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Case Report

Ectopic Lingual Thyroid Presenting as Menorrhagia

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Abstract

Introduction: Hypothyroidism is the most common thyroid disorder which could be either congenital or acquired where the thyroid gland is producing insufficient amount of thyroid hormones to meet the metabolic demand. Thyroid dysgenesis accounts for eighty five percentage of congenital hypothyroidism. Thyroid dysgenesis can be either agenesis, hypoplasia, or ectopic tissue. Lingual thyroid (LT) gland is where the thyroid gland fails to descend to its normal cervical location during embryogenesis. The presence of an ectopic thyroid gland located at the base of the tongue may present as dysphagia, upper airway obstruction, dysphonia at any time from infancy through adulthood.

Presentation of Case: We are presenting a case of 12 year old girl with lingual thyroid presenting as menorrhagia and treated with suppression dose of hormonal treatment without surgical excision.

Discussion: Female predominance is seen in the incidence of ectopic lingual thyroid gland. Some patients can be asymptomatic where the lingual thyroid gland produce thyroxine to meet the metabolic requirement. But puberty and pregnancy leads to high metabolic demand where the previously asymptomatic patients can present with symptoms of hypothyroidism. They should be investigated with thyroid function test, Ultrasound Scan of the neck, thyroid uptake isotope scan.

Conclusion: Even though Lingual thyroid is a rare abnormality it can present with upper airway obstruction, dysphagia and dysphaonia where the definitive treatment of surgical excision is indicated.

Keywords: *Menorrhagia; Hypothyroidism; Thyroid Dysgenesis; Lingual thyroid (LT)*

Introduction

Hypothyroidism is the most common thyroid disorder which could be either congenital or acquired where the thyroid gland is producing insufficient amount of thyroid hormones to meet the metabolic demand.

Case Report

Previously healthy, 12 year old girl presented with abdominal pain, exertional dyspnea and heavy menstrual bleeding with clots for fifteen days. There was no other bleeding manifestations. She was the third child of healthy non consanguineous parents with two healthy siblings. Since she attained menarche two months prior to admission, she had monthly periods which lasted two weeks. Her development

was age appropriate with average school performance. Anthropometry showed height of 134 cm (0.4^{th} - 2^{nd} centile) weight - 38 kg and BMI of 21.2 kgm^2 (85^{th} - 95^{th}). Her height was within mid-parental height range. She had a non-verbal IQ of 121. She was pale without any features of heart failure.

Examination showed a distended abdomen with firm non tender hepatomegaly which was 4 cm below costal margin without other organomegaly or free fluid. Respiratory and central nervous system examinations were normal. Her full blood count showed macrocytic anaemia with haemoglobin 7.1 g/dl, MCV 101.2fl, MCH 30.1 pg, MCHC 29.7 g/dl, RDW 17.6%. The clotting profile was normal. TSH was above 100 ulU/ml with free T_4 0.18 ng/dl. Ultrasound scan of the neck did not show thyroid tissue at the thyroid bed or in ectopic locations. Technetium (^{99m}Tc) thyroid scan revealed isotope uptake only at the base of the tongue confirming a lingual thyroid without thyroid tissue in normal location (Figure 1). Antithyroid antibody screen showed antithyroglobulin antibody 10.51 IU/ml (normal < 4.11 IU/ml) and thyroid peroxidase antibody level 21.3 IU/ml (normal < 35 IU/ml). Liver function tests showed ALT153.9 u/l, AST 144.1 u/l and ALP 192.9 u/l. Lipid profile showed high total cholesterol level of 440.4 mg/dl, triglycerides 207.3 mg/dl, HDL 54.5 mg/dl, LDL 344.9 mg/dl and VLDL 41 mg/dl. Chest x ray showed cardiomegaly (Figure 2).

