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Research paper 10

# An interventional study assessing the impact of pain relief during fine needle aspiration cytology on the procedure and quality of cytological smears

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**Introduction and objectives:** Although fine needle aspiration (FNA) of thyroid is a minimally invasive procedure, patients often request pain relief. The objective was to assess the efficacy of pain relief by local anaesthetic agent infiltration during FNA of thyroid and asses if the was any difference in the adequacy of the cell yield and quality of smears in patients with adequate pain relief (intervention group-IG) ) and with no pain relief (comparison group-CG).

**Methodology:** An interventional study was performed on 139 patients undergoing FNA (non-aspiration) of thyroid at the Teaching Hospital, Ragama. Seventy patients in the IG received a subcutaneous injection of lignocaine with adrenaline from an insulin syringe. The CG of 69 patients received no pain relief. Quantitative pain assessment was performed using a visual analog scale, numeric rating scale and verbal rating scale. The cell yield was classified as adequate/not adequate based on Bethesda criteria (2017). The quality of smears was assessed based on the amount of background haemorrhage as Grades 1-3 (1-<50%, 2->50% and 3-completely obscured by haemorrhage). Pearson chi Square test was used to assess the difference between the two groups.

**Results:** There was a significant difference in the perception of pain between the two groups using all three assessment methods ( $p < 0.0001$) and the majority of IG found the procedure tolerable. There was no impact on the adequacy of the cell yield ($p=0.574$) or the presence of background haemorrhage ($p=0.531$).

**Conclusions:** The study shows that pain relief reduces the anxiety among patients during FNA of thyroid and that it does not influence the cell yield or quality of the cytological smears.

**Keywords:** FNA thyroid, pain relief, lignocaine with adrenaline, smear quality

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