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Newsletter

HISTOPATHOLOGY UPDATE
A rare case of thyroid enlargement

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3rd Quarter 2018

The case

A 57 year old female presents with a one year history of enlargement of the right lobe of the thyroid gland. The patient was clinically and biochemically euthyroid. No distinct nodules were noted. A diagnostic excision biopsy was undertaken. The thyroid gland was adherent to the surrounding soft tissue.

Pathological examination showed a diffusely enlarged thyroid lobe with no distinct nodules. The gland had a fleshy appearance (see Figure A).

Microscopy showed disruption of the normal thyroid gland architecture (see Figure B). Numerous reactive lymphoid follicles with active germinal centres were noted (see Figure C). Expansion of the marginal zone by small to intermediate lymphocytes extending into the surrounding thyroid stroma were also noted. There was infiltration of lymphocytes into the resident thyroid follicles forming “lympho-epithelial” lesions (see Figure D). Focal residual thyroid gland showed Hashimoto thyroiditis.

Immunohistochemical studies showed a B-cell lineage with CD43 expression. Germinal centre origin was excluded (negative for BCL2 and CD10). B and T-cell gene rearrangement studies showed a monoclonal B-cell population.

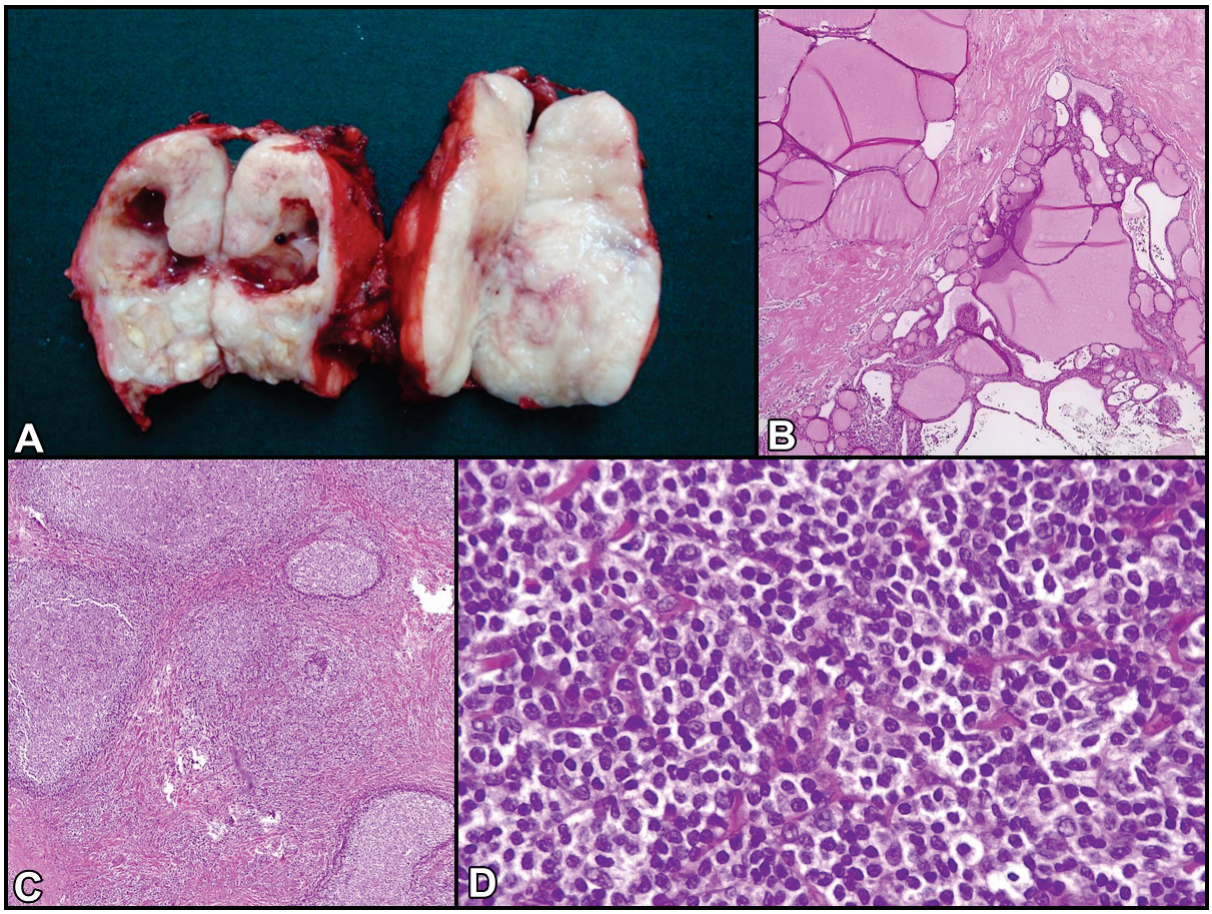

Figure A – D.

FINAL DIAGNOSIS: Primary B-cell lymphoma of the thyroid gland – compatible with MALT (mucosa-associated lymphoid tissue) subtype.

DISCUSSION

- Primary thyroid lymphoma (PTL) is rare, occurring in less than 5% of thyroid malignancies. By definition, it affects only the thyroid gland or thyroid gland and local lymph nodes.
- The following primary thyroid lymphoma subtypes have been reported: diffuse large B-cell not otherwise specified, MALT (mucosa-associated lymphoid tissue) lymphoma, follicular lymphoma, Hodgkin disease, small lymphocytic lymphoma.
- The main predisposing factor is a history of Hashimoto auto-immune thyroiditis, which confers a 40 to 80 fold increased risk of PTL compared to the general population.
- Clinical presentation includes a painless rapidly enlarging neck mass, usually in the seventh decade of life, with local compression symptoms. Most patients are euthyroid.
- Diagnosis requires formal histology to ensure accurate distinction between low grade MALT lymphomas and diffuse large B-cell lymphomas.
- Treatment consists of a combination of surgery, chemotherapy and radiation, depending on the lymphoma subtype and extent of disease. Indolent MALT lymphomas are generally confined to the thyroid gland and can be treated with radiation alone. Disseminated indolent lymphomas or aggressive subtypes require chemotherapy. Surgery is always required for compressive symptoms or airway obstruction.
- Prognosis is tumour subtype and disease stage dependant. The 5 year survival for intrathyroid disease is 90%, decreasing to 35% with extrathyroidal extension. Clinical factors indicating a worse prognosis include tumour size > 10 cm, rapid tumour growth, obstructive local symptoms, advanced stage, mediastinal extension, age > 60 years, and raised β2-microglobulin and LDH levels.

References

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