

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. They should be aware of the fact that a significant number of patients present with spinal pain without a known history of malignant disease.

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

Discussion should also include the indications for nonoperative treatments such as radiotherapy and chemotherapy and the timing of these treatments as an adjuvant to surgical treatment when this is indicated.

Lecture: *Spinal metastatic disease—assessment, prognostic factors, and management*

Discuss the typical clinical features of patients presenting with metastatic disease of the spine (such as nocturnal pain and neurological dysfunction).

Outline the appropriate strategy for investigation, particularly in the context of the patient presenting without a prior diagnosis of malignancy or a confirmed primary site or known pathology. Also cover the indications for and the interpretation of various investigative studies, both radiographic and laboratory.

Discuss the differential diagnosis and the relative incidence of primary and secondary neoplastic disease of the spine.

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

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.

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

Participants should also have an understanding of the principles of management, both medical and surgical, when neural decompression or stabilization is needed in the absence of a definite tissue diagnosis, the place of steroids, etc.

Learning outcomes

- Recognize the signs, symptoms, and “red flags” of metastatic disease of the spine
- Initiate and interpret appropriate radiographic and 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

Lecture: *Primary spinal tumors–assessment, prognostic factors, and management*

Discuss the typical clinical features and history of patients presenting with primary neoplastic disease of the spine including age, location, and nature of the tumor.

Outline the appropriate strategy for investigation, particularly in the context of the patient presenting without a prior diagnosis of malignancy, to determine the presence of metastatic spread, pathology, and prognosis.

Discuss the principles of medical and operative management, relating to the common types of tumors and the indications for surgical intervention and the surgical objectives.

Also cover the indications for and the interpretation of various radiographic and laboratory investigative studies.

Learning outcomes

- Recognize the signs and symptoms of primary malignant disease of the spine
- Initiate and interpret appropriate radiographic and 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 primary malignant disease of the spine