



Intramedullary Spinal Cord Tumors in the Elderly Patient

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Section snippets

Key points

- Ependymomas are the most common intramedullary spinal cord tumor in the elderly, and the incidence of several primary malignant spinal cord tumor types peaks among adults aged greater than 65 years. ...
- Frailty is a more robust predictor of post-operative complications and mortality than age alone, making it an essential component of surgical decision-making in any age group. ...
- Surgical goals in the elderly are tailored to the tumor type, with maximum safe gross total resection indicated for ...

Incidence and Prevalence

Primary IMSCTs are rare, representing only 2% to 5% of all primary CNS tumors and 5% to 10% of all spinal tumors.¹ Recent population-based data indicate an incidence of approximately 0.40 per 100,000 for malignant primary spinal cord tumors in adults over the age of 60 years, with the most common subtype, ependymoma, having an incidence of 0.19 per 100,000 among this age group.⁹ Notably, many authors have described an increased burden of primary malignant non-osseous tumors in the elderly, with ...

Symptomatology and Diagnostic Delays

The clinical manifestation of IMSCTs in elderly patients is often characterized by an insidious onset and a slowly progressive myelopathy.²⁰ This subtle development can lead to a significant prodromal period, often spanning many months, before a definitive diagnosis is established. Shrivastava and colleagues¹⁴ documented an average prodromal period of 19.4 months in their cohort of IMSCT patients older than 50 years. The initial symptoms are frequently sensory in nature, with paresthesias, ...

The critical role of frailty and pre-operative assessment in surgical decision-making

The decision to proceed with surgical intervention for an IMSCT in an elderly patient is complex, requiring evaluation beyond tumor characteristics to consider the patient's overall functional reserve (Table 1, Fig. 2). ...

Surgical technique and intra-operative considerations for elderly intramedullary spinal cord tumor patients

The surgical management of IMSCTs in elderly patients demands meticulous technique, careful consideration of age-related physiologic changes, and the judicious use of intra-operative adjuncts to maximize tumor resection while minimizing neurological injury. ...

Measuring success: quality of life and functional outcomes in the elderly population

Success following IMSCT surgery in elderly patients goes beyond radiological tumor control to include the preservation of neurological function, the maintenance of independence in activities of daily living, and overall QOL (Table 2).^{42,43} ...

Non-operative adjuncts: a cautious approach in the elderly

While surgical resection remains the cornerstone of treatment for most symptomatic IMSCTs, non-operative modalities play adjunctive roles, particularly for malignant tumors, incomplete resections, and recurrent disease. The therapeutic window for these adjuncts often narrows significantly in elderly and frail patients, as the potential for severe toxicity can outweigh marginal or unproven benefits. Thus, prioritizing QOL by avoiding aggressive, potentially harmful adjuvant treatments may be ...

Summary

The management of IMSCT in patients aged 65 years and older presents a confluence of oncological, neurologic, and practical challenges, where treatment must balance tumor control with preservation of functional independence. An individualized assessment incorporating frailty status, nutritional status, and comorbidity burden is essential for appropriate patient selection and risk stratification. For well-selected elderly patients, GTR for well-demarcated lesions and maximal safe debulking for ...

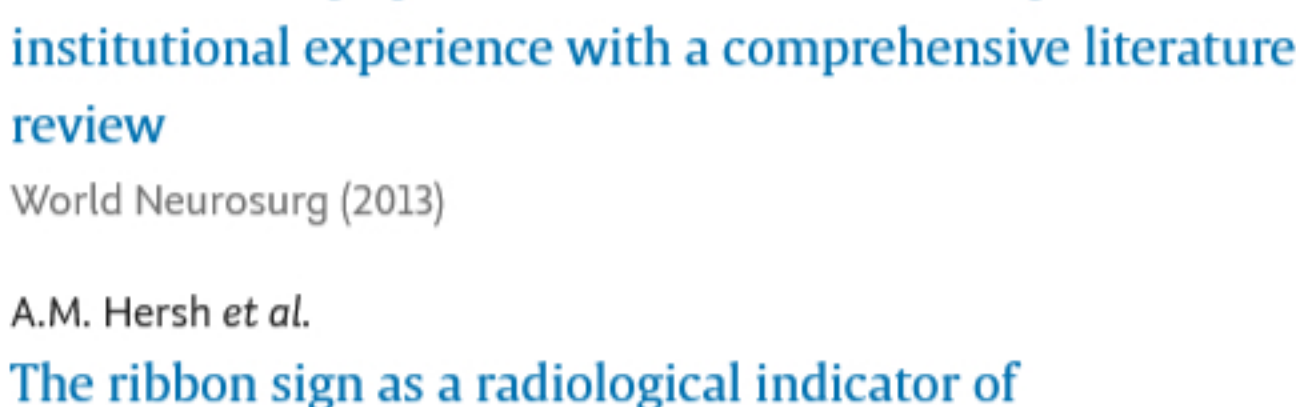
Clinics care points

- Routine use of a validated frailty index, such as the mFI-5, can more accurately predict post-operative risk than age, improving patient selection for surgery. ...
- A high index of suspicion for IMSCT is crucial in elderly patients presenting with progressive myelopathy, even in the presence of confounding degenerative spine disease. Diagnostic delay is a key modifiable predictor of poorer functional outcome. ...
- Intraoperative frozen section pathology is invaluable when preoperative diagnosis is ...

Disclosures

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