Lateral Sequestered Submandibular Thyroid Nodule

Case Report & Literature review

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Introduction

- Ectopic thyroid tissue is an uncommon abnormality.
- Most reported cases, were in midline or near midline without thyroid gland in its normal position.
- Few cases were reported as lateral ectopic thyroid tissue without normally located thyroid tissue

BUT

- Lateral ectopic thyroid tissue with normally functioning and positioning thyroid gland is extremely rare.

Case Report

- 60 yrs old female known case of NIDDM, HTN Dyslipidemia on aspirin, presented with 5 months history of left upper cervical mass gradually increasing in size for first time.

- No associated symptoms.
- Negative risk factor of malignancy
- Surgical history:
    - Appendectomy, cholecystectomy & glaucoma surgery
- Not known to have any allergy.

Examination

- Left submandibular 3x2 cm mobile non-tender firm mass
- Other ENT exam normal
- Fibro-optic laryngoscopy was normal
- No other mass in the neck were palpable.

INVESTIGATION

- All blood work up were normal including thyroid function tests.

CT SCAN

- CT scan neck with contrast:
    - Well defined rounded lobulated mass immediately inferior and not continuous to left submandibular gland measured 3.1 x 2.3 x 2.4 cm with heterogeneous strong enhancement
    - The mass was away from normally located thyroid gland.
    - Both thyroid lobes are visible with small areas of poor enhancement representing nodules without enlargement of the thyroid gland
    - No lymphadenopathy


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U/S Guided Fine Needle Aspiration Cytology

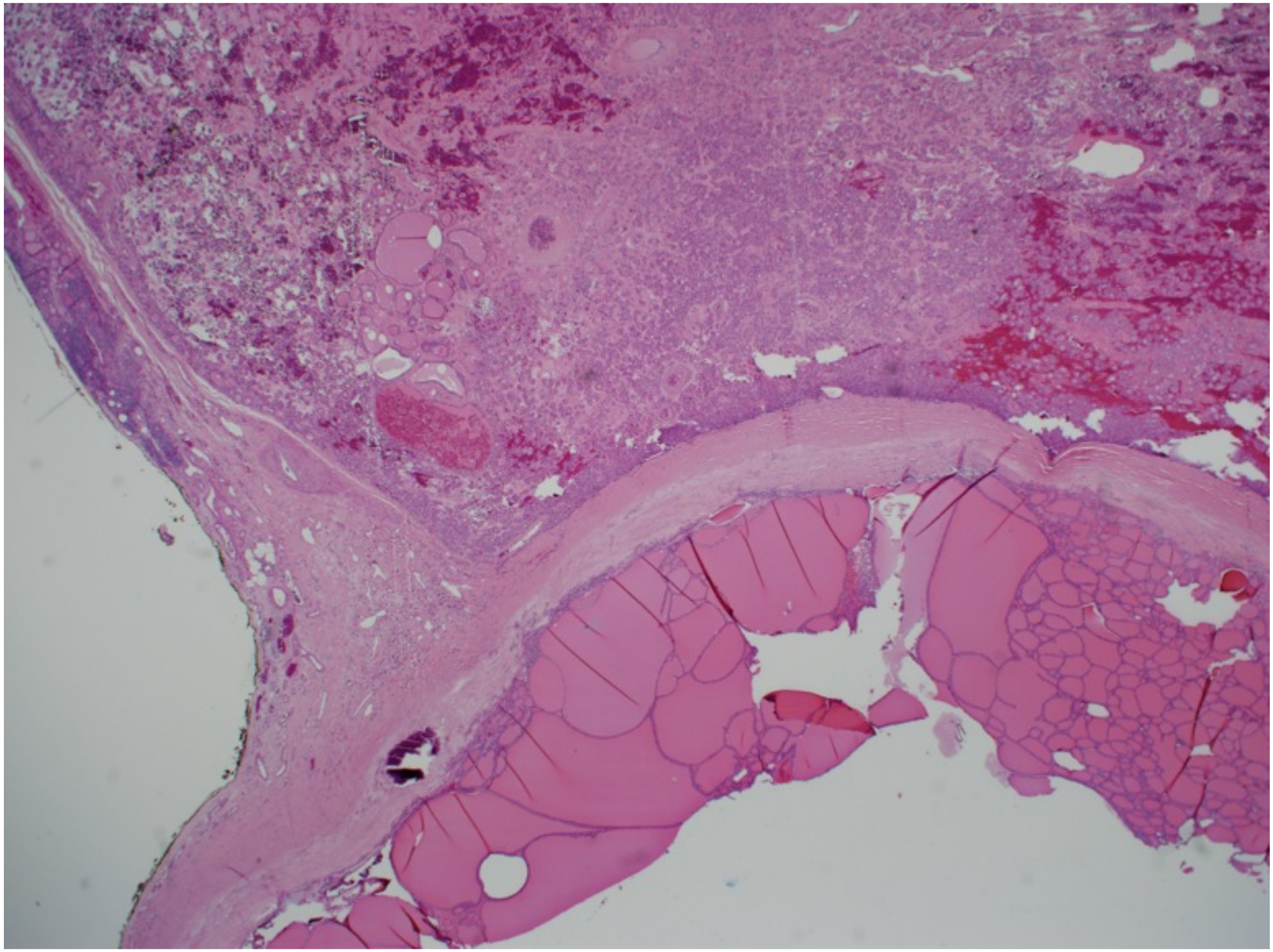
- It was requested but not done because the risk of bleeding:
  - Highly vascular area around the mass.
  - The Radiologist suspected vascular lesion.

