

Diagnostic Utility of Ultrasound Scanning in the Preoperative Diagnosis of Thyroid Nodules

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Abstract

A 2.1-fold increase in the rate of thyroid carcinoma is observed in Sri Lanka during the past decade. Despite high incidence of thyroid tumors (7% of the population), malignancy rate was 5%. Effective methods of preoperative diagnosis are crucial for effective patient management. A descriptive cross-sectional study was conducted to evaluate the diagnostic utility of Ultrasound Scan (USS) in the preoperative diagnosis of thyroid tumors. The study enrolled 108 patients with radiologically suspected malignant nodules. USS findings were reported according to the Thyroid Imaging Reporting and Data System (TIRADS), and the results were compared with the final histological diagnosis. Among the 108 participants, the majority were females (78%), and their ages ranged from 15 to 75 years, with a mean age of 47.5. Histology results were available for only 35 individuals, with 77.14% (27 cases) confirmed as malignant. In the 27 histologically confirmed malignant cases, there were fourteen (n=14) reported as 4c, three (n=3) as five. TIRADS system shows a moderate, positive and insignificant correlation ($p>0.05$) when compared with histology results. Based on the findings, TIRADS system proved to have a 50% specificity and thus additional investigations are required for further preoperative diagnosis.

Keywords: *Thyroid Imaging Reporting and Data System, Thyroid ultrasound scan, Thyroid malignancy*