2598: Outcomes Following Surgical Removal of Cerebellar Hemangioblastoma

The authors have no disclosures to report
Cerebellar hemangioblastomas are highly vascular neoplasms that account for 1-2.5% of intracranial tumors.

These tumors can appear sporadically or be associated with Von-Hippel Lindau disease, a hereditary cancer syndrome.

Due to highly vascular nature and locations of involvement, surgical approaches must be carefully planned in order to maximize tumor resection and minimize disturbance of surrounding eloquent tissue.

Due to comparative rarity of this tumor subtype, we would like to characterize treatment of cerebellar hemangioblastoma in a single-center retrospective study as well as analyze factors associated with peri-operative complications and post-operative functional and mortality outcomes.
A single-center retrospective analysis was conducted for all cerebellar hemangioblastomas treated with surgery at our institution from 2012-2019.

Demographic variables, presenting symptoms, pre-operative factors, operative variables, and post-operative course were collected.

Long-term neurological outcomes and mortality were determined from follow-up record.
RESULTS

• 27 patients were identified that fit the inclusion criteria

• Most common presenting symptoms were gait disturbance: 55% (15/27), balance issues: 41% (11/27), headaches: 41% (11/27), nausea or vomiting: 11% (3/27), dizziness: 11% (3/27)

• 4 patients were identified with Von-Hippel Lindau disease

• Average tumor size (largest dimension) was 2.64 cm (SD: 1.15, range 0.7 – 5.3).

• 8 patients received steroids prior to surgery
• 27 were treated with suboccipital craniotomy

• All procedures achieved gross total resection.

• Post-operative complications included EVD placement, VP shunt placement, and DVT.

• Average length of stay (LOS) was 6.6 days (SD = 3.6).
• Average KPS improvement at 6-month follow up was 7.3 (SD = 9.9) and average KPS improvement at last known follow-up was 10.0 (SD = 6.79).

• Recurrence occurred in 6% of patients (2/27). Overall mortality was 11% (3/27).

• Presenting KPS over 70 was associated with better improvement in KPS at 6 months (p=0.047) and balance issues at initial presentation was associated with lower improvement in KPS at last follow-up (p=0.021).

• Factors associated with mortality were arterial invasion (p=0.035), longer LOS (p=0.044), 30-day readmission (0.029), and worsening or non-improvement of symptoms at 6-month follow up (0.004).
• Presenting symptoms of cerebellar hemangioblastoma are largely due to local mass effect and consist most commonly of gait dysfunction and ataxia

• Gross total resection is achievable due to relative lack of local invasion except in rare cases

• Pre-operative embolization is an option due to highly vascular nature of tumor
SUMMARY POINTS

• Surgical resection is an effective treatment for cerebellar hemangioblastoma
  • Prognosis is generally good with low rates of recurrence
  • Worse presenting factors and increased invasion are predictors of worse outcomes