

Triple ectopic thyroid: A rare entity

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ABSTRACT

Ectopic thyroid tissue is an uncommon congenital aberration. It is extremely rare to have three ectopic foci at three different sites. The thyroid scan has been used successfully to diagnose ectopic thyroid tissue. We report a case of ectopic thyroid tissue at base of tongue, another at the level of hyoid and third one as aberrant tissue at suprahyoid location in a 16 year old female who presented with swelling in front of neck. This patient was clinically diagnosed as thyroglossal cyst and was being planned for surgery. Preoperative thyroid scan helped in establishing diagnosis of ectopic thyroid which was the only functioning thyroid tissue. Thus, it prevented unnecessary surgery. Therefore it is suggested that thyroid scan and USG/CT scan must be done as routine work up in neck swellings pre operatively to avoid unnecessary surgeries.

Keywords: Ectopic thyroid, Tc 99m TcO₄ scan, thyroid anomalies

INTRODUCTION

Ectopic thyroid tissue is an uncommon congenital aberration. It is extremely rare to have three ectopic foci at three different sites. The thyroid scan has been used successfully to diagnose ectopic thyroid tissue. We report a case of ectopic thyroid tissue at base of tongue, another at the level of hyoid, and third one at aberrant tissue suprahyoid location in a 16-year-old female who presented with swelling in front of the neck. This patient was diagnosed as thyroglossal cyst and was posted for operation. Pre-operative thyroid scan helped in establishing diagnosis of ectopic thyroid, which was the only functioning thyroid tissue, thus preventing unnecessary surgery [Figure 1].

Therefore, it is suggested that thyroid scan and thyroid must be done as routine work up pre-operatively to avoid unnecessary surgeries.

CASE REPORT

16-year-old female presented with an anterior mid-line swelling

in front of the neck since childhood. The swelling was gradually increasing in size and moves with deglutition.

She was investigated and Ultrasonography (USG) neck was performed, which suggested right paramedian neck mass measuring 26 × 16 × 13 mm. Dermoid Thyroglossal cyst. Fine needle aspiration cytology (FNAC) was performed suggestive of cystic changes.

Patient was referred to Nuclear Medicine Department for further evaluation of the patient.

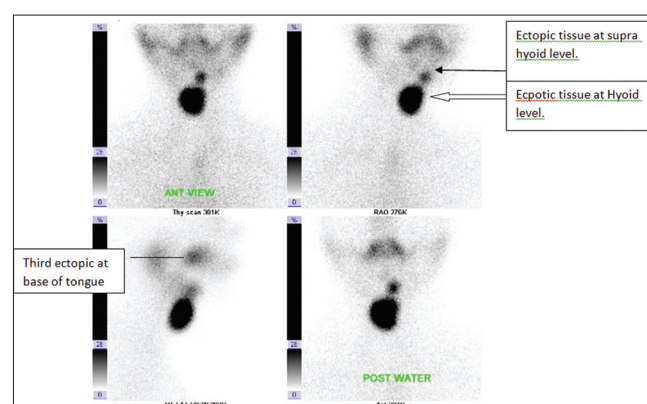


Figure 1: Tc 99m TcO₄ scan showing triple ectopic thyroid tissue. Showing ectopic thyroid tissue at suprahyoid level (shown by Simple arrow) ectopic thyroid tissue at the level of thyroid (shown by Open arrow) third ectopic thyroid tissue at the base of tongue (shown by simple line)

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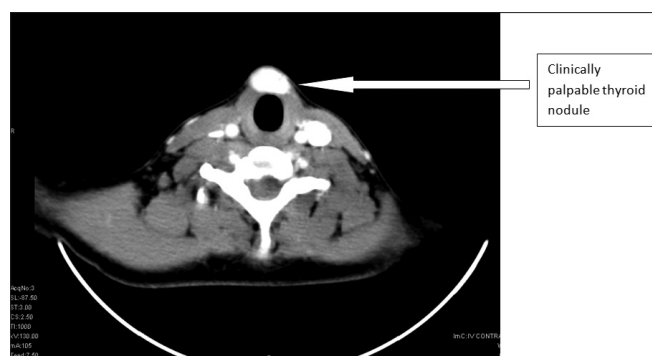


