



## EVALUATION OF NECK SWELLING: A CLINICAL, CYTOLOGICAL AND HISTOPATHOLOGICAL STUDY IN A TERTIARY CARE HOSPITAL

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### ABSTRACT

**Background:** Swelling in the head and neck region is one of the commonest clinical presentation in the ENT practice. In routine ENT practice, we run over wide assortment of neck swellings going from incendiary to neoplastic, huge numbers of which represent a clinical quandary in authoritative conclusion and the executives.

**Subject And Methods:** Total of 46 cases were studied and their clinical-cytological-Histopathological relationship were analysed.

**Results:** Satisfactory smears were found in 43(93.5%) cases. In 3(6.5%) cases smears were unsatisfactory as they showed in adequate material, definitive diagnosis were made by histopathological examination. The rate of unsatisfactory smear in this study is in close proximity, to that of other studies.

**Conclusion:** FNAC can reduce substantially the need of open biopsy for histopathological examination. Disparity in clinico-cytological-histopathological relationship is most elevated in instances of neck swellings.

**KEYWORDS :** Neck swelling, USG and FNAC.

### INTRODUCTION:

In routine ENT practice, we run over wide assortment of neck swellings going from incendiary to neoplastic, huge numbers of which represent a clinical quandary in authoritative conclusion and the executives. Swelling in the head and neck region is one of the commonest clinical presentation in the ENT practice. Presence of a neck mass represent a demonstrative problem for the ENT. An incredible number of infection manifest as a tangible and/or obvious swellings in the neck. These may inborn/formative, incendiary/traditionalist or neoplastic (essential/optional). Every infection may have diverse method of introduction. On the other hand numerous sicknesses may present with comparable indications. For this reasons finding frequently gets troublesome in neck expanding.

Many instance of neck expanding may be analyzed after a thorough history also, a careful clinical assessment of the head neck. Further assessment is finished by hematological, cytological and imaging method. Conclusion is affirmed by histopathological assessment of the example. The clinical calling should be insistently stayed of the recurrence with which cervical metastasis may show up as the sole side effect in disease of the mouth, pharynx and larynx, less frequently somewhere else in the body. There can be no chance of fix until the essential injury is found. The prompt expulsion of a lymph hub for analysis is never goes in the wellbeing of the patient. This system should be conceded and utilized distinctly as a last demonstrative resort.[1] Hence now the head neck specialist have upheld a cautious quest for essential harm before the introducing neck protuberance is biopsied. Open biopsy causes seedling of tumor cell into avascular plane creation them safe to healing radiotherapy or chemotherapy and the putting of a biopsy cut in a zone which may accordingly be wrong for extremist neck analyzation flaps.[2] Open biopsy is an obtrusive strategy requiring careful aptitude and offices. The time has come burning-through, exorbitant and some time hospitalization and general sedation may be required. It delays the complete treatment.[3] Fine needle yearning cytology is a straightforward system that should be possible on an outpatient premise without nearby sedative what's more, gives fast outcome. It is basic, costeffective, less horrible.

The system may reshaped a few times to get satisfactory material for cytological analysis.[4] In India, FNAC is slowly turning out to be more famous as a preoperative exceptionally touchy and savvy symptomatic devices. Through this present study, I tried to find out spectrum of sicknesses creating neck

swelling and their socio-demographic feature. Histopathological report has been taken as a corroborative demonstrative test in all the cases also, contrasted with the FNAC discoveries with find out its analytic unwavering quality.

### SUBJECT AND METHODS:

This present study was conducted in the Department of ENT, Gouri Devi Institute of Medical Sciences and Hospital, Durgapur during the period from November, 2019 to August, 2020. All patients clinically diagnosed as having benign neck swelling planned for surgical management were enrolled in the study. Fine needle aspiration cytology, MRI, CT scan and histopathological examination of postoperative specimen of neck swelling, analyzed data presented by various tables, graphs and figures. A total of 46 patients irrespective of age and sex with neck swelling randomly selected for the study who admitted in the Department of ENT, Gouri Devi Institute of Medical Sciences and Hospital. This was a cross sectional study with a sample size 46. Clinical presentation, Fine needle aspirating cytology, Imaging of different types in selective cases, histopathological examination of postoperative specimen of neck swelling. All information recorded in a standardized data collection sheet for the study. Then those were complied, analyzed and tabulated in order to obtain statistical and comprehensive results of the study. All information recorded in a standardized data collection sheet for the study.

