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A prospective study to evaluate the efficacy and utility of fine needle aspiration by manual liquid based cytology in palpable lesions

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Introduction: Liquid-based cytology (LBC) has become increasingly popular in gynecological pathology, however, it is gaining importance in the evaluation of non-gynaecologic cytology specimens including fine needle aspiration (FNA). The more widely used technologies for liquid-based cytology require expensive equipment, hence the need to evaluate and validate a cheaper & inexpensive manual method for processing LBC specimens.

Aims and Objectives: The aims and objectives of the study were to evaluate the efficacy of manual LBC in FNA cytology versus conventional slide preparation method, study cytomorphological features of various lesions on liquid-based preparation and assess the sensitivity and specificity of the diagnosis rendered on liquid-based preparation wherever possible.

Materials and Methods: FNA was performed on 50 cases with superficial palpable swellings. The material was obtained by the minimum of 3 passes in each case for conventional and manual liquid-based preparation of aspirates using SurePath™ cytokerin.

Results: Out of 50 total cases, 20 were performed on thyroid swelling, 14 on lymphadenopathies and 16 on palpable breast lumps. Manual LBC had sufficient cellular yield with 98% cases depicting adequate material for diagnosis. Histopathological confirmation was available in 29 of 49 reported cases with a 100% sensitivity and specificity. LBC has shown superiority in terms of cellularity, cell arrangement, cellular details, background and reduced screening time and storage.

Conclusion: Manual LBC gives superior results when compared with that of the conventional method with better morphology. Various artifacts inherent to liquid-based cytology should be known and kept in mind during reporting.

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