



Metastatic Epidural Spinal Cord Compression: An Update of Best Practice

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Editorial

As the survival of patients with cancer is increasing, metastasis to the spine becomes a real health issue and economic burden. Treating patients with metastatic epidural spinal cord compression MESCC remains a challenge, and multidisciplinary approach is highly recommended. The main goal of treatment is to avoid spinal cord or cauda equina compression, which negatively affects prognosis.

Making an early diagnosis before neurological deficits appear is of utmost importance, in order to avoid irreversible lesions. With the widespread use of MRI, diagnosis is made easier, and any patient with cancer presenting with back pain should be investigated without any delay [1].

The Spine Instability Neoplastic Score SINS is a very important tool; it helps clinicians in identifying when patients with neoplastic disease of the spine should benefit from surgical consultation [2]. The treatment strategy algorithm of Paton et al. [3](LMNOP), evaluates the number of spinal Levels involved and the Location of disease in the spine (L), Mechanical instability (M), Neurology (N), Oncology (O), Patient fitness, Prognosis and response to Prior therapy (P). It helps taking the best decision in each particular patient. Finally, the Oswestry Spinal Risk Index (OSRI) score, developed by Balain et al. [4], is a simple score that can predict life expectancy accurately in patients presenting with spinal metastases. It is helpful in making difficult clinical decisions without the delay of extensive investigations.

The advent of new technologies and minimally invasive surgical techniques has helped optimize the treatment of spinal metastases, especially in frail patients. Surgery has become less aggressive, and the use of stereotactic radiosurgery SRS has revolutionized a new concept of treatment known as "separation surgery". Major vertebral resections, especially in radioresistant metastases, are no more needed, and thus complications of surgery are minimized.

The concept of "Separation surgery" relies on making a safe space free of tumor around the spinal cord or cauda equina, and then applying high-dose hypofractionated SRS. This results in less radiation dose, thus protecting the neurological elements from the radiation toxicity, and diminishing radiation-induced vertebral fracture that is the most serious and prevalent side effect of SRS.

Laufer et al. [5] showed that postoperative adjuvant SRS following epidural spinal cord decompression and instrumentation is a safe and effective strategy for establishing durable local tumor control regardless of tumor histology-specific radiosensitivity. This less-invasive alternative to radical spinal oncological resection appears to be effective regardless of tumor histology without sacrificing durability of radiographic or clinical response [6].

In the end, always remember that «Time is Spine». The best neurological prognosis after surgery for MESCC is obtained when surgery is done in the 48 hours following the installation of the neurological signs and symptoms [7].

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