ANTERIOR TRIANGLE NECK SWELLINGS- RELATIVE INCIDENCE OF VARIOUS CLINICAL CAUSES

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ABSTRACT

Aims and objectives- The intended aim of our study was to find out the cause of various benign anterior triangle neck swellings.

Material And Methods- A prospective study was carried out at ENT department of MMIMSR for a period one year from June 2017 to May 2018. The sample size consist of 50 patients. All patients attending the ENT OPD with neck swelling were included in this study. These patients were evaluated based on clinical history and examinations. Pathological investigations like FNAC (Fine needle aspiration cytology) & histopathological examination (HPE) along with radiological examination such as Ultrasounography (USG), X-ray, Magnetic resonance imaging (MRI), Computed tomography (CT Scan) was carried out wherever it was required.

Result – Out of 50 patients, 46 percent were male patients (n=23) and 54 percent were female patients (n=27). Patients with the age from 5 years to 70 years were affected with the mean age of 42years. Midline neck swellings were more common than lateral neck swellings (Anterior triangle). Among the midline neck swelling, thyroid gland pathology was commonest with 72.4% of cases (n=21), followed by Thyroglossal duct cyst with 24% cases (n=7). Thyroglossal cyst was the most common congenital swelling seen in our study. In the lateral neck, salivary gland pathology was the commonest cause of neck swelling with 52.3% cases (n=11) followed by branchial cyst with 23.8% cases (n=5). 14.3% of cases (n=3) with tubercular lymphadenopathy were found in submandibular region

KEYWORDS

Anterior triangle neck swelling, fine needle aspiration cytology, Thyroid swelling

INTRODUCTION:

The task of dealing with neck swellings is a common clinical condition which an ENT clinician routinely encounters. These swellings are responsible for a significant cause of morbidity and mortality in India'. Neck swellings can be classified in various ways: it can be congenital or acquired, can be midline swelling or lateral neck swelling (LNS). The neck swellings can also be classified in relation to the triangles of the neck, depending on which differential diagnosis can be made. The lateral neck corresponds to the area of posterior triangle as well as anterior triangle. Here in our study we are concerned with the anterior triangle of lateral neck.

Even though we can classify these neck swellings on various simple ways that helps in the diagnosis still evaluating a swelling in the neck may seem daunting, but a good systemic approach is all that is needed. Identifying the involved structure that is enlarged and comparing that with the pathologies that may occur within that structure, solves most of the problems and hence appropriate investigation can be performed which is must to plan an effective management.

The process of diagnosing a neck swelling requires a full task of gathering information that includes detailed history, clinical examination, cytopathological, histological examination as well radiological assessment.

The intended aim of our study is to find out the cause of various benign anterior triangle neck swellings.

METHODS & MATERIALS:

A prospective study entitled "Anterior Triangle Neck Swellings-Relative Incidence of various clinical causes" was carried out at ENT department of MMIMSR for a period one year from June 2017 to May 2018.

The sample size consist of 50 patients.

Collection of data: All patients attending the ENT OPD with neck swelling were included in this study. These patients were evaluated based on clinical history and examinations. A provisional diagnosis was established and further investigations in the form of Ultrasounography, fine needle aspiration cytology (FNAC) & USG guided fine needle aspiration cytology were carried out wherever

indicated. In some cases special radiological investigations like CT scan neck and MRI neck were also done. Final diagnosis was made & further management was done accordingly. Surgical excision was the modality of treatment preferred in most of the cases.

inclusion criteria: patients with a clinically palpable anterior triangle neck swelling including midline swellings.

Exclusion criteria: Malignant neck swellings.

RESULTS

Our prospective study included 50 patients out of them 46 percent were male patients (n=23) and 54 percent were female patients (n=27). Patients with the age from 5 years to 70 years were affected with the mean age of 42years.

Midline neck swellings were more common than lateral neck swellings (Anterior triangle). 58% of neck swellings were midline and 42% were lateral neck swellings. (Table 1)

Table 1: Relative Prevalence Of Neck Swellings:

Neck swellings	No. of cases	percentage
Midline neck swelling	29	58%
Lateral neck swellings	21	42%
Total cases	50	100%

Among the midline neck swelling, thyroid gland pathology was commonest with 72.4% of cases (n=21), followed by Thyroglossal duct cyst with 24% cases (n=7). Thyroglossal cyst was the most common congenital swelling seen in our study. A case of ranula was also found in upper midline. (Table 2) (Figure 1)

Figure:1 Thyroid Swelling

Table 2: Various Midline Neck Swellings

Midline neck swellings	No. of cases(N=)	Percentage(%)
Thyroid gland pathology	21	72.4%
Thyroglossal duct cyst	07	24.1%
Ranula	01	3.4%
Total	29	100%

In the lateral neck, salivary gland pathology was the commonest cause of neck swelling with 52.3% cases (n=11) followed by branchial cyst with 23.8% cases (n=5). 14.3% of cases (n=3) with tubercular lymphadenopathy were found in submandibular region. A single case of Ludwig's angina and hypoglossal schwannoma were also found in our study. (Table 3) (Table 4) & (Figure 2)

Figure 2: Excised Hypoglossal Schwannoma**Table 3: Various Lateral Neck Swellings**

Lateral neck swellings	No. of cases(N=)	Percentage (%)
Salivary gland pathology	11	52.3%
Branchial cyst	05	23.8%
Tubercular lymphadenopathy	03	14.2%
Ludwigs angina	01	4.7%
Hypoglossal nerve schwannoma	01	4.7%
Total	21	100%

Table 4: Sex Distribution In Patients With Clinical Findings.

Disease	Male	Female	No. of Cases (n=)
Thyroid pathology	3	18	21
Salivary gland pathology	7	4	11
Thyroglossal duct cyst	5	2	07
Branchial cyst	3	2	05
Tubercular lymphadenopathy	3	0	03
Ludwigs angina	0	1	01
Hypoglossal nerve schwannoma	1	0	01
Ranula	1	0	01
Total	23	27	50

DISCUSSION

Our study revealed that the midline neck swellings were frequently seen as compared to the anterior triangle neck swellings. Among all these benign thyroid gland swellings were the commonest. Similar results were found in the study conducted by *Khokhale PD et al²* which was conducted on 57 patients out of which 82.45% were midline and 17.55% were lateral neck swellings and total cases of thyroid gland swellings were 61%.

Mondin V et al³ reveals that Thyroglossal duct cyst is the most common congenital anomaly of the neck in childhood, representing more than 75% of congenital midline neck swellings. Although Thyroglossal duct cysts often occur in children, at least half are diagnosed in the second decade of life and can even also present in adulthood. This was in accordance to our study where Thyroglossal cyst was the most common congenital swelling seen predominantly in children and younger patients.

About lateral neck masses we found that the salivary gland pathologies were the commonest benign cause of swelling in submandibular region. Among these chronic sialadenitis with intraductal obstruction was frequently encountered with n=6, followed by chronic sialadenitis with intraglandular calculus n=3. Two cases of unilateral Mumps were also seen in right submandibular region. This was in consistent with the study conducted by *Khokhale PD et al²* & *Raad II et al⁴*.

In a study conducted by *Lakshmi R S et al⁵* Branchial cleft cysts are the most common congenital neck masses presenting as an asymptomatic

circumscribed movable swelling in lateral neck, most commonly anterior to the upper 3rd of sternocleidomastoid muscle

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