Cerebellar hemangioblastoma case series

32 consecutive patients with posterior fossa hemangioblastoma who underwent surgery from 2008 through 2020. Tumors were classified as predominantly cystic or solid according to radiological features. Resection was defined as gross total (GTR) or subtotal (STR).

Results: During the study period, 32 posterior fossa HGBs were resected. There were 26 cerebellar lesions and 4 medullar lesions, and in 2 patients, both structures were affected. Predominant cystic tumors were seen in 15 patients and solids in 17. Preoperative digital subtraction angiography (DSA) was performed in 8 patients with solid tumors, and 4 showed tumor-related aneurysms. Embolization of the tumors was performed in 6 patients, including the four tumor-related aneurysms. GTR was achieved in 29 tumors (91%), and subtotal resection in 3 (9%). Three patients had postoperative lower cranial nerve palsy. Functional status was stable in 5 patients (16%), improved in 24 (75%), and 3 patients (9%) deteriorated. One patient died 2 months after the surgery. Two tumors recurred and underwent a second surgery achieving GTR. The mean follow-up was 42.7 months (SD ± 51.0 months).

Conclusions: Predominant cystic HGB is usually easily treated as the surgery is straightforward. Those with a solid predominance present a more complex challenge sharing features similar to arteriovenous malformations. Given the important vascular association of solid predominance HGB with these added risk factors, the preoperative assessment should include DSA, as in arteriovenous malformations, and endovascular intervention should be considered before surgery [1)].

Bründl et al. retrospectively analyzed the clinical, radiological, surgical, and histopathologic records of 24 consecutive patients (11 men, 13 women; mean age 51.3 years) with HBL of the posterior cranial fossa, who had been treated between 2001 and 2012.

Mean time to diagnosis was 14 weeks. The extent of resection (EOR) was total in 20 and near total in 4 patients. Four patients required revision within 24 h because of relevant postoperative bleeding. One patient died within 14 days. One patient required permanent shunting. At discharge, 75% of patients [n = 18, modified Rankin scale (mRS) 0-1] showed no or at least resolved symptoms. Mean follow-up was 21 months. Two recurrences were detected during follow-up.

In comparison to other benign entities of the posterior fossa, time to diagnosis was significantly shorter for HBL. This finding indicates the rather aggressive biological behavior of these excessively vascularized tumors. In this series, however, the rate of complete resection was high, and morbidity and mortality rates were within the reported range [2)].

Cerebrospinal fluid dissemination of cerebellar hemangioblastoma was found dominantly in non-Von Hippel-Lindau disease patients. The diagnosis was made 10 years after the initial surgery. Irradiation therapy was performed, but the patients died about 2 years after the diagnosis was given. Molecular targeted therapies including vascular proliferation suppression have been attempted lately, but no effective therapy has been established. Early diagnosis of dissemination as well as combination of aggressive excision and stereotactic radiosurgery are considered to be appropriate for current interventions [3)].

1)
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2)
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