

Cutaneous implantation metastasis of papillary thyroid carcinoma: a caveat of fine needle aspiration

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A 57-year-old male presented with anterior neck mass for 6 months. Neck ultrasound revealed a huge cystic mass with a hypervascularity exophytic solid nodule, 2.7 cm in diameter at the left thyroid lobe. Approximately 55 ml of hemorrhagic fluid was aspirated and followed by fine needle aspiration (FNA) of the solid component with a 23-gage needle. Two days later, he returned with swollen and ecchymosis of the surrounding neck (Fig. 1A). The cervical hematoma resolved conservatively. The cytological diagnosis revealed a suspicious for malignancy and total thyroidectomy was done one month later. Classic variant of papillary thyroid carcinoma (PTC) in the left thyroid gland with lymphatic invasion was found. No metastatic lymph node was detected. Postoperative high-dose radioiodine (RAI) ablation and thyroxine suppressive therapy were given. He was doing well with persistent biochemical incomplete response at one year after treatment and subsequently lost to follow-up. He came back two years later with palpable multiple subcutaneous nodules along the right side of the neck for 3 months. Ultrasound revealed small well-defined nodules (0.3 to 0.7 cm in diameter) located superficially over the right sternomastoid muscle (Fig. 1B). Serum thyroglobulin level increased from 17.2 ng/ml to 62.8 ng/ml and detectable thyroglobulin was found in fluid washouts from the nodule biopsy. Further investigations revealed no distant metastases. Neck reoperation confirmed skin metastasis of PTC (Fig. 1B, inset). Based on the patient's history and location of multiple subcutaneous nodules metastasis, cutaneous implantation PTC metastasis following the FNA was diagnosed. The patient was in stable condition with persistent biochemical incomplete response at the last follow-up.

While needle tract seeding has long been recognized as an uncommon complication (less than 0.2% in incidence with variable time interval up to 11 years post-procedure) of the FNA of the thyroid nodules [1], seeding tumor metastasis resulted from subcutaneous hematoma following FNA is extremely rare [2]. Due to its rarity, there is no well-conducted study that needle track seeding affects long-term survival in patients with PTC. FNA of the thyroid is still regarded as a safe procedure. However, physicians should be watchful of hemorrhagic complications in high-risk

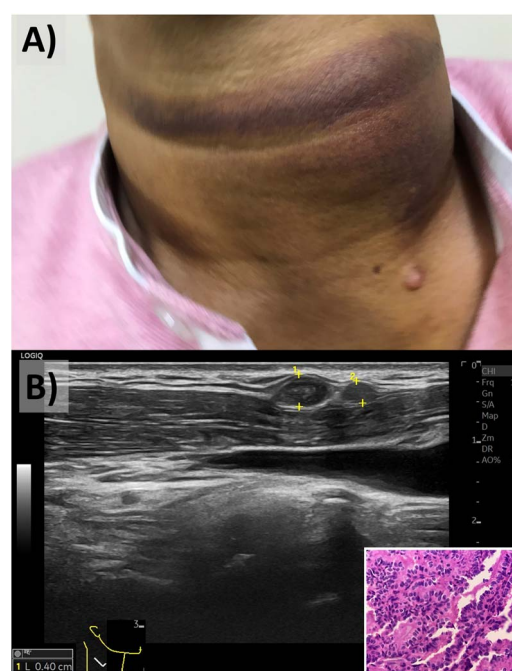


Figure 1. (A) Subcutaneous cervical hematoma of this patient after fine needle aspiration of huge cystic mass with a hypervascularity exophytic solid left thyroid nodule (B) Ultrasound appearance of small well-defined heterogeneous echogenic nodules (arrow) located superficially over the right sternomastoid muscle (size 0.3–0.4 cm) at 3 years later and neck reoperation confirmed skin metastasis of papillary thyroid cancer (inset).

patients [3] and aware that late complications such as seeding tumors could develop many years after bleeding complications.

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ETHICAL APPROVAL

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CONSENT

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GUARANTOR

The first author is the guarantor of this work.

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