SINS, etc) to assist in determining the indications and nature of any surgical intervention to be undertaken – palliative only to decompress neural elements and achieve stability, or curative or heroic where an attempt is made to resect the lesion where a reasonable duration of survival is expected.

They should also have an understanding of the indications for and appropriate techniques used to achieve a tissue diagnosis (biopsy), and the principles of management when neural decompression or stabilization is needed in the absence of a definite tissue diagnosis, the place of steroids, etc.

Conclude the discussion with a brief summary of key points and take-home messages.

Learning outcomes

- Recognize the signs, symptoms, and “red flags” of metastatic disease of the spine
- Initiate and interpret appropriate radiographic, laboratory tests, biopsy, and input from professional colleagues to determine the patient’s prognosis
- Determine the appropriate course of action based on presenting symptoms, radiographic features, pathology, and prognosis

- Recognize and manage common complications relating to metastatic disease of the spine
- Outline the principles of performing a spinal biopsy to obtain a tissue diagnosis of spinal infection or tumor
- Request and interpret the results of a spinal biopsy

Case presentation: Metastatic disease of the spine (multiple sites in patient known to have cancer with recent increased pain and neurological deterioration)

Participants should discuss the indications for and the nature of surgery to be undertaken in this circumstance. They should also consider prognostic factors and the need to tailor any planned operative treatment to the immediate needs of the patient— stability and neural decompression with intervention appropriate to the general medical condition of the patient and their expected survival.

Conclude the discussion with a brief summary of key points and take-home messages.

Learning outcomes

- Recognize the signs and symptoms of primary malignant disease of the spine
- Initiate and interpret appropriate radiographic, laboratory tests, biopsy, and input from professional colleagues to determine the patient's prognosis
- Determine the appropriate course of action based on presenting symptoms, radiographic features, pathology, and prognosis
- Recognize and manage common complications relating to metastatic disease of the spine