### RESULTS AND DISCUSSION:

Total of 46 cases were studied and their clinic-radiopathological relationship were analysed. Out of 46, 33 (71.7%) were females and 13 (28.3%) were males. The male to female ratio was 1:2.53. The male to female ratio is consistent with the study of other.[6] Majority of our subjects felt in the age group between 25-55 years .

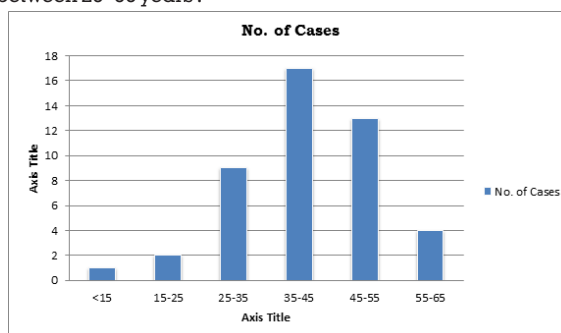


Fig-1 : Shows The Age Distribution Of The Subjects

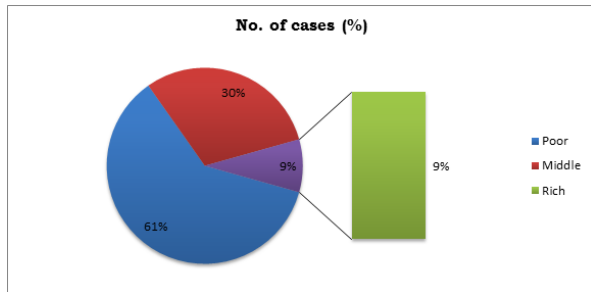


Fig-2 : Shows The Socioeconomic Condition

Table-1: Shows The Clinical Diagnosis Of Neck Masses

Clinical diagnosis	Disease	No. of cases
Cervical lymph adenopathy	Tubercular lymph adenitis	16(34.8)
	Metastatic carcinoma	4(8.7)
Thyroid and related neck mass	Goiter	17(36.95)
	Thyroglossal cyst	1(2.2)
Salivary gland swelling	Salivary gland tumour	5(10.9)
Other congenital and developmental neck mass	Branchial cyst	1(2.2)
	Submental dermoid	2(4.3)

Table-2: Shows The FNAC Diagnosis Of Neck Masses

Clinical diagnosis	FNAC diagnosis	No. of cases (%)
Cervical lymph adenopathy (22)	Tubercular lymph adenitis	8(17.4)
	Metastatic carcinoma	5(10.9)
	Non specific lymphadenitis	3(6.5)
	Lymphoma	5(10.9)
	Unsatisfactory smear	1(2.2)
Thyroid and related neck mass (17)	Nodular goiter	9(19.6)
	Papillary carcinoma of thyroid gland	3(6.5)
	Follicular neoplasm	3(6.5)
	Thyroglossal cyst	1(2.2)
	Unsatisfactory smear	1(2.2)
Salivary gland swelling (4)	Pleomorphic adenoma of salivary gland	3(6.5)
	No specific submandibular sialoadenitis	1(2.2)
Other congenital and developmental neck mass (3)	Branchial cyst	1(2.2)
	Submental dermoid	1(2.2)
	Unsatisfactory smear	1(2.2)

Table-3: Shows The Histopathological Diagnosis Of Neck Swelling

Clinical diagnosis	Histopathological diagnosis	No. of cases (%)
Cervical lymph adenopathy (22)	Tubercular lymph adenitis	11(23.9)
	Metastatic carcinoma	4(8.7)
	Non specific lymphadenitis	3(6.5)
	Lymphoma	4(8.7)
Thyroid and related neck mass (18)	Nodular goiter	10(21.7)
	Papillary carcinoma	4(8.7)
	Follicular carcinoma	2(4.3)
	Follicular adenoma	1(2.2)
Salivary gland swelling (4)	Thyroglossal cyst	1(2.2)
	Pleomorphic adenoma of salivary gland	3(6.5)
	No specific	1(2.2)

	submandibular sialoadenitis	
Other congenital and developmental neck mass (2)	Branchial cyst	1(2.2)
	Submental dermoid	1(2.2)

Table-4 Shows The Comparison Between Clinical FNAC And Histopathological Diagnosis Of Cervical Lymph Node Masses

Clinical diagnosis	FNAC diagnosis	No. of cases	Histopathological diagnosis	No. of cases
Tuberculosis (18)	Tubercular lymphadenitis	10 (21.7)	Tubercular lymph adenitis	10 (21.7)
	Non specific lymph adenitis	3(6.5)	Non specific lymph adenitis	3(6.5)
	Lymphoma	5(10.9)	Lymphoma	5(10.9)
	Unsatisfactory smear	1(2.2)	Tubercular lymph adenitis	1(2.2)
Metastatic carcinoma (4)		4(8.7)	Metastatic carcinoma	4(8.7)

Table-5 Shows The Compare Between Clinical FNAC And Histopathological Diagnosis Of Thyroid And Related Disease.

