

ROLE OF ULTRASOUND AND FNA IN THE MANAGEMENT OF THYROID NODULES

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Background/Purpose: 65% of UK population have thyroid nodules. Incidental findings are increasing due to increased quality and quantity of imaging yet thyroid malignancy is rare, 1.2 /100 000. Therefore physicians, presented with increased incidences and decreased healthcare budgets, must strive to reassure the majority of patients with benign disease; whilst reliably identify malignant nodules. Therefore it is important to explore current thyroid nodule management frameworks, including efficiency of Ultrasound as a screening tool and Fine-Needle-Aspiration (FNA) Biopsy.

Methods: A systematic review of literature was performed. National data on the efficiency of Ultrasound and FNA was collated, and compared to local data extracted from LTHT.

Results: Literature shows Ultrasound to be an unreliable screening tool with variable sensitivity (17-87%) and specificity (39-94%) in distinguishing malignant and benign thyroid nodules. Leeds Teaching Hospital Trust (LTHT), a major healthcare centers in the UK, had sensitivity and specificity values of 80 and 94 % respectively. National rates of FNA failure are estimated to be 5-20% but in LTHT failure rate is 46%.

Discussion & Conclusion: The value of Ultrasound as a screening tool is highly variable, and the introduction of an established framework to help evaluate the efficiency of US in differentiating benign from malignant nodules is recommended. Furthermore, there appears to be issues in the rate of failed FNA's (50%). Therefore worldwide research is required to assess the true extent of the problem. A triad of issues, encompassing low rates of thyroid malignancy, increased incidental findings of thyroid nodules and stretched medical budgets requires increased efficiency of the nodule management framework.