



# A 12 year old boy with multifocal papillary thyroid carcinoma



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## Objectives

A 12 year old boy presented with the 2 months history of increased thyroid gland, hoarse voice. There was no family history of thyroid cancer and no history of irradiation.

## Methods

**On physical examination**, there was significant bilateral cervical lymphadenopathy and thyroid gland was palpable and firm.

**Laboratory Examination.** Routine blood examination and the level of thyroid hormone were normal.

**Ultrasound scan** of thyroid showed typically location of the gland with no additional lesions. The thyroid gland is mildly hypo-echogenic. The echo-structure is not homogenous due to the small and large hyper-echogenic lesions. Regional lymph nodes are visualized in the regions: right and left submandibular, jugular area, from 3 up to 9 mm, plural. The tissue of the lymph nodes is hypo-echogenic. Echo-structure is heterogeneous due to areas of fibrosis and cystic degeneration.

Total volume by Brunn method (cm<sup>3</sup>): 42.67. Right lobe - 20.35 (47.7%); the left lobe is 22.32 (52.3%).

Ultrasound scan of abdomen and chest X-ray had no significant abnormality.

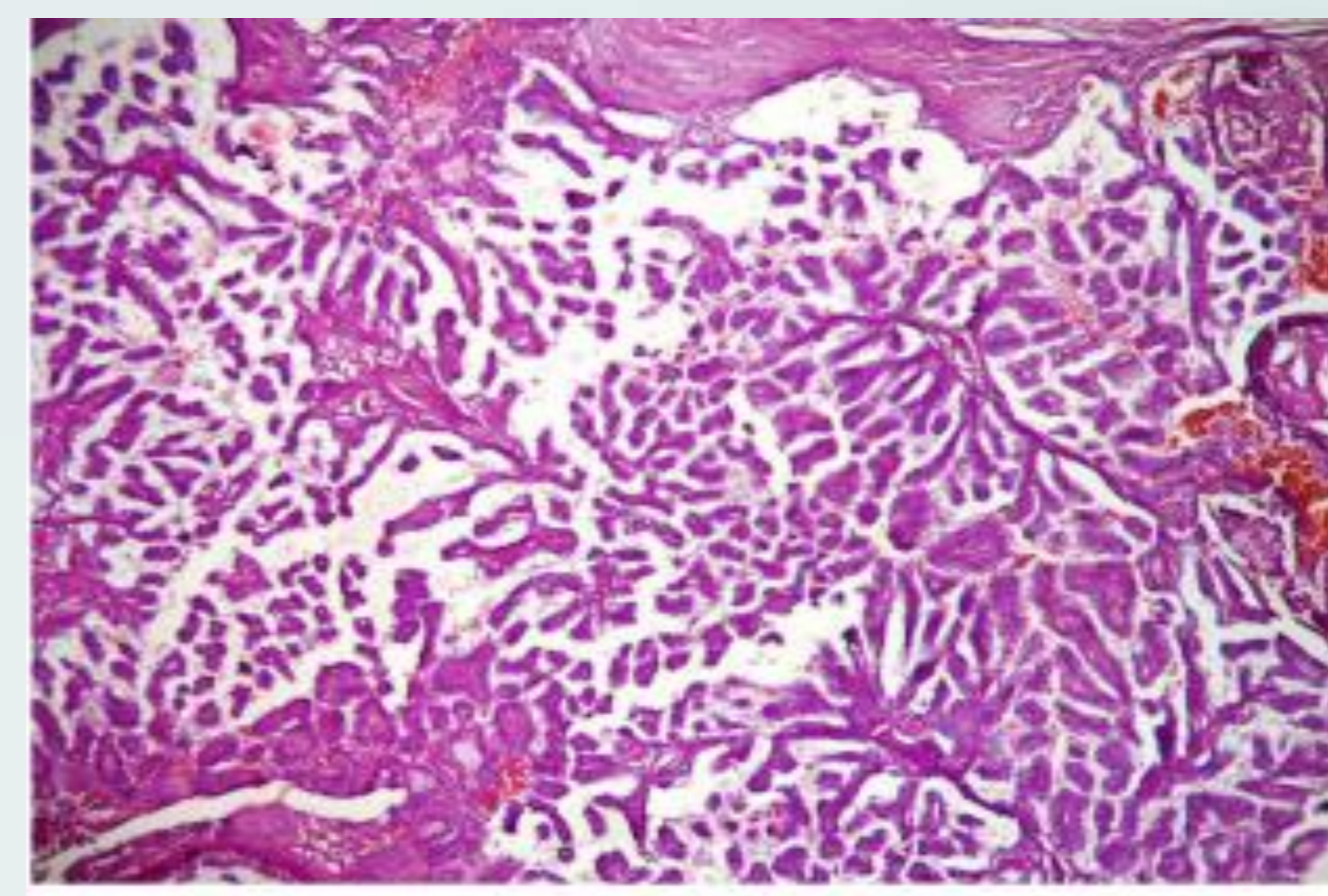
**Fine needle aspiration cytology** was performed from the middle third of the left lobe of the thyroid gland with a diameter of 16 mm and left submandibular lymphnode 9 mm.

**Cytological diagnosis** of papillary thyroid carcinoma with metastasis to the lymph node was made (BSRTC: VI. Malignant).

## Results

Total thyroidectomy with bilateral neck dissection was done.

**Histological examination.** Multifocal papillary thyroid carcinoma (pTm3aN1b L1 V0 Pn0 R1).



Microphotograph showing classical features of papillary thyroid carcinoma with papillary areas and nuclear features

Tumor cells are localized in both lobe (subtotal substitution of the tissue of both lobe by the tumor). There are signs of tumor invasion in perimysium of skeletal muscle. Three lymph nodes with carcinoma metastases were found near to the tissue of both particles of fatty tissue.

## Conclusions

Thyroid carcinoma in pediatric patients usually manifests as an asymptomatic neck mass, with a reported incidence of cervical lymphadenopathy that ranges from 35-83%. Multifocal involvement of the thyroid gland is a well-recognized feature of papillary carcinoma. The reported frequency is about 20%, with wide variations depending on the extent of the sampling and reporting by the pathologist.

## References

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