

Core Needle Biopsy Is Useful for Diagnosis of Thyroid Nodules after Previous FNA Biopsy was Nondiagnostic

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ANALYSIS AND COMMENTARY ● ● ● ● ●

Core needle biopsy of palpable thyroid nodules was performed in the 1950s and 1960s, usually by trained thyroid surgeons, because of the fear of bleeding complications if a large vessel was lacerated (1). The procedure was not adopted by endocrinologists and was fortunately supplanted by FNA in the 1970s. Refinement of the needles to smaller diameters and the use of ultrasound guidance has now made CB more feasible. Potential advantages of CB are that it can provide more tissue and preserve the cellular architecture. Interventional radiologists have the most experience with CB and performed the procedure in this study. Aside from its technical difficulty, CB has not been widely used because earlier comparative studies of FNA and CB showed no diagnostic advantage for CB (2,3).

In the same issue of *Thyroid*, a paper from a group in Korea compared the use of CB and FNA for evaluation of 149 nodules that were nondiagnostic or fol-

licular lesion of undetermined significance (FLUS) (4). They used an 18-gauge spring-activated needle and lidocaine anesthesia. They reported that the diagnostic sensitivity of CB was higher than that of FNA in the FLUS category, but this was not statistically significant in the 45 patients who had prior nondiagnostic FNA. They noted no major complications of CB, but there were perithyroidal hematomas in 3.6% and mild transient parenchymal edema in 2.3%. They concluded that CB is more useful than repeat FNA in patients with inconclusive diagnostic results.

The pendulum seems to be swinging back to reconsideration of core biopsy for patients with inconclusive diagnostic results. However, the decision to use CB must be based on multiple factors: the suspicion of malignancy on ultrasound and other clinical features, the availability of expertise in performing CB of thyroid nodules, the need to discontinue anticoagulation, and the potential benefit to the patient.

— Jerome M. Hershman, MD

References

1. Wang C, Vickery AL Jr, Maloof F. Needle biopsy of the thyroid. *Surg Gynecol Obstet* 1976;143:365-8.
2. Silverman JF, West RL, Finley JL, Larkin EW, Park HK, Swanson MS, Fore WW. Fine-needle aspiration versus large-needle biopsy or cutting biopsy in evaluation of thyroid nodules. *Diagn Cytopathol* 1986;2:25-30.
3. Khoo TK, Baker CH, Hallanger-Johnson J, Tom AM, Grant CS, Reading CC, Sebo TJ, Morris JC 3rd. Comparison of ultrasound-guided fine-needle aspiration biopsy with core-needle biopsy in the evaluation of thyroid nodules. *Endocr Pract* 2008;14:426-31.
4. Na DG, Kim JH, Sung JY, Baek JH, Jung KC, Lee H, Yoo H. Core-needle biopsy is more useful than repeat fine-needle aspiration in thyroid nodules read as nondiagnostic or atypia of undetermined significance by the Bethesda system for reporting thyroid cytopathology. *Thyroid* 2012;22:468-75.