2472. Epidermoid Cyst Resection: A Descriptive Study Examining Preoperative Characteristics and Postoperative Outcomes

DISCLOSURES

- Baldassari MP – no disclosures
- Wong D – no disclosures
- Ye DY – no disclosures
- Velagapudi L – no disclosures
- Hafazalla K – no disclosures
- Farrell CJ – no disclosures
- Evans JJ – no disclosures
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- Judy KD – no disclosures
Intracranial epidermoid cysts are rare lesions originating from neuroembryological remnants.

Although benign, epidermoid cysts pose significant risk via compression of cranial nerves, cerebrovasculature, or the brain stem.

Surgical cure remains possible via gross total resection (GTR) but can be technically difficult to achieve due to its adherent nature.

Our study describes our institutional experience resecting epidermoid cysts and aims to determine clinical factors that are associated with patient outcomes.
We retrospectively reviewed consecutive microsurgical resections of epidermoid cysts performed from January 2012 to December 2018 at a large single-center academic institution.

- 21 consecutive surgical resections of epidermoid cysts were identified.
- Statistical analysis was performed using Statistical Package for Social Science (SPSS) Version 20.0 (SPSS Inc.).
# RESULTS – Patient Information

**Table 1: Patient Demographics & Cyst Characteristics**

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<tr>
<th></th>
<th>n or avg</th>
<th>% or St.Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Patients</strong></td>
<td>21</td>
<td></td>
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<tr>
<td><strong>Age</strong></td>
<td>49.6</td>
<td>11.1</td>
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<tr>
<td><strong>Follow-Up Time, months</strong></td>
<td>25.2</td>
<td>15.2</td>
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<tr>
<td><strong>Presenting Symptoms</strong></td>
<td></td>
<td></td>
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<tr>
<td>Headaches</td>
<td>12</td>
<td>57.1%</td>
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<tr>
<td>Cerebellar Dysfunction</td>
<td>7</td>
<td>33.3%</td>
</tr>
<tr>
<td>Cranial Nerve Deficits</td>
<td>4</td>
<td>19.0%</td>
</tr>
<tr>
<td><strong>Tumor Characteristics</strong></td>
<td></td>
<td></td>
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<tr>
<td>Known Recurrences</td>
<td>8</td>
<td>38.1%</td>
</tr>
<tr>
<td>Infratentorial Location</td>
<td>11</td>
<td>52.3%</td>
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<tr>
<td>Estimated Cyst Volume (cm^3)</td>
<td>84.1</td>
<td>86.9</td>
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</table>
Intraoperative complications included one case each of hemorrhage and vasospasm.
The most common postoperative complication was chemical meningitis (19.0%), followed by worsening hydrocephalus, infectious meningitis, cranial nerve palsy, and intraventricular hemorrhage.
Two patients experienced persistent short-term memory deficit.

There were 0 mortalities at last follow-up.

Recurrence occurred in 1 patient despite GTR.

Preoperative cyst volume was not associated with extent of resection, intraoperative complications, recurrence, post-operative complications or post-operative cerebellar symptoms.

Recurrent epidermoid cysts exhibited a higher likelihood of postoperative residual or recurrent cyst on follow-up imaging (p < 0.05).
Microsurgical excision of epidermoid cysts is potentially curative, is associated with a low complication/mortality rate, and alleviates preoperative symptoms.

Cyst volume alone is not associated with poorer clinical outcomes.

Recurrent epidermoid cysts are significantly less likely to be totally removed and more likely to recur after a repeat surgery.

This study is limited by retrospective design and small sample size.
SUMMARY POINTS

- Epidermoid cyst resection is safe and carries low risk.
- Recurrent epidermoid cysts are less likely to achieve GTR during repeat surgery.
- Recurrent epidermoid cysts are more likely to recur after repeat surgery.
- Epidermoid cyst volume is not associated with clinical outcomes.