The use of ultrasound scanning & fine needle aspiration cytology in the diagnosis of thyroid neck lumps

Introduction

The British Thyroid Association guidelines for management of thyroid cancer suggest that Ultrasound (US) scanning in association with Fine Needle Aspiration Cytology (FNAC) is a sensitive method of examining thyroid nodules.

We therefore wished to investigate the accuracy of US scanning with FNAC in comparison with the histological findings in post-thyroidectomy patients.

Methodology & Theoretical Orientation

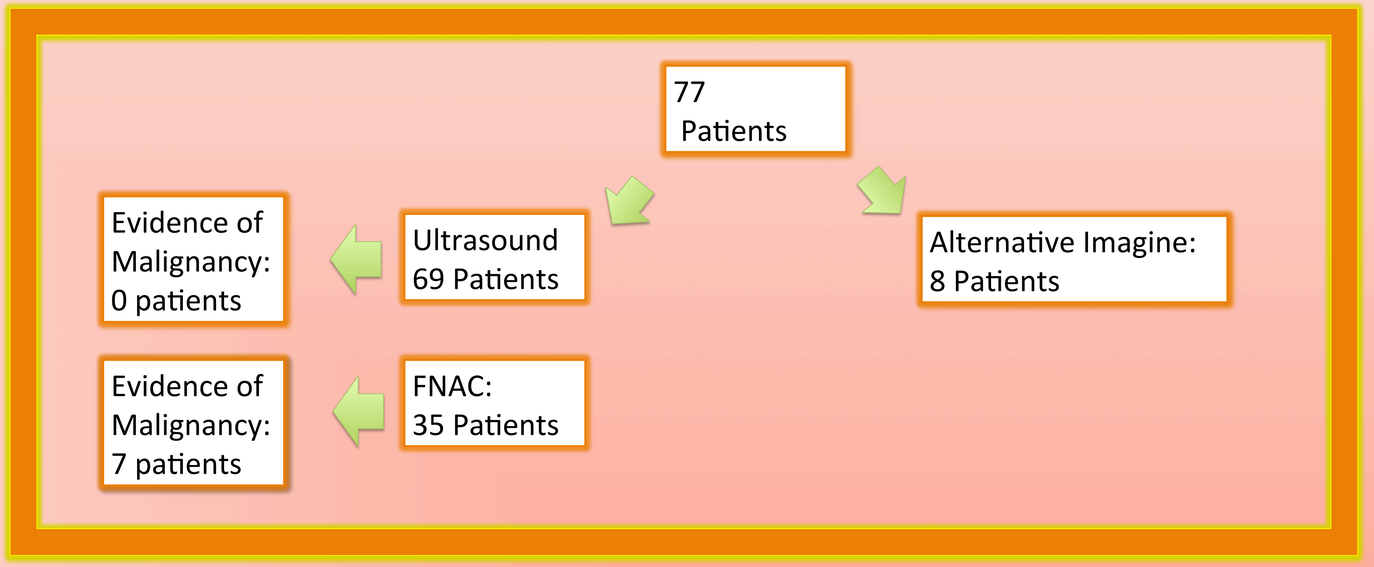
A retrospective study was carried out on a sample of 100 patients presenting with neck lumps between October 2012 and September 2016. Each patient was initially assessed in clinic and then underwent a partial or total thyroidectomy.

We identified from this sample whether US +/- FNAC was carried out, and compared the findings with post-operative histological diagnosis. Of the 100 patients, 23 patients had insufficient data accessible, thus 77 patients were included in the study.

Results

69 of the patients underwent an US, with 8 patients undergoing alternative imaging, due to limited benefit of US. FNAC was only carried out in 35 patients. 7 patients where shown to have evidence of malignancy on FNAC, whereas none on US.

In 87% of patients, an accurate diagnosis was made with the use of US +/- FNAC, when compared with histological findings post-operatively. In 13% of patients, there was a discrepancy between the two; 2 patients there were misdiagnosed with follicular carcinoma, where histology confirmed papillary. 2 incidental papillary microcarcinomas were found. 6 were diagnosed with a benign lesion (7.8% of total patients sampled), where the histology confirmed malignant disease.

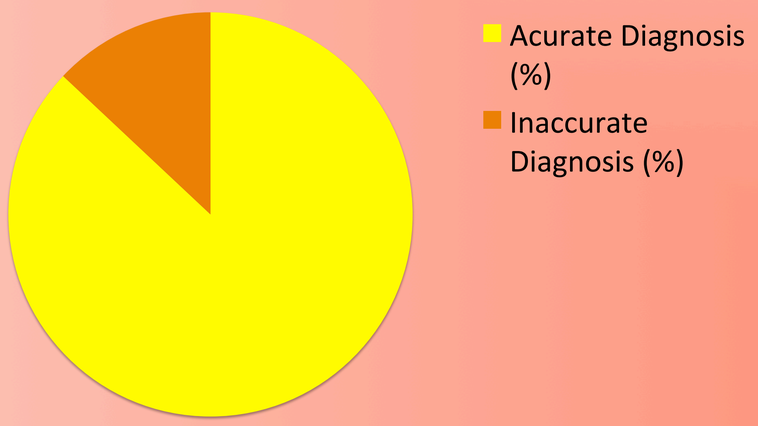


Conclusion & Significance

In conclusion a significant number of patients received an acurate diagnosis 87%, with use of US and FNAC. We also noted that the use of US and FNAC in combination improved accuracy in comparison to imaging alone: 7 patients were diagnosed with malignancy on FNAC following a non-malignancy US result.

Of the 69 patients undergoing US only 45.5% underwent FNAC, therefore further more frequent studies would need to be performed on a larger scale to further aid investigation into the sensitivity of US in association with FNAC in the assessment of thyroid nodules and thus improve the diagnosis and management of patients with thyroid lumps

A Graph to show Percentage of Patients Accurately Diagnosed using Ultrasound and Fine Needle Aspiration Cytology



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