

Clinical Case No. 17

Female - 21 years of age

Family medical history: negative

Past medical history: nothing noteworthy

Recent medical history

The patient complains that a tumefaction had appeared at the base of the neck some years earlier. With time, it gradually increased in size, becoming rather prominent, without, however, procuring any respiratory, swallowing or speaking difficulties. Clearly, because the tumefaction became ever more prominent, it began to create problems of a cosmetic nature, all the more so given the patient's young age. Attending physicians in the patient's region of origin, having diagnosed a voluminous thyroid goiter, referred her to our center for surgical intervention.

Physical examination

The patient's complaints of the cosmetic damage caused by the "goiter" were founded, as can be seen in Fig. 1: a quite visible tumefaction in the supra-jugular, and nevertheless, subhyoid, region, firm-elastic in consistency on palpation, and unmovable, be it manually or by swallowing. No other objective pathological signs were detected.

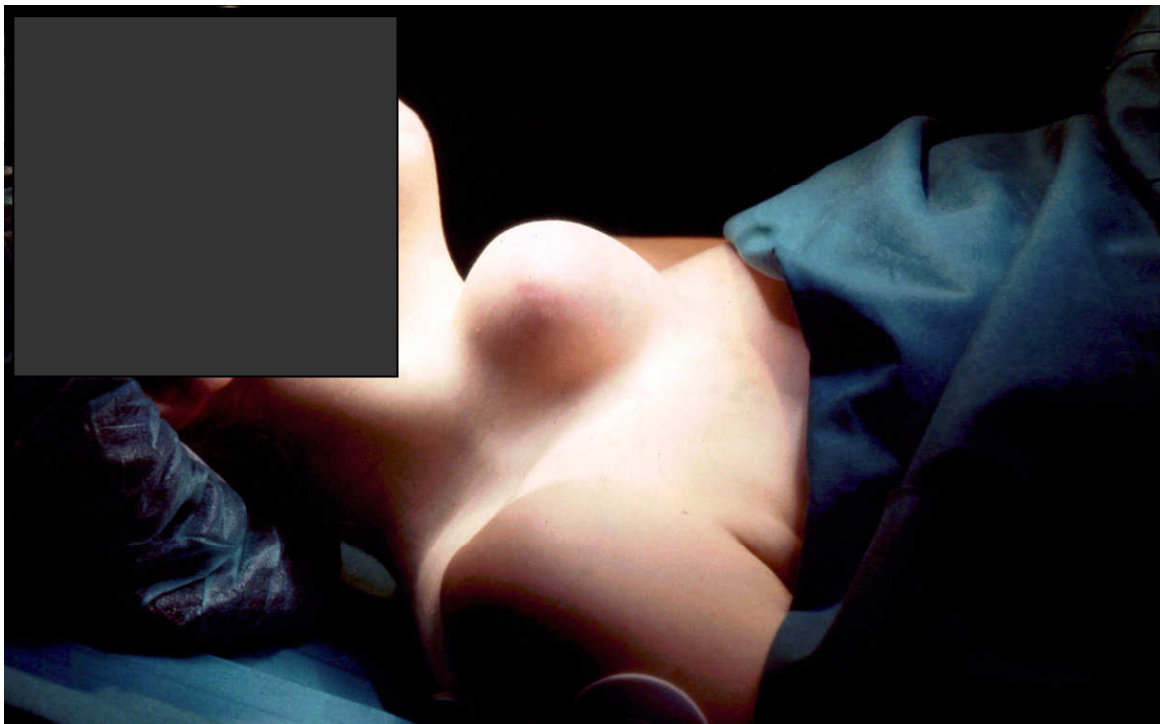
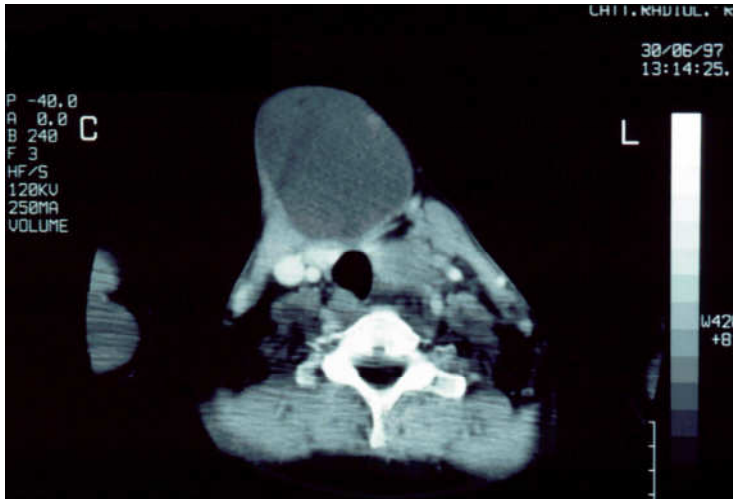


Fig. 1

Diagnostic examinations

Among the examinations performed, the cervical-thoracic CT scan is particularly worthy of mention.

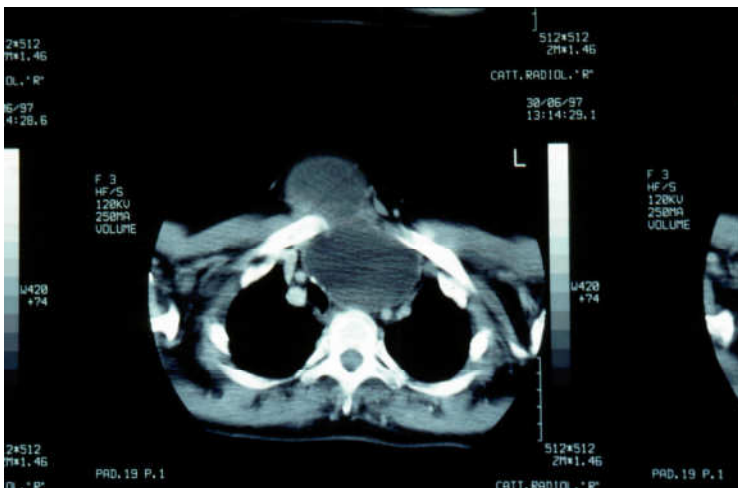


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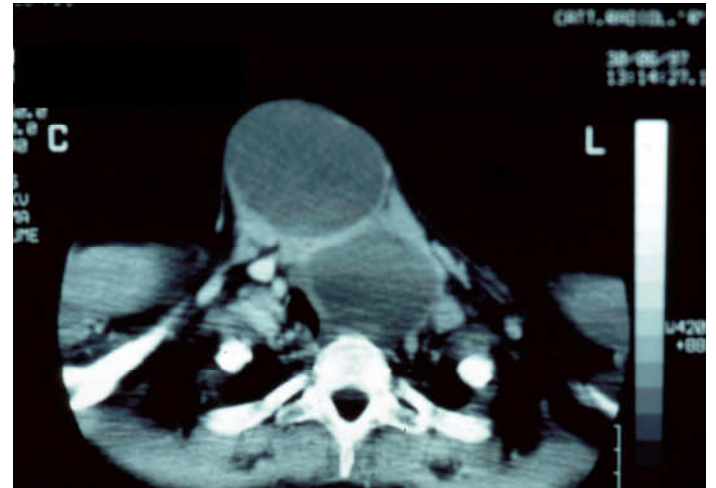


b

Fig. 2



a



b

Fig. 3

Diagnosis

The clinical, morphological and instrumental features led to the diagnosis of cervical-mediastinal neof ormation presumably of a dysembryogenetic nature. Appropriate surgical therapy is decided.

Surgical procedure

