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# **PAPILLARY THYROID CANCER IN A 17-YEARS OLD GIRL WITH A LATE-DIAGNOSED TURNER SYNDROME**

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## **BACKGROUND:**

Papillary thyroid cancer has been described in three patients with Turner syndrome (TS) who received growth hormone therapy (Cabanas P, 2005; Bautembach-Minkowska J, 2018). We are presenting a case of papillary thyroid cancer in a girl with a late-diagnosed Turner syndrome who has not received any hormonal therapy up to 17 years.

## **CLINICAL CASE:**

A girl was diagnosed with TS syndrome (karyotype 45XO/46X i(X)q) at the age of 17 years old. Objectively, the girl had a short stature (height 141 cm, SDS=-3.5), hypergonadotropic hypogonadism, bone age was 15 years old, and there were no heart or kidney defects. Until now, the patient has not received any hormonal therapy. Family history towards thyroid disorders and ionising radiation was negative. During the exam, Hashimoto thyroiditis was detected (with normal level TSH – 2.2 mU/ml [0.35-4.92], normal level free T4 – 16.9 pmol/l [9.1-21], high levels of anti-TPO – 1000 IU/ml and anti-TG – 150 IU/ml. On the ultrasound a hypoechogenic nodule (1.0 × 0.9 × 0.9 mm) was seen in the left lobe of the thyroid gland with microcalcifications and vasculature on the border. Fine needle biopsy was provided and the cytological exam revealed a structure of thyroid cancer (Bethesda V). The patient was immediately performed total thyroidectomy with lymphadenectomy, including removal of central lymph nodes of the neck and about thyroid isthmus and both lobes. The histopathology of the removed tissue of nodule revealed a structure of classical papillary thyroid cancer. The stroma of the thyroid was characterised by colloidal goitre and multifocal reactive lymphoplasia.

Central lymph nodes of neck were free from cancerous tissue. The performed surgical treatment was accepted as completed, suppressive therapy with levothyroxine was initialized (125 mcg per day). There was no recommendation for therapy using <sup>131</sup>I at present. After surgery hypoparathyroidism was detected (low ionised calcium level – 0.9 mmol/l [1.05-1.30] and low concentration of parathormone in serum – 2 pg/ml [16-87], girl was prescribed replacement therapy with alfacalcidol and calcium with a positive effect.

## **CONCLUSIONS:**

We have presented a case of papillary thyroid cancer in a girl with late-diagnosed TS without any hormonal therapy to 17 years old. She had autoimmune thyroiditis, which is a risk factor for the development of this condition.

## **LITERATURE:**

1. Papillary thyroid carcinoma after recombinant GH therapy for Turner syndrome. Cabanas P, García-Caballero T, Barreiro J, Castro-Feijóo L, Gallego R, Arévalo T, Cañete R, Pombo M. Eur J Endocrinol. 2005 Oct;153(4):499-502.
2. Papillary thyroid carcinoma in a patient with Turner syndrome treated with human growth hormone. Bautembach-Minkowska J, Birkholz-Walerzak D, Kędzia A, Myśliwiec M. Pediatr Endocrinol Diabetes Metab. 2018; 2018(3):145-150. doi: 10.5114/pedm.2018.80997.

**Authors have nothing to disclose**