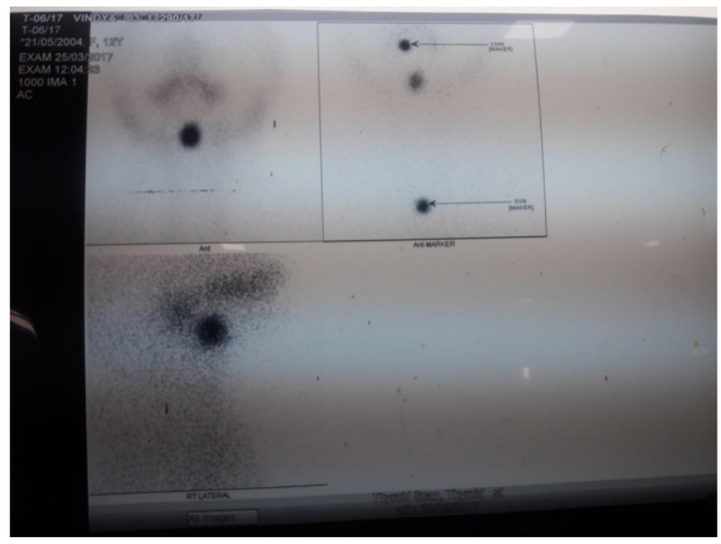

Figure 1: Tc 99 thyroid scan.

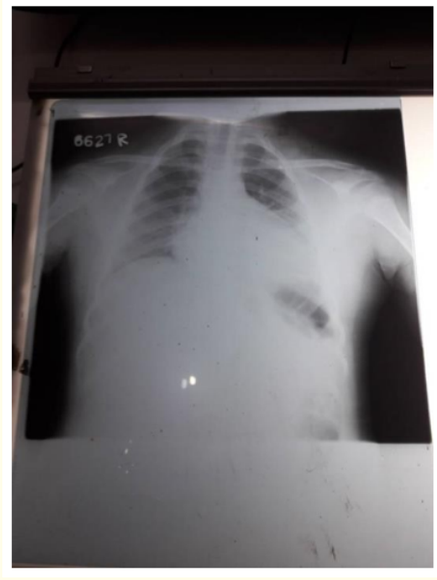

Figure 2: Chest X ray.

ECG was normal. 2D echocardiogram showed mild pericardial effusion with normal ejection fraction. Ultrasound scan of the abdomen showed hepatomegaly with liver span of 17 cm and grade II fatty liver. Radiograph of left hand showed delayed bone age where chronological age 144 months and bone age was 120 +/- 21.6 months. Serum corrected calcium level was 2.28 mmol/l (2.2 - 2.7 mmol/l). She was started on thyroxine 100 micrograms daily and haematinics. She is followed up in the clinic for hypothyroidism and anaemia.

Discussion

Hypothyroidism can be either congenital or acquired. thyroid dysgenesis, including thyroid agenesis, hypoplasia and ectopy is the cause of 85% of congenital hypothyroidism [1,2].

The incidence of lingual thyroid is reported as 1:100,000 with 1:7 female predominance [3]. Lingual thyroid can present as failure to thrive and mental retardation in infants and young children or detected via routine screening. Rarely, presents as severe respiratory distress [5]. Other cases may present with slowly progressing dysphagia and oropharyngeal obstruction before or during puberty. Puberty and pregnancy can lead to an increase in gland size due to increase need for thyroxin and precipitate symptoms. Hypothyroidism can present as sexual pseudoprecocity. The exact mechanism of sexual pseudoprecocity is not fully understood; however, TRH-induced TSH excess is thought to be the common stimulator of the follicle-stimulating hormone (FSH) receptor. The ectopic thyroid tissue can be the only functional thyroid tissue. This must be kept in mind when determining the therapeutic approach.

Asymptomatic cases can be monitored with suppressive hormonal therapy aiming for reduction of ectopic tissue volume as in lingual thyroid [3]. Definitive treatment for lingual thyroid is surgical excision provided that adequate thyroid tissue is found in neck [6]. Indications for surgical intervention are dyspnea or dysphagia, suspicion of malignancy, uncontrolled hyperthyroidism, and repetitive or severe bleeding.

Our patient has dyslipidemia, steatohepatitis and marginally delayed bone age as complications of hypothyroidism. As her height is within the mid parental height and normal IQ with raised antithyroglobulin antibodies, she probably had acquired hypothyroidism due to lingual thyroid which failed due to the increased metabolic demand in puberty or due to autoimmune destruction. Extensive literature survey did not show a similar patient. Menorrhagia with significant anaemia may be the only presentation in hypothyroidism. Search for thyroid tissue in ectopic locations is important to avoid complications.

Conclusion

Even though Lingual thyroid is a rare abnormality it can present with upper airway obstruction, dysphagia and dysphonia where the definitive treatment of surgical excision is indicated.

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