Clinical diagnosis	FNAC diagnosis	No. of cases	Histopathological diagnosis	No. of cases
Goiter (17)	Nodular goiter	11 (23.9)	Nodular goiter	11 (23.9)
	Papillary carcinoma of thyroid	4 (8.7)	Papillary carcinoma of thyroid	4(8.7)
	Follicular neoplasm	3 (6.5)	Follicular carcinoma thyroid	2(4.3)
	Unsatisfactory smear	1 (2.2)	Follicular adenoma	1(2.2)
			Nodular goiter	1(2.2)
Thyroglossal cyst (1)	Thyroglossal cyst	1(2.2)	Thyroglossal cyst	1(2.2)

Table-6 Shows The Comparison Between Clinical, FNAC And Histopathological Diagnosis Of Salivary Gland Disease.

Clinical diagnosis	FNAC diagnosis	No. of cases	Histopathological diagnosis	No. of cases
Salivary gland tumour (4)	Pleomorphic adenoma	3(6.5)	Pleomorphic adenoma	3(6.5)
	Chronic submandibular sialoadenitis	1(2.2)	Chronic submandibular sialoadenitis	1(2.2)

Patients with palpable and or visible neck mass is a quite common presentation to an ENT. So one should be sound also, precise for the determination and the board of quite a patient. In the present study, I attempted to build up the part of FNAC in the administration of such patients by building up its analytic affectability and particularity in examination with histopathological one, which is an accurate yet cost viable, tedious and furthermore an intrusive technique. In the present study we analyzed FNAC report of 46 cases. Here satisfactory smears were found in 43(93.5%) cases. In 3(6.5%) cases smears were unsatisfactory as they showed in adequate material, definitive diagnosis were made by histopathological examination. The rate of unsatisfactory smear in this study is in close proximity, to that of other studies.[5] In the present study age of the patient ranged from 12 to 65 years. The highest number of cases were found in 4th decade. This was followed by 3rd and 2nd decades. In this present series 40% of neck mass were of thyroid in origin

which consistent with other studies.[7]if there should arise an occurrence of thyroid expanding out of 18 cases 10 (21.7%) cases were end up being multinodular goiter on histopathology and it is equivalent with others.[8] Here FNAC shows exceptionally affectability 93% and explicitness 100% for nodular goiter. In any case, if there should arise an occurrence of thyroid danger its affectability is low 55.6% as it cannot separate plainly between follicular carcinoma and follicular adenoma. Albeit exceptionally touchy 100% for papillary carcinoma of thyroid. It is equivalent with others studies.[9] Commonest was Cervical lymphadenopathy 47.8% of which tubercular lymphadenitis was 11 cases 23.9%. This is reliable with the discoveries of some other studies.[10] In this investigation the affectability was 93% and particularity 100% of FNAC for diagnosing tubercular lymphadenopathy is high and steady with other studies.[11] In this examination just one bogus negative outcome was found for tubercular lymphadenopathy by FNAC, might be because of insufficient suction or spectator blunder. Metastatic carcinoma was found in 8.7% of complete cervical lymphadenopathy and affectability and explicitness for diagnosing such injury is 100% which was predictable with other studies.[12,13] In salivary organ injuries FNAC is extremely helpful apparatus for determination as it an almost 100% touchy and specific.[3,9] The general affectability and particularity of FNAC according to histopathology is 92% and 100% individually which were viable with other study.[2] The general precision of FNAC was found in 91% which is like that of other studies.[9] To acquire greatest advantage from the method, close co-activity between the specialist and pathologist is significant. The function of an accomplished cytopathologist is basic for right diagnosis.[14] Adequate measure of suction from the injury is fundamental for exact conclusion. Administrator should be talented in performing desire. The pathologist should be knowledgeable about cytologic understanding of the material suctioned. Close clinicopathological connection is totally important for valuable clinical understanding.

## CONCLUSION:

In conclusion, FNAC can reduce substantially the need of open biopsy for histopathological examination. Last of all I wish to conclude the study with the popular saying of Stewart "Diagnosis by aspiration is as reliable as the combined intelligence of the clinician and pathologist makes it". Disparity in clinico- cytopathological relationship is most elevated in instances of neck swellings. All cases reminiscent of threat intraoperatively ended up being dangerous histopathologically. There is a need to advise the patient well for a medical procedure.

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