Hospital Course

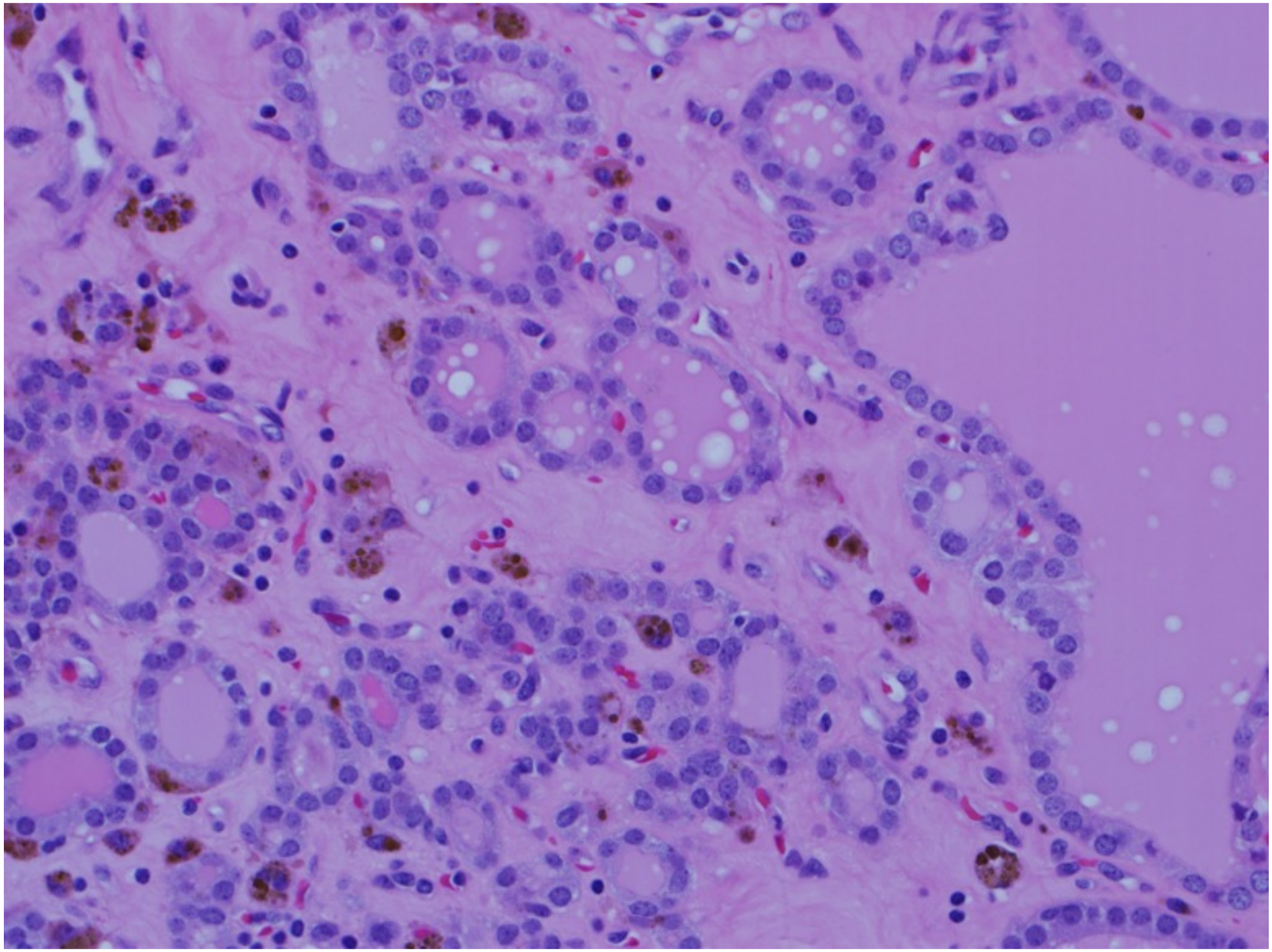
- Excisional biopsy of the mass was done, under GA
- HISTOPATHOLOGY Report:
- Grossly:
    - Round nodular soft tissue mass
    - Measured 2.7x2.5x1.5 cm
    - Smooth brown outer surface

