Operative Treatment In Patients With Suboccipital Spinal Metastasis: Is A Posterior Approach Alone Enough?

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Introduction

• Suboccipital metastases is rare but increasing due to longer life expectancy.

• Operative treatment is often challenging.
  – Limited fixation points, neural and vascular anatomy

• We present one of the largest series of suboccipital metastatic patients who underwent occipitocervical fixation, evaluating clinical outcomes and complications.
Methods

• Retrospective analysis of single-institution database from 1999-2014

• Suboccipital metastases (occipital condyles, C1, and C2)
  – Posterior-only instrumented fusion

• Outcome measures
  – Perioperative complications
  – Survival
  – Pre-/postoperative neurologic function
  – Implant failure
  – Reoperation
Results

• Total of 17 patients (12 M/5 F) were included:
  – Mean age 64.5 years (48-80 yrs).
  – Mean preoperative Tokuhashi score was 7.9 (5-13).
  – All had C2 tumors except one patient w/ occipital condyle metastasis.

• Neck pain without neurological deficit was the most common presenting complaint.

• All patients underwent instrumented occipitocervical fusion, with a mean 4.6 levels fused (range 2-7 levels).
Results
Results

• Median postoperative survival was 10.3 months

• All patients reported marked neck pain improvement and resumed ADLs

• Follow-up
  – No wound infections, reoperations, or neurological deficits from tumor expansion
Results

• Perioperative complications (18%)
  – 3 patients had perioperative complications
    • Urinary tract infection
    • DVT
    • Cardiac arrhythmia
  – No postoperative neurologic complications

• Mortality (6%)
  – One perioperative death due to myocardial infarction
Conclusions

• Our study found that posterior-only occipitocervical stabilization:
  – Was highly effective at relieving patients’ neck pain.
  – Resulted in no instrumentation failures, neurologic complications, or symptomatic local metastatic progression.

• Survival after surgery was slightly longer than Tokuhashi predicted survival.