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Title	Role Of ARFI Elastography In Risk Stratification Of Thyroid Nodules
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Category	Thyroid including thyroid malignanc
Abstract	<p>Background: Ultrasound is the screening modality based upon which the management of a thyroid nodule is decided. The risk range of malignancy of nodules under TIRADS category 4 and 5 is wide (5-80%).</p> <p>Objectives: The aim of the study is to detect the impact of ARFI elastography on TIRADS categorization in risk stratification of thyroid nodules.</p> <p>Methods: 130 thyroid nodules in 79 patients were examined with conventional ultrasound and VTQ and VTI methods of ARFI elastography technique. Imaging findings were correlated with fine needle aspiration cytology results. Tissue elasticity was expressed as shearwave velocity (m/s) in VTQ method and as black and white colour coded images in VTI method.</p> <p>Results: Out of 130 nodules 117 were benign (94 nodular goitres, 5 follicular adenomas and 18 lymphocytic thyroiditis) and 13(10%) were malignant (papillary carcinoma) . The mean VTQ value for malignant nodules(7.21 ± 1.63 m/s) was significantly higher than for benign nodules (2.01 ± 1.46 m/s). The cut off value for differentiation of benign and malignant nodules was 3.55 m/s. On VTI images 89% of the nodular goiters were soft, 72% of the lymphocytic thyroiditis had equal stiffness and 92% of the papillary carcinoma were hard images. 28 nodules were grouped under TIRADS category 4 and 5 based on ultrasound. 42% of the TIRADS 4A nodules and 64% of TIRADS 4B nodules were correctly downstaged by VTQ method. 57 % in TIRADS category 4A and 70 in category 4B were down staged by VTI method.</p> <p>Conclusions: Both VTQ and VTI methods have high sensitivity and specificity in differentiating benign and malignant nodules. Both of these ARFI methods correctly downs stages atleast 50% of the undetermined nodules under TIRADS category. Thus ARFI can reduces the false positive rate of ultrasound and reduces the number of unnecessary FNAC or biopsies.</p>
Conflicts	None
Email	dayalasundaram@gmail.com
Decision of Scientific committee	
State if accepted for oral	