SURGICAL APPROACH OF JUVENILE NASOPHARYNGEAL ANGIOFIBROMA (JNA)

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Introduction
- JNA is a tumor that benign histologically, but have locally invasive growth patterns, located in sphenopalatine foramen
- Prevalence: one between 5,000 - 60,000 ENT patients in the US, 0.05% of all head and neck tumors
- Generally occurred in patients age 7-19 years, rarely more than 25 years
- As the main therapy of JNA, surgery is done by varieties of approaches; anterior, lateral, and inferior
- Post-surgical residual tumor is likely to make recurrence; radical resection of all tumor tissue is needed to reduce recurrence
- Is open surgery with lateral approach compared to other approaches will decrease the tumor recurrence in patient with JNA?

Method
- The literature search through search engines (Pubmed, ClinicalKey, Cochrane, Google scholar)
- Keywords used: juvenile nasopharyngeal angiofibroma, open surgery, and tumor recurrence.
- Inclusion criteria: clinical therapeutic study with a clear follow-up to tumor recurrence
- Exclusion criteria: study that is inconsistent with the study design, unavailable full-text

"(Juvenile nasopharyngeal angiofibroma) AND (open surgery) AND (tumor recurrence)"

Case

13-year-old boy with:
- Right nose bleed 5 months prior to admission
- Lumps on the right cheek in the last 5 months, no pain, not easily bleed
- Clanged right nose without secretions
- Blurring on right eye for 3 months
- No complaints of headache, post nasal drip, and hearing loss
- No family history of similar complaint

Physical examination:
- Right side of face looks swollen
- Mass filled the right nose

Management:
- Tracheostomy
- Ligation of right external carotid artery
- Coverage of bleeding with fibrillar surgicell and beriplast
- Radiation 41Gy in 19 cycles

Evaluation:
- Blood seepage in operative wound
- Visible hypervascular solid filled the nasal cavity, choana, nasopharynx, oropharynx, maxillary right-ethmoid-sphenoid sinus, right retroorbita

Table 1. Approach of surgery and event of tumor recurrence

<table>
<thead>
<tr>
<th>Tumor recurrence</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open surgery lateral approach</td>
<td>32</td>
<td>25</td>
</tr>
<tr>
<td>No</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>Total</td>
<td>5</td>
<td>28</td>
</tr>
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</table>

Table 2. Critical appraisal

<table>
<thead>
<tr>
<th>Category</th>
<th>Questions</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Validity</td>
<td>Randomization</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Similarity of group</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Equal treatment</td>
<td>Unclear</td>
</tr>
<tr>
<td></td>
<td>Lost to follow up</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Blinding</td>
<td>No</td>
</tr>
<tr>
<td>Importance</td>
<td>Treatment effect</td>
<td>RRR : 0.52</td>
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<tr>
<td></td>
<td>ARR : 0.13</td>
<td>NNT : 7.7</td>
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<tr>
<td>Applicability</td>
<td>Relevance</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Feasibility</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Benefit over Harm</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Conclusion
- At advanced stage of JNA with a large tumor mass, surgical approach that can expose the entire mass of the tumor is needed

References