# An unusual neck mass in an adult: epidermoid cyst

Ewelina Szczepanek-Parulska[1], Anna Ostałowska[1*], Patrycja Antosik[1*], Małgorzata Wierzbicka[2], Marek Ruchała[1]

1 Department of Endocrinology, Metabolism and Internal Medicine, Poznan University of Medical Sciences, Poznań, Poland
2 Department of Otolaryngology, Head and Neck Surgery and Laryngological Oncology, Poznan University of Medical Sciences, Poznań, Poland

A mass in an adult located anteriorly in the lower part of the neck is strongly suggestive of a thyroid nodule. However, congenital neck lesions may be diagnosed not only in children but also in adulthood. The most common among them are thyroglossal duct cysts (TDCs), branchial cleft, and epidermoid cysts (ECs).[1-3] Establishing the etiology is helpful for appropriate treatment planning.

We present an 18-year-old man diagnosed with painless neck mass localized close to the suprasternal notch (FIGURE 1A and 1B). He did not report any preceding injury and did not notice any rapid changes in lesion size. However, the appearance of the mass coincided with his recent intentional weight loss. The patient denied breathing difficulties, dysphagia, and symptoms suggesting thyroid dysfunction. Clinical examination revealed a soft tumor which moved during swallowing. Ultrasonography revealed a 3.57 × 3.70 × 2.23 cm hypoechogenic mass in the lower part of the neck with no connection to the thyroid. No pathological findings were detected on thyroid ultrasound (FIGURE 1C and 1D). The lesion appeared soft on sonoelastography (FIGURE 1E) and was visualized also by computed tomography (FIGURE 1F). The levels of thyroid-stimulating hormone, free thyroid hormones (thyroxine, triiodothyronine), and anti-thyroid autoantibodies (anti-thyroid peroxidase antibodies, anti-thyroglobulin antibodies, thyrotropin receptor antibodies) concentrations were within reference ranges. Complete blood count, C-reactive protein levels, and lactate dehydrogenase levels were also within reference ranges. The specimen obtained from fine needle aspiration biopsy of the lesion contained protein fluid and erythrocytes. Due to the size of the mass and uncertainty regarding its origin, the patient was qualified for surgical removal. Histopathological examination indicated epidermoid cyst with a focal inflammatory reaction.

Differentiation of congenital neck lesions may be challenging. Features such as patient's age, lesion's origin, localization, growth potential, symptoms, moment of appearance, and characteristics on imaging studies should be considered during evaluation. However, definite diagnosis is often only possible after histopathological examination of the mass,[1] as it was in our case. Among neck lesions occurring in the midline, dermoid, epidermoid, and thyroglossal duct cyst should be considered, but cervical cleft and teratoma are also possible. Like in our patient, EC is a benign, firm, round lesion, composed of only squamous epithelium, occurring mostly in young and middle-aged adults.[2] Typical localization of EC is the head and the neck, especially the submental region and the midline of the neck, superficially in subcutaneous tissue.[1] It might imitate other congenital

Correspondence to:
Prof. Ewelina Szczepanek-Parulska, MD, PhD, Department of Endocrinology, Metabolism and Internal Medicine, Poznan University of Medical Sciences, ul. Przybyszewskiego 49, 60-355 Poznań, Poland, phone: +48 61 869 13 30, email: ewelinaparulska@gmail.com
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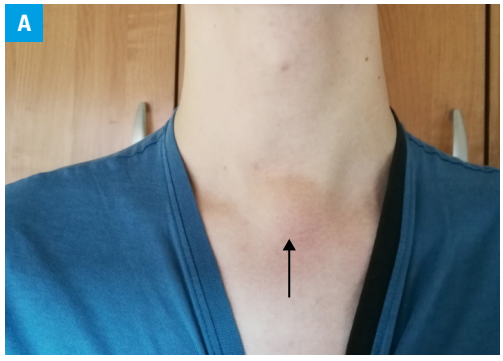
*AO and PA contributed equally to this work.