Cont..

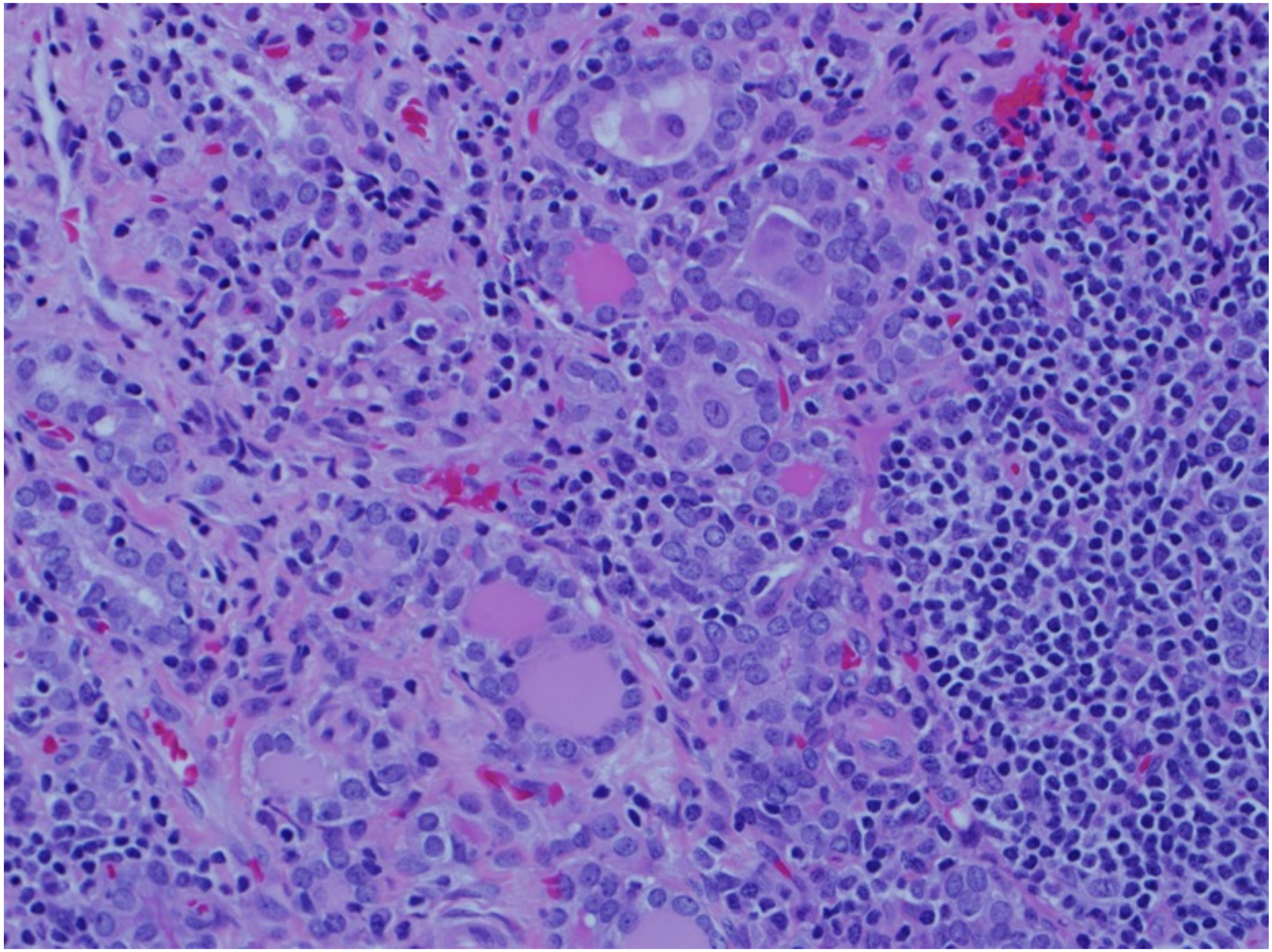
- Microscopically
  - Benign thyroid tissue, with nodular goiter and lymphocytic thyroiditis background
  - No salivary glands tissue seen
  - No malignancy



