ABSTRACT

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Novel Clinical Insights into Spinal Hemangioblastoma in Adults: A Systematic Review.

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BACKGROUND: Hemangioblastomas (HBs) are well-vascularized, benign central nervous system tumors and the third most common primary spinal cord tumor after astrocytoma/ependymoma, occurring sporadically or as a part of autosomal dominant von Hippel-Lindau disease, in which tumors are often multiple and prone to relapse. Spinal HBs are commonly located in the cervical cord and associated with a syrinx formation. Owing to location and growth trends, they may cause significant neurological deficit, impairing quality of life. We conducted a systematic review to understand better clinical insights into spinal HB in adults and compare spinal HB versus posterior cranial fossa HB.

METHODS: Following Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines for conducting systematic reviews, we reviewed the English-language literature on adult spinal HB in the MEDLINE/PubMed database over the last 40 years.

RESULTS: We reviewed 237 articles on adult spinal HB and analyzed national and continental distribution, clinical symptoms, tumor location and presence of syringomyelia, treatment strategies and postoperative complications, histology and immunochemistry, and treatment outcomes. We compared individual characteristics in sporadic and von Hippel-Lindau disease spinal HBs. Finally, we compared features of posterior cranial fossa and spinal HBs.

CONCLUSIONS: Spinal cord HBs most commonly have a dorsal intramedullary location. Total surgical tumor resection is the first treatment option; preoperative embolization may be performed to reduce intraoperative bleeding and surgical time. HBs located in the spine have decreased mortality and rate of infection, but increased rates of cardiopulmonary complications compared with HBs in the posterior cranial fossa.

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