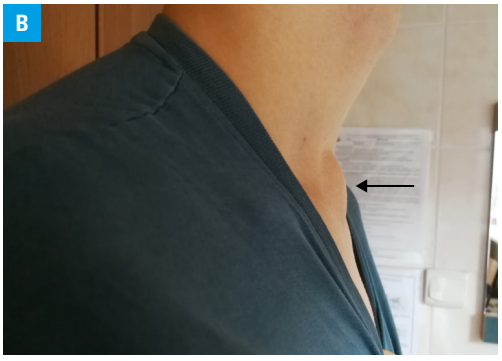




**FIGURE 1** A, B – the patient's neck lesion (arrows) in the frontal (A) and lateral views (B)

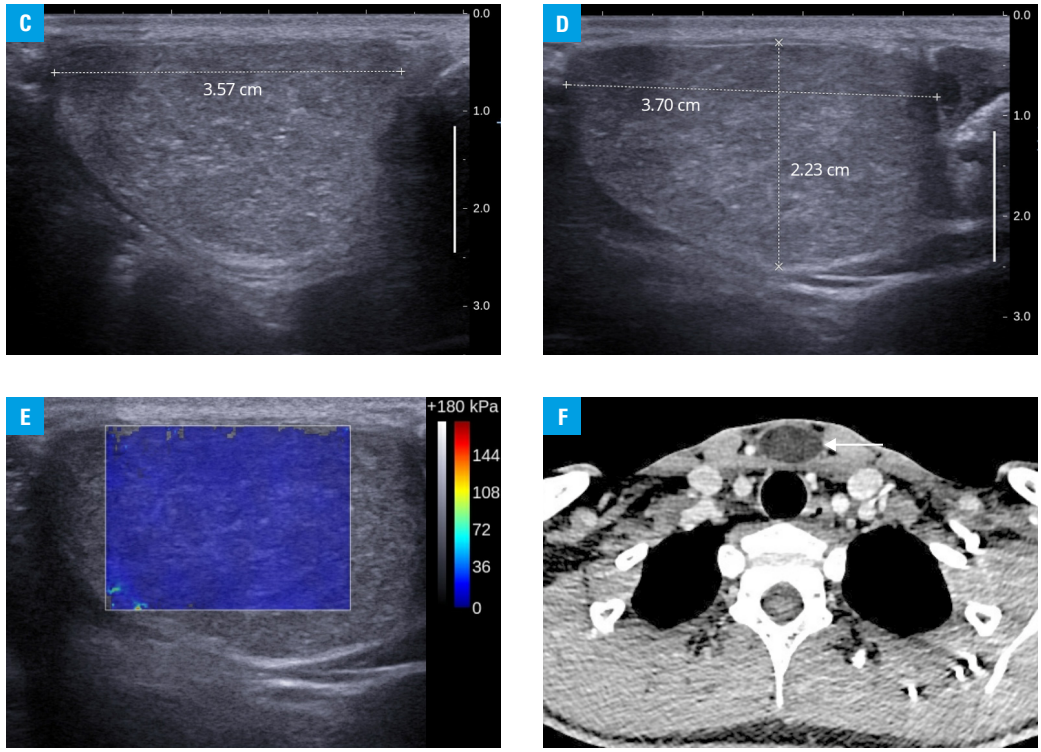



**FIGURE 1** **C**, **D** – ultrasound image presenting a well-defined hypoechogenic lesion in the longitudinal (**C**) and transverse sections (**D**); **E** – the result of sonoelastographic examination indicating high elasticity value; **F** – computed tomography image showing a 3.4 × 2.4 cm thin-walled cyst (arrow) without pathological contrast enhancement at the level of suprasternal notch and no abnormalities within the neighboring structures

lesions, primarily TDC, which is an epithelial benign lesion originating during thyroid development. In 60% of cases, TDC is diagnosed before 20 years of age.[3] The hyoid region is the predominant localization of TDC. To date, only 7 cases of EC in the suprasternal region have been reported.[4] Both EC and TDC are mainly benign and asymptomatic, but rapid growth might indicate malignant or inflammatory transformation.[5] Pressure on adjacent organs might lead to difficulties in breathing, dysphagia, and odynophagia. In our patient, the mass was presumably congenital and became clinically apparent after weight loss.

During diagnostics of neck masses in adults, congenital lesions of atypical localization should also be considered. EC and TDC share many common features, which makes preoperative differentiation challenging.

## ARTICLE INFORMATION

**CONFLICT OF INTEREST** None declared.



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