ROLE OF FINE NEEDLE ASPIRATION CYTOLOGY IN THE DIAGNOSIS OF CERVICAL LYMPHADENOPATHY

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Aspirates were obtained from the lymph nodes of 50 patients of cervical lymphadenopathy. 47 smears were found to be satisfactory. Histopathological report was considered as confirmatory and was compared with FNAC report. The overall sensitivity and specificity excluding the unsatisfactory aspirates was 93.75% and 100% respectively.

Introduction
Numerous reports have been published till date on various aspects of Fine Needle Aspiration Cytology (FNAC) but studies concerning specifically the cervical lymph node aspirations are not that much apparent. FNAC is a quick, simple and safe technique requiring neither local nor general anaesthetics, which can be carried out at the bed-side or in the OPD during the patients very first visit. Cervical lymph nodes being superficial are readily accessible for investigations by this method.

The purpose of the present study is to evaluate the utility of FNAC in the clinical management of the patients of cervical lymphadenopathy and determine the feasibility of its application as a routine diagnostic procedure.

Materials and Methods
A total of 50 patients attending the ENT OPD with cervical lymphadenopathies were selected for this study. The cases of metastatic cervical lymphadenopathies with occult primaries were not included in this series.

Aspiration was carried out using a hand-held 20cc. disposable syringe fitted with 21G (green) needle. The mass was stabilised and suction applied as several radial passes were made, then suction was released and the needle withdrawn. Aspirated material was quickly expelled onto a glass slide and spread in a narrow area in the manner of a blood smear (Frable, 1976). Air-dried slides were used for staining with Hematoxylin - Eosin and Leishman - Giemsa stains and alcohol-fixed smears were stained with Papanicolaou stain.

Excision biopsy of the lymph node was done when FNAC suggested presence of benign lesion or lymphoma. But when FNAC diagnosis was metastatic malignancy or when clinical suspicion was in favour of metastasis, the primary site was identified and incisional/punch biopsy was taken from the primary site. Histopathological report was considered as confirmatory diagnosis and was compared with the FNAC report.

Fig. 1: Microphotograph of aspirated smear from a case of metastatic carcinoma in lymph node showing malignant squamous cells. Leishman-Giemsa x 400.
Results
Of the 50 aspirations, 47 smears were found to be satisfactory. In the rest 3 (6%) cases, scanty material and poor cell yield precluded the possibility of any diagnosis. One of the 3 patients, whose neck node aspirations were categorised as unsatisfactory, was suffering from metastatic squamous cell carcinoma and the other two were diagnosed histopathologically to be cases of chronic non-specific lymphadenitis.

The FNAC and histopathological diagnoses are shown in Table-I. All the cases of metastatic carcinoma, lymphoma and tubercular lymphadenitis were confirmed by histopathological examination. Among the satisfactory specimens, 2 cases of tubercular lymphadenitis and 1 case of metastatic malignancy were erroneously diagnosed as non-specific lymphadenitis by FNAC.

The overall results of cytology in terms of malignant and benign conditions are shown in Table-II excluding the unsatisfactory smears. The accuracy was 97.87% and sensitivity 93.75%.

Discussion
The experience of Scandinavian authors (Zajicek, 1974) generated interest in FNAC as a diagnostic modality and is steadily gaining popularity since the 1950s. Unfortunately in some papers, the number of unsatisfactory smears and whether these are included or deleted in the statistical analysis is not always mentioned. Therefore, it is difficult to determine true sensitivity and specificity, positive and negative predictive values and thus the diagnostic utility of the method in clinical practice (Smallman et al, 1988).

Table III shows summaries of the literature on FNAC of cervical lymph nodes (including the results of the present study) from which such data can be extracted (Frable, 1976; Betsill and Hajdu; 1980; Gertner et al, 1984; Yadav et al, 1991).

Precise diagnosis of the malignancies from the smears was less satisfactory. Exact tumour typing (e.g. squamous cell carcinoma, adenocarcinoma etc), was possible in 13 of 17 malignancies. Differentiation of squamous cell carcinoma was not