

FINE NEEDLE BIOPSY

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The basic idea of aspiration of material through a fine needle for purposes of diagnosis is not new. As far back as 1833, the diagnosis of a liver abscess was confirmed by putting in a needle (Deeley, 1974). Later material obtained through needles from abscesses was used for establishing the nature of the bacterial infection. Biochemical examination of fluids is also a well established procedure. What is new is the refinement of cytological techniques whereby material aspirated from solid masses with the help of a fine needle as opposed to special wide bore needle is used for the diagnosis of malignancy.

Martin and Ellis (1930) at Memorial Hospital, New York are the pioneers who did a large volume of work in 1920's on this technique well before Papanicolaou and his work on exfoliative cytology. Fine needle aspiration technique however, was not accepted in USA and even in Memorial its use decreased in 1950's. Scandinavian workers nevertheless continued the work and are to be credited for its present world wide acceptance.

In this issue of the journal two articles are being published describing experiences of the use of fine needle aspiration technique in Karachi. One of the papers deals with fine needle aspiration in breast lesions and the other with lymph nodes. In both cases the results of the preliminary work are very encouraging.

The technique is simple and what is more important, it does not require any special instruments to obtain the specimens but an ordinary 20 cc glass syringe and an 18 gauge needle is all that is needed. The processing of the slides is also not difficult and can be easily done by almost all the laboratories. As described by the authors the slides need not be immediately fixed and thus the problem of transporting fixative mostly alcohol based is also simplified.

Interpretation of slides however requires the services of an experienced pathologist with training in cytology, who is not available everywhere in Pakistan and other developing countries. Keeping in mind that histopathology services require capital investment plus technical support in addition to the services of a pathologist the cytological methods offer many advantages. Firstly the equipment, technical staff and space required for cytological services involve less expenditure than any histopathology facilities and are thus easier to set up. There is no question, that histopathological examination is much more reliable and cytology cannot replace it, but where histopathology services are not available cytology offers a reasonable alternative. With the introduction of fine needle aspiration the range of cytological examination has widely increased in scope. It is no longer limited to sites from where exfoliated cells can be obtained, but covers all areas of the body into which a needle can be introduced.

As pointed out by the authors of the two articles, the patients accepted this technique very well. Very often in our country the fear of a biopsy leads to procrastination on the part of the patient and their relatives thus delaying treatment. Again in our hospitals there is a tremendous pressure on the existing surgical services so that biopsy patients have to wait. In these situations needle aspirations provide a useful adjunct to a definite biopsy diagnosis.

References

1. Deeley, T.J. Needle biopsy, Butterworth, Glasgow, 1974.
2. Martin, H.E., and Ellis, E.B. (1930) Biopsy by needle puncture and aspiration. Ann. Surg., 92:160.