Showing two nodules divided by thick fibrous septum, containing focal calcification. A peripheral rim of thyroid tissue (upper left) shows lymphocytic thyroiditis .



The thyroid tissue within the hyperplastic nodules



Within the peripheral rim of lymphocytic thyroiditis tissue

These images showed lack of cytologic features of papillary thyroid carcinoma

Follow up

- Patient was followed in the clinic in stable condition.

- Endocrine team consulted and following the case.

Discussion

- The first endocrine gland to develop in the body is thyroid gland.

- The embryogenesis of thyroid gland usually starts at 3rd gestational week descending to its final position at 7th week

- Abnormality in development or descent lead to thyroid gland ectopias.

Cont..

- According to stage of abnormality thyroid ectopias can be presented as lingual thyroid (most common), intralingual thyroid, thyroglossal duct cyst or low neck ectopia and usually to be in the midline.

- It has been reported in parotid gland, mediastinum, trachea, esophagus, lung, heart, breast or duodenum.

Cont..

- It has also been reported in the carotid bifurcation by Rubenfeld et al 1988.

- Some cases of thyroid ectopias may present as lateral thyroid ectopias.

- In this situation it is **a MUST** to differentiate it from metastatic thyroid cancer especially papillary type.

Cont..

- It reflects difficulties in diagnosis and management especially in high risk cancer patient.

- Lateral thyroid ectopias can be benign or malignant.

- It can develop the same pathologies as the normal thyroid gland

Literature Review

- Although most of the reported cases were in midline and without normally active thyroid gland in its place.

- A literature review revealed 10 reported cases of submandibular thyroid.

- The first case was reported by Helidonis et al 1980

- All cases were unilateral except Sironi et al 1996 who reported bilateral submandibular thyroid

Cont..

- All cases were reported absence of normally functioning and located thyroid gland except :

  - Carber et al reported atrophic normally located thyroid gland 1996

  - Kay-uwe-feller et al reported nodular goiter thyroid gland 2000

  - Clark et al reported normotopic multinodular goiter 2003

Conclusion

- The standard care of management of lateral ectopic thyroid is surgical removal not only to confirm the diagnosis but also to rule out risk of metastatic thyroid cancer especially in high risk group.

- Before surgery,TFT and US thyroid +/-Tc99 or I131 thyroid scan is important to ensure presence of thyroid gland thus avoiding iatrogenic hypothyroidism.

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Thank You