POINT OF VIEW
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Big gain, no pain: Thyroid minimally invasive FNA (Thy MIFNA): Proposal of novelty in terminology

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In the field of thyroidology, image-guided interventional procedures have globally been discerned and incrementally utilized over the past four decades. While ultrasonography (US) and fine-needle aspiration (FNA) serve as a diagnostic cornerstone to rule out malignancy in thyroid lesions, *per se*, remaining the main challenge in their management, to a lesser extent, core needle biopsy has been being currently used as another primary diagnostic tool for evaluating this crucial issue. Nevertheless, the debate is still ongoing, and in particular, indeterminate cytology remains to be a highly controversial issue in thyroid cytopathology, a dynamic discipline, to date[1-3]. To deal with this compelling state and resolve this issue, clinical data, sonographic features, elastographic pattern, or outcome of other imaging/interventional techniques should be considered together and also can be supported by the relevant molecular testing. Roles of sonography and FNA are well-established and well-accepted in the diagnosis of thyroid nodules worldwide. However, to the best of our knowledge, the ideal needle size for US-guided FNA (henceforward, FNA) procedure has not been declared in a released well-accepted management guideline, up to now. On the contrary, a wide range of needle sizes, 20–27 gauge (G), have been used for application in the different geographic regions (e.g., 25–27-G in most Western countries and 21–22-G in Japan)[4]. Adequacy of the finer and thicker needles has been reported as similar by many authors[5]. Hanbidge et al.[6] proclaimed no significance between the 23- and 27-G needles in the adequacy of the samples obtained. Of note, the authors asserted that the diagnostic quality of the aspirate may be preferable to the finer one, harboring 27-G[6]. Zhang et al.[7] stated that no statistically significant differences were present between 23-, 25-, and 27-G needles with the adequacy rates (88.5, 90.4, and 89.7%, respectively; p>0.05), involving higher numerical rates in 27-G needle than the 23-G one. However, Tanaka et al.[8] reported that the nondiagnostic/unsatisfactory rates of 22- and 25-G needles were 18.5 and 21.0%, respectively. We have utilized the 27-G needles for our interventional US techniques with surgeon-performed US (SUS) for 10 years, which have been performed by one endocrine surgery sonographer (I.S.), with the nondiagnostic cytology (Category I, The Bethesda System for Reporting Thyroid Cytopathology [TBSRTC], 1st ed.) rate of 9.0%[3-9]. On the other hand, the size/bore of the fine needle for FNA application might also affect the comfort of the patient. The real adequate and comfortable sampling technique with less painful instruments in the case of interventional procedures might be considered as state-of-the-art. "Bonitas non est pessimis esse meliorem." Herewith, we might propound to opt for a 27-G needle for aspiration purposes as an efficient and comfortable tool of choice. In addition, we have administrated preprocedural local anesthesia to the neck region of the cases before the "SUS-based" FNA during the time frame of 10 years. We even have administrated topical anesthesia before administrating the preprocedural local anesthetic agent during the mentioned decade. Currently, on the basis of the scientific reports in the English-language literature and our experiences, we have presented and kindly propounded a novel term, "minimally invasive FNA" (*MIFNA*) and "Thyroid minimally invasive FNA" (*Thy MIFNA*)[10,11]. More recently, we suggested opting for Thy MIFNA with 27-G fine needle in FNA while revisiting optimal needle size for thyroid FNA cytology in terms of diagnostic rate and comfort of the patient as different pears in a pod, which has currently been published in Volume 67, *Revista da Associação Médica Brasileira*[12]. We hope *Thy MIFNA*[10-12], involving preprocedural topical and local anesthesia with 27-G genuine fine needle, to contribute considerably

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in the field of neck-endocrine and endocrine surgery, endocrinology, endocrine pathology, interventional radiology, head & neck surgery, otorhinolaryngology, and thyroidology as a delicate[10-12] and crucial diagnostic tool with a novel terminology.

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AUTHORS' CONTRIBUTIONS

IS: Conceptualization, Data curation, Formal Analysis, Investigation, Methodology, Project administration, Resources, Software, Validation, Visualization, Writing – original draft, And Writing – review & editing. **DS:** Conceptualization, Data curation, Formal Analysis, Investigation, Methodology, Project administration, Resources, Software, Supervision, Validation, Visualization, Writing – original draft, And Writing – review & editing.

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