Institution Name: Al Nahdha Hospital

Document Title: Fine Needle Aspiration Cytology (FNAC) Guideline

Approval Process

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Acronyms:

FNAC	Fine Needle Aspiration cytology
ENT	Ear, Nose and Throat

FNAC Guideline

1. Introduction

Fine needle aspiration cytology (FNAC) entails using a narrow gauge needle to collect a sample of a lesion for microscopic examination. It is a minimally invasive, inexpensive, atraumatic technique that allows rapid tissue diagnosis, and helps planning further management of various tumours.

2. Scope

The guideline applies to all ENT clinics, Al Nahdha Hospital and at Seeb and Baushar Polyclinics.

3. Purpose

The purpose of this guideline is to improve the quality of care received by our patients, and to make our management of head and neck tumours more uniform and consistent.

4. Procedure

4.1 Informed consent:

4.1.1 The following should be explained to the patient before the procedure:

4.1.1.1 The procedure.

4.1.1.2 The purpose of the procedure.

4.1.1.3 The risks.

4.1.1.4 The benefits.

4.2 The settings:

4.2.1 An office-based procedure, done in the outpatient clinic.

4.2.2 The procedure is performed by an ENT doctor.

4.3 Indications:

4.3.1 A palpable head or neck mass, where a cellular material is required for a cytological diagnosis.

4.4 Contraindications:

4.4.1 A major anatomical structure overlaying the mass and at risk of injury (e.g. vessels, nerves).

4.4.2 Patients with a haematological disorder.

4.4.3 Patients on warfarin should stop taken the medication for 5 days prior to the procedure.

4.4.4 Patients taking anti-platelet agents, like aspirin or clopidogrel bisulfate, the patient should refrain from taking the medications for 3-5 days before and 3 days after FNAC, unless the patient needs to take the medication as indicated by the patient's referring physician.

4.5 Palpation

4.6 Cleaning the site of aspiration

4.7 Aspiration:

4.7.1 21-24G needle size should be used.

4.7.2 While fixing the mass with two fingers.

4.7 Asses the site of aspiration for any hematoma, bleeding.

4.8 Smear preparation:

4.8.1 Fixation: all the four glass slides should be uniformly fixed.

4.8.2 Date of the procedure should be written on the slides.

4.9 Send the slides to the laboratory.

4.10 Thyroid nodules: **(Appendix 1)**

4.10.1 Thyroid nodule diagnostic FNA is recommended for:

4.10.1.1 Nodules >1 cm in greatest dimension with high suspicion sonographic pattern.

4.10.1.2 Nodules >1 cm in greatest dimension with intermediate suspicion sonographic pattern.

4.10.1.3 Nodules >1.5 cm in greatest dimension with low suspicion sonographic pattern.

4.10.1.4 Nodules <1 cm, if a suspicious lymph node present in the Ultrasound.

4.10.2 Thyroid nodule diagnostic FNA is not required for:

4.10.2.1 Nodules that do not meet the above criteria.

4.10.2.2 Nodules those are purely cystic.

4.10.3 Thyroid nodule diagnostic FNA may be considered for:

4.10.3.1 Nodules > 2 cm in greatest dimension with very low suspicion sonographic pattern (e.g., spongiform).

4.10.3.2 Observation is an option.

5. Document History and Version Control

Document History and Version Control			
Version	**Description of Amendment**	**Author**	**Review Date**
01	Initial Release	Dr. Shaden Al- Riyami	Feb/2020
02			
03			
04			
05			

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Dr. Shaden Al- Riyami	Dr. Salma Al- Sheibani	Hospital Director

6. References:

Title of book/ journal/ articles/ Website	Authors	Year of publication	Page
Fine needle aspiration cytology (FNAC) and neck swellings in the surgical outpatient.	Ahmad T, Naeem M, Ahmad S, Samad A, Nasir A	2008 Sep	20(3):30–2.
Fine needle aspiration cytology in cancer diagnosis	Roskell DE, Buley ID	2004 Jul 31	329(7460):244–5
Fine needle aspiration cytology	Lever JV, Trott PA, Webb AJ	1985 Jan	38(1):1–11
Fine-needle aspiration biopsy.	Amedee RG, Dhurandhar N	2001 Sep	111(9):1551–7.
Fine-needle aspiration of the head and neck	Layfield LJ	1996	4(2):409–38.
Ultrasound-Guided Fine Needle Aspiration of Thyroid Nodules: A Consensus Statement by the Korean Society of Thyroid Radiology	Lee YH, Baek JH, Jung SL, Kwak JY, Kim J, Shin JH	2015	16(2):391–401

Appendix 1:

TABLE 6. SONOGRAPHIC PATTERNS, ESTIMATED RISK OF MALIGNANCY, AND FINE-NEEDLE ASPIRATION GUIDANCE FOR THYROID NODULES

Sonographic pattern	*US features*	*Estimated risk of malignancy, %*	*FNA size cutoff (largest dimension)*
High suspicion	Solid hypoechoic nodule or solid hypoechoic component of a partially cystic nodule ***with*** one or more of the following features: irregular margins (infiltrative, microlobulated), microcalcifications, taller than wide shape, rim calcifications with small extrusive soft tissue component, evidence of ETE	>70–90[a]	Recommend FNA at ≥1 cm
Intermediate suspicion	Hypoechoic solid nodule with smooth margins ***without*** microcalcifications, ETE, or taller than wide shape	10–20	Recommend FNA at ≥1 cm
Low suspicion	Isoechoic or hyperechoic solid nodule, or partially cystic nodule with eccentric solid areas, ***without*** microcalcification, irregular margin or ETE, or taller than wide shape.	5–10	Recommend FNA at ≥1.5 cm
Very low suspicion	Spongiform or partially cystic nodules ***without*** any of the sonographic features described in low, intermediate, or high suspicion patterns	<3	Consider FNA at ≥2 cm Observation without FNA is also a reasonable option
Benign	Purely cystic nodules (no solid component)	<1	No biopsy[b]

US-guided FNA is recommended for cervical lymph nodes that are sonographically suspicious for thyroid cancer (see Table 7).
[a]The estimate is derived from high volume centers, the overall risk of malignancy may be lower given the interobserver variability in sonography.
[b]Aspiration of the cyst may be considered for symptomatic or cosmetic drainage.
ETE, extrathyroidal extension.