Figure 2: CT scan images of neck region: Open arrow showing homogeneously enhancing thyroid tissue in clinically palpable nodule

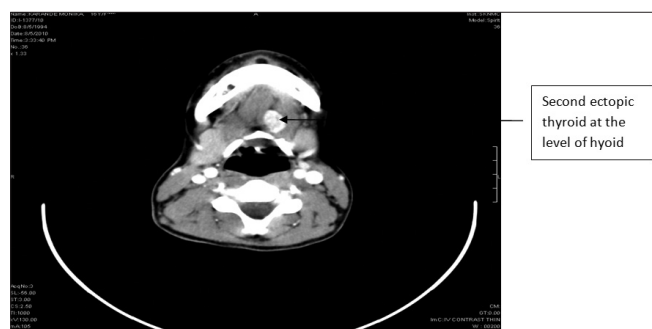


Figure 3: CT scan image of neck region: Second ectopic thyroid tissue seen at the level of hyoid (shown by simple arrow)

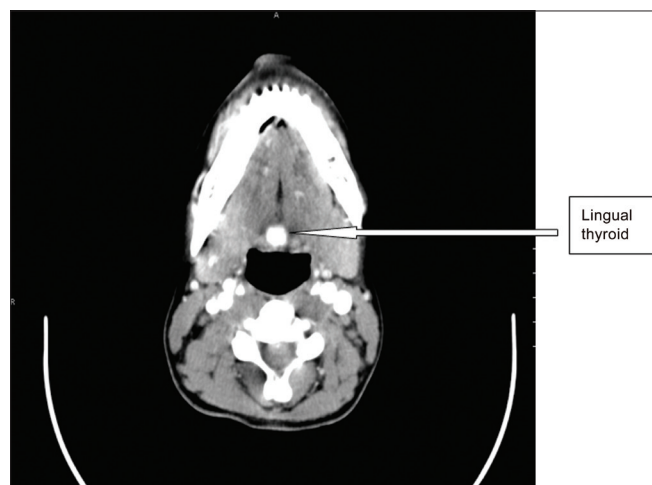


Figure 4: CT scan image at the level of tongue: Showing third ectopic thyroid enhancing lesion at the base of tongue (shown by open arrow)

Patient was injected 5 m Ci of Tc 99 m Pertechnetate and static images were acquired after 10 min. Initial static images showed avid tracer uptake at the base of tongue and in clinically palpable nodule at the level of hyoid and another small focus of tracer uptake in mid-line just above the clinically palpable nodule [Figures 2-4].

Marker images were acquired. Lateral images were acquired to localize another focus of tracer uptake, which showed the tracer uptake along the line of descent. Patient was asked to drink water and images were acquired to exclude possibility of esophageal tracer uptake. Post-water drinking images showed persistent tracer uptake in suprahyoid location.

Computerized tomography (CT) scan of the patient was performed.

Thyroid function test dated: 5/08/10

T3: 1.28 ng/ml

T4: 7.65 ug/dl

TSH: 3.30 u IU/ml

Antibodies: Thyroid peroxidase (TPO) anti-body: Positive 11.4, ANA-Anti Nuclear Ab: N: negative.

DISCUSSION

In this case, thyroid tissue is present in a mid-line position above or at the hyoid bone. Hypothyroidism with elevation of thyrotropin secretion is commonly present because of the absence of a normal thyroid gland in most instances. An enlarging mass commonly occurs during infancy, childhood, or later life. Often, this mass is mistaken for a thyroglossal duct cyst because it is usually located in the same anatomic position. If it is removed, all thyroid tissue may be ablated, a consequence that has definite physiologic as well as possible medico legal implications. To prevent total thyroid ablation, it is recommended that a thyroid scan examination be performed in all the cases of thyroglossal duct cyst before its removal to be certain that a normal thyroid gland is present.

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