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RESEARCH ARTICLE

FINE NEEDLE ASPIRATION CYTOLOGY VS BIOPSY INHEAD AND NECK SWELLINGS

***Dr. Rajendra Singh**

MS (ENT), Dept. of ENT, MDM Hospital and Dr. S.N. Medical College Jodhpur

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***Corresponding author:**
Dr. Rajendra Singh

ABSTRACT

This study was carried out in the Department of E. N. T. in collaboration with Department of Pathology to compare the role of fine needle aspiration cytology to histopathology by excision or punch biopsy. 198 cases were compared, and it was found that 91.98% cases were correctly diagnosed and 100% accuracy was observed in malignant swellings.

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INTRODUCTION

Accurate diagnosis in case of tumors is of immense importance to the surgeon as well as to the patient. The diagnosis of cancer generally means that patient has to be subjected to major surgical procedure, along with chemotherapy and radiotherapy. So the error in diagnosis may become a serious hazard. For correct diagnosis, of course histopathology is the final court of appeal and it can be obtained by punch, drill needle, excision, incision or needle aspiration. FNAC is simple, safe and rapid method to establish diagnosis but it was illustrated that cancer cells grow through needle track thus promoting dissemination of disease. This study was to assess the efficacy of FNAC Vs Biopsy in Head and Neck swellings.

MATERIAL AND METHODS

This study was conducted on 134 patients presenting with head and neck swellings in ENT OPD from February 2020 to June 2023. The detailed history and examination along with routine investigation were carried out. Besides in every case Fine Needle Aspiration Cytology and biopsy was advised. FNAC was done after preparing the skin with savlon and fixing the swelling between index finger and thumb of left hand and using 10 ml disposable syringe aspiration was done by needle movement in different directions along with development of vacuum pressure in the syringe. Biopsy specimen was taken either by excision or punch, depending upon the nature of the swelling.i

OBSERVATIONS

The needle aspiration was done in all 134 patients irrespective of age and sex. Out of this 99 patients (75%) gave consent for excisional or punch biopsy. Evaluation of diagnostic accuracy was made taking histopathological diagnosis as parameter. Table II shows that out of 99 lesions histopathologically proved, 91 (91.9%) were correctly diagnosed on smear cytology. In 8 cases (8.1%) the smears inconclusive, because they mostly showed blood cells. From Table III we can see that all the 29 malignant lesions were correctly diagnosed by aspiration cytology and inconclusive smears were almost equal in non-neoplastic (inflammatory) and benign lesions. Besides the 25 cases out of 29 malignant lesions were followed for 6 months and not a single dissemination found in the needle track, but these were patients who were receiving treatment in the form of chemo-radiation in the Department of Radiotherapy.

DISCUSSION

The importance of correct diagnosis can only be appreciated from the expression of patients, getting relieved from the trauma of being diagnosed as malignant. Surgeon too feels relieved if the disease turns out to be benign as massive, mutilating surgery along with pains of chemo-adiotheraphy can be avoided to the patient. Aspiration cytology was introduced by Martin and Ellis (1930) as a substitute for excisional biopsy. It was strongly favoured by different workers (Saygo-1942, Tobbins and brothers-1954, Zajicek-

Table I. The swellings presented were as follow

S.No.	Organs Involved	Number of Cases	Percentage
1.	Lymphonode	84	62.68%
2.	Thyroid	19	14.18%
3.	Salivary glands	16	11.95%
4.	Miscellaneous	15	11.19%
	Total	134	

Table II. Comparative Study of aspiration smears in different tissue (Histopathology diagnosis n=197)

S.No.	Tissue Involved	No. of Case	Aspiration Cytoogy	
			Satisfactory	Unsatisfactory
1	Lymphnode	52	48	4
2	Thyroid	19	18	1
3	Salivary gland	13	12	1
4	Miscellaneous	15	13	2
Total		**99**	**91**	**8**

Table III. Comparative Study of aspiration smears in different tissue (Histopathology diagnosis n=198)

S.No.	Nature of lesion	Lymphnode	Thyroid	Salivary	Misc.	Total
1.	Non-neoplastic	26/30	-	-	4/4	30/34
2.	Benign	-	13/18	8/9	7/8	32/36
3.	Malignant	22/22	1/1	4/4	2/2	29/29
Total		**48/52**	**18/19**	**12/13**	**13/15**	**91/94**

1974 and Tokenga et al 1980etc.) and variable results ranging 80-100% accuracy was reported. M. R. Draper, A. G. Pfleiderer and W. Smith also reported 100% accuracy in advance, although it was slightly less 88.86% in all cases of malignancy swellings. In this study too malignant growths were diagnosed 100% accurately although it was 88.24% and 88.89% for non- neoplastic and benign swellings respectively, with the average accurate diagnosis in 91.92% patients. Aspiration cytology has the advantage of relatively less morbidity, quick procedure without the need of any anaesthesia, less cost and almost without any contraindications.

Some surgeons are reluctant to aspirate for the fear of malignant cell implantation in the needle track but it was not found in any case as also reported by Robbins et al in 1955; probably because of auto-immune destruction of very small number of malignant cells implanted in the tract as found by Moore 1959.

CONCLUSION

Fine needle aspiration cytology with its advantage of less morbidity, low cost, rapid diagnosis without any contraindication and of course good accuracy rate will prompt a wider use for tumor diagnosis.

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