Histopathological pattern of nasopharyngeal mass in adults

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Introduction

Nasopharyngeal mass resembles a confounding problem in adults because of the increased fear of malignancy with age which usually have vague symptoms in the early stage hence may be confused with other benign lesions. Histopathological pattern of nasopharyngeal lesions varies greatly from benign lesions such as hyperplastic lymphoid tissue and benign nasopharyngeal cysts to malignant diseases such as lymphoma and nasopharyngeal carcinoma. In this study we identify the various pathological entities detected in adult patients presented to our department with a nasopharyngeal swelling with analysis of the associated clinical and demographic data.

Patients and methods

We conducted a prospective study that included all adult patients presented to our tertiary referral hospital with a nasopharyngeal mass in 2 years period from October 2014 to September 2016. All patients included in the current study presented to our outpatient clinic with nasopharyngeal masses. All cases of antrochoanal polyps and angiofibroma were excluded from the study.

Demographic data (Age, gender, smoking status), clinical manifestations (presenting symptoms and signs), and clinical findings on nasopharyngeal endoscopy were recorded.

Nasopharyngeal biopsies were performed under general anesthesia. A 4 mm 0 rigid endoscope was introduced through the inferior meatus (Storz, Germany). A good view of the nasal cavity and the nasopharynx was possible in all cases, and biopsy was taken using a punch forceps.

Histopathological findings were reviewed for biopsy results. Descriptive analysis was used for frequencies and means. All analysis was conducted using SPSS (SPSS Inc, Chicago, IL), and a p value < .05 was considered significant.

Results

A total of 80 patients (45 males - 56.25% and 35 females - 43.75%) were included. Patients’ age ranged between 18 and 76 years (mean ± SD = 45.1 ± 13.6 years). The detected benign pathological lesions included hyperplastic lymphoid tissue hyperplasia (48.75%), Tornwaldt cyst (1.25%) and Branchial cleft cyst (1.25%). Malignant lesions constituted 48.75% of the study population (12.5% squamous cell carcinoma, 18.75 % undifferentiated carcinoma, and 17.5% malignant lymphoma).

Table 1. Distribution of the presenting symptoms in adult patients with nasopharyngeal mass

<table>
<thead>
<tr>
<th>Presenting Symptom</th>
<th>All Cases</th>
<th>Benign Cases</th>
<th>Malignant Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nasal obstruction</td>
<td>27 (33.75%)</td>
<td>17 (21.25%)</td>
<td>10 (12.5%)</td>
</tr>
<tr>
<td>Aural symptoms</td>
<td>24 (30%)</td>
<td>13 (16.25%)</td>
<td>11 (13.75%)</td>
</tr>
<tr>
<td>Snoring</td>
<td>13 (16.75%)</td>
<td>10 (12.5%)</td>
<td>3 (3.75%)</td>
</tr>
<tr>
<td>Neck lump</td>
<td>11 (13.75%)</td>
<td>0</td>
<td>11 (13.75%)</td>
</tr>
<tr>
<td>Rec epistaxis</td>
<td>3 (3.75%)</td>
<td>1 (1.25%)</td>
<td>2 (2.5%)</td>
</tr>
<tr>
<td>Dysphagia (bulbar palsy)</td>
<td>0</td>
<td>1 (1.25%)</td>
<td>3 (48.75%)</td>
</tr>
<tr>
<td>Headache</td>
<td>1 (1.25%)</td>
<td>0</td>
<td>1 (1.25%)</td>
</tr>
<tr>
<td>Total</td>
<td>80 (100%)</td>
<td>41 (51.25%)</td>
<td>39 (48.75%)</td>
</tr>
</tbody>
</table>

The most commonly detected pathological lesion was hyperplastic lymphoid tissue hyperplasia (48.75%). The mean age of adult patients with benign disease was 45.08 ± 15.6 years, while that of patients with malignant disease was 49.51 ± 12.06 years. Of 39 patients with malignant lesions 12 were smokers (all males); 6 patients had undifferentiated carcinoma, 4 had lymphoma and 2 had squamous cell carcinoma; however only six patients (all males) were smokers in the benign group.

Nine patients having malignant nasopharyngeal swellings presented with unilateral secretory otitis media while two patients presented with bilateral bilateral secretory otitis media.

Only 2 cases with benign pathology had unilateral secretory otitis media, other cases had bilateral conditions including safe ear, central perforations, and adhesive otitis media.

Discussion

Routine nasopharyngeal endoscopic examination is not reliable to distinguish between malignant lesions and adenoid tissue in adults, the standard medical practice is to biopsy nasopharyngeal masses for histopathological examination.

A study conducted in 2002 and included 30 cases reported a 15:1 ratio of benign: malignant nasopharyngeal masses the study included both adults and children. Another study published in 2014 and included only adults starting from the age of 18 years reported an 18:1 ratio of benign: malignant nasopharyngeal masses. In this study, malignant nasopharyngeal diseases constituted 48.75 % of the study population which is markedly more than the percentage reported in other recent studies.

In this study we found no significant sex difference as regard adult adenoid hypertrophy, also any significant effect of smoking or immunodeficiency was not observed. We found important gender difference as regard development of malignant tumors where the male to female ratio was 2:1 however in patients with benign pathology the male to female ratio was 1:1.15.

The complaint of nasal obstruction and snoring was significantly higher in patients with benign lesions (21.25% and 16.25% respectively) than in patients with malignant lesions (12.5% and 3.75%). The most common presentation in malignant group was neck lump and aural symptoms followed by nasal obstruction.

Our results are in accordance to the literature evidence that unilateral OME increases suspicion for nasopharyngeal malignancy and the necessity of nasopharyngeal biopsy in those patients.

Our study found that reactive lymphoid hyperplasia is the most common pathology encountered in the nasopharynx of adult population followed respectively by nasopharyngeal carcinoma and nasopharyngeal lymphoma while nasopharyngeal cysts were the least detected lesions.

Conclusion

Benign lesions are more commonly detected in the nasopharynx in adult population particularly hyperplastic lymphoid tissue. Histopathological examination of nasopharyngeal mass is very essential to rule out malignancy which is not uncommon.

References