Spinal metastases

- Radiofrequency Ablation of Painful Spinal Metastasis: A Systematic Review
- PTEN Mutations Associated with Increased Recurrence and Decreased Survival in Patients with Prostate Cancer Spinal Metastasis
- New options and techniques in reconstructing the sacrum
- Spinal Instability Neoplastic Score as a Predictor of Vertebral Fracture in Patients Undergoing Radiation Therapy for Spinal Metastases: A Single-Institution Study
- Inpatient neurosurgical mortality in germany: a comprehensive analysis of 2023 in-hospital data
- Thoracic SMARCA4-deficient undifferentiated tumor: A case report in a 40-year-old male without a smoking history
- Level IIb Metastases in cN0 Oral Squamous Cell Carcinoma: Multicenter Retrospective Study
- Outcomes after total en bloc spondylectomy at a mean follow-up of 11 years

Most spinal metastases are extradural. Intramedullary metastases are rare, accounting for 3.4% of symptomatic metastatic spinal cord lesions.

Primaries include: small-cell lung Ca, breast Ca, malignant melanoma, lymphoma and colon Ca.

Ca rarely presents first as an intramedullary spinal met.

Questionaire

The Spine Oncology Study Group Outcome Questionnaire (SOSGOQ) includes all domains relevant for measurement of function and disability and its content validity is confirmed by linkage with the International Classification of Function and Disability ICF. This questionnaire has superior content capacity to measure disease burden of patients with spine metastases [1].

A study proposes a scoring methodology -after reversing 4 inversely scored items- for the SOSGOQ and demonstrates that the questionnaire is a valid tool for the assessment of quality of life in patients with metastatic spine disease. The SOSG-OQ is superior to the EQ-5D in terms of coverage and internal consistency, but consists of more questions [2].

Choi et al.. recommend the use of the EQ-5D measure in research for assessment of patient-centered outcomes and calculation of cost effectiveness of surgery for spinal metastases. Routine use of the measure in clinical practice is also encouraged because it is a simple and quick method to assess overall clinical outcome [3].

Epidemiology

see Spinal metastases epidemiology.

Classification

see Spinal metastases classification.

Routes

There are three ways in which metastatic tumors can reach the epidural space. The most common way in approximately 85% of patients, the tumor reaches the spinal cord by the indirect route of an initial hematogenous metastases to the vertebral body and the metastases grows in the bone and then spreads into the epidural space, eventually causing secondary compression of the spinal cord [4].

The less common way is invasion of a paravertebral tumor directly into the spinal canal through an intervertebral foramen, which compresses the spinal cord. This process causes about 15% of MESCC and is commonly associated with lymphomas, Ewing's sarcoma, and neuroblastomas. However, least common mode of metastases described is the direct hematogenous spread to spinal epidural space, dura, or spinal cord [5].

Arterial

Venous [6].

Perinervous

Clinical features

Spinal metastases clinical features

Diagnosis

Spinal metastases diagnosis.

Treatment

see Spinal metastases treatment.

Outcome

Spinal metastases outcome.

Case series

see Spinal metastases case series.

Case reports

An unusual presentation of isolated atypical chest pain preceding metastatic cord compression, secondary to penile carcinoma. Spinal metastases from penile carcinoma are rare, with few cases reported. This unusual presentation highlights the need for a heightened level of clinical suspicion for spinal metastases as a possible cause for chest pain in any patient with a history of carcinoma. The case is discussed concerning the literature [7)].

Research

Rutges et al.. summarize the work of the AO Spine Knowledge Forum Tumor, specifically studies from the Spinal tumor epidemiology, Process and Outcomes in Spine Oncology (EPOSO) study. A narrative review of all published manuscripts from the EPOSO study was undertaken. EPOSO represents a multicenter, prospective registry effort across 10 North American and European sites to enroll patients with spine metastatic disease. The review summarized all studies from the EPOSO network, divided into the following five sections: (1) quality of life and satisfaction, (2) overall survival, (3) spinal instability, (4) neurologic outcome in patients with metastatic epidural spinal cord compression or radicular pain, and (5) patient and tumor-specific factors. Several important findings were elucidated. Patient evaluation should include SINS, nutritional status, severity and duration of neurologic deficit, extent of metastatic tumor burden, and axial differentiation from radicular pain. Moreover, SOSGOQ2.0 serves as a useful and validated instrument for patient-reported outcome instruments. Despite the palliative nature of spinal metastases surgery, clear improvement in quality of life is seen. Even in patients with short survival, the remaining weeks and months of life result in improved quality of life. Metastatic spine surgery often improves neurologic function, potentially enhancing survival through increased performance status. Several noteworthy results have come from the EPOSO network, highlighting important trends in metastatic spine care. The AO Spine Knowledge Forum Tumor has helped advance metastatic spine tumor research as well as ensure these new findings reach and benefit clinicians and their patients [8)].

Rutges et al.. and the AO Spine Knowledge Forum Tumor’s EPOSO study have made invaluable contributions to the field of metastatic spine oncology. The study highlights critical factors influencing surgical outcomes, providing a strong foundation for evidence-based decision-making. While the study has certain limitations, its insights into quality of life, survival, and neurologic outcomes underscore the benefits of metastatic spine surgery. Future research efforts should focus on refining prognostic tools, standardizing treatment approaches, and exploring innovative methodologies to further improve patient care.

1)
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5)

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