Introduction

- Each year there are approximately 29,000 meningioma diagnoses.
- The vast majority of meningiomas found were not found incidentally. Therefore, the meningiomas were associated with neurological symptoms that lead to their initial discovery.
- Symptoms of meningiomas are related to their location within the brain.
- Quality of life and ease of financial burden are two common topics of discussion in medicine, both of which recurrences largely impact.

Materials and Methods

- An evaluation of all meningiomas surgically resected and/or treated at a single institution between 1/1/2006 – 12/31/2016 was completed.
- Typical demographic and clinicopathologic data were collected to include numbers of recurrences, treatments, and overall outcomes.

Results

Histologic Characteristics

<table>
<thead>
<tr>
<th>Path Grade</th>
<th>Ki-67 Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>WHO I</td>
<td>0.00%</td>
</tr>
<tr>
<td>WHO II</td>
<td>20.00%</td>
</tr>
<tr>
<td>WHO III</td>
<td>60.00%</td>
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</tbody>
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Recurrence vs. No-Recurrence

Comparison of Recurrence vs. No-Recurrence

- The mitotic rate is statistically significant, showing that individuals who did have a recurrence had a higher average mitotic rate.
- As shown above, Ki-67 was also shown to have higher incidence of recurrence as the range increases.
- Regarding grade, recurrences were typically grades II and III compared to no recurrences which were predominately Grade I.
- In the event of a Gross-Total Resection (GTR), the chance of recurrence decreased.
- Symptoms (incidental findings) do not seem to influence probability of recurrence.
- When comparing those with recurrences to those without, none of the demographics were significantly different except for race.

Discussion

- It appears the profile for individuals with recurrences is dependent on histological markers, as shown by the data.
- Creating a standardized pathological array of test to perform on these patients could help determine who is more at risk for recurrence.
- Treatment options could then factor in recurrence and avoid the recurrence of symptoms.

Selected References

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