

Table 1. Published cases of acute transient thyroid swelling following thyroid FNB or other diagnostic modalities

First author, year*	Case(s)/ Gender	Age (years)	Goiter	Thyroid function tests		Technique/ Needle's gauge (G)
				(TSH/antibody)	Biopsied nodule's characteristics	
Haas SN, 1982 ⁵	1/F	47	No	Normal/NA	3.0 max diameter; R lobe	P-FNA/22
Dal Fabbro, 1987 ⁴	1/F	63	No	Normal/NA	3.8 cm max diameter, solid, hypochoic; R lobe	P-FNA/22
Van den Bruel, 2008 ⁶	1/M	56	No	NA/NA	3.3 max diameter, hypochoic, hypervascular; L lobe	US-FNC/24
Bowmann, 2009 ¹⁰	1/M	69	Yes	NA/NA	-	Subclavian vein catheterization
Norrenberg, 2011 ⁷	2/F/F	27/46	No/ No	Case #1: low/positive Case #2: normal/ normal	Case #1: 1cm max diameter, hypochoic, marked vascularization; L lobe/ Case #2: 1.5 cm max diameter, hypochoic, heterogenous, capsular calcification; R lobe	US-FNA/21
Nakatake, 2011 ⁸	3/F/M/F	58/31/45	Yes/ Yes/ Yes	Case #1: normal/ normal Case #2: normal/ normal Case #3: normal/ normal	Case #1: 0.9 cm max diameter, solid, heterogenous; L lobe / Case #2: 1.5 cm max diameter, solid, heterogenous, irregular margin; R lobe/ Case #3: 2.4 cm max diameter, solid, heterogenous; L lobe	NA-FNA/22
Nakagawa, 2011 ⁹	1/F	67	Yes	Normal/NA	4.1 cm max diameter, isochoic with cystic degeneration; L lobe	NA-FNA/22

Table 1. (continued)

Number of passes	Pain	Start of swelling	Volume increase (approximately)	Cytological diagnosis	Duration of swelling	Additional information
6	Anesthesia with lidocaine	3 min after FNA	2.5-fold (clinically)	Benign	1 h	Cold packs application
2	Mild pain/ the patient swallowed while the needle was in situ	During FNA	3-fold (clinically)	Non-diagnostic (repeat FNA: follicular neoplasm)	Within a few hours	Cold packs application/ Thyroidectomy/ Histologically follicular carcinoma
2	Acute pain	During FNC	1.5 to 3-fold (US)	Medullary carcinoma	1 h	Thyroidectomy/ Histologically medullary carcinoma
Several unsuccessful attempts	NA	15 min post-procedure	N/A	-	4 h	
2/1	Acute pain/ Acute pain	Both during FNA	2-fold (US)/ 3-fold (US)	Non-diagnostic/ Benign	3 h / 1 h	Case #1: History of post-partum thyroiditis/ Diclofenac administration Case #2: Concomitant diabetes mellitus/ Paracetamol administration
1/2/2	Mild pain/ Acute pain/ NA	1 h/1.5 h/2h after FNA	3-fold (US)/ 2-fold (US)/ 2.5-fold (US)	All benign	All within a few hours	Case #1: - Case #2: On warfarin and aspirin/ acute pain Case #3: -
NA	NA	1h after FNA	2-fold (US)	NA	20 h	Hydrocortisone (200 mg) intravenously

(*) References are presented in publication date order

F: female; FNA: fine needle aspiration; NA: not available; L: left; M: male; max, maximum; P-FNA: palpation-guided FNA; TSH: thyroid stimulating hormone; US-FNA: ultrasound-guided FNA; R: right; US: ultrasound; US-FNA: ultrasound-guided fine-needle aspiration; US-FNC: ultrasound-guided fine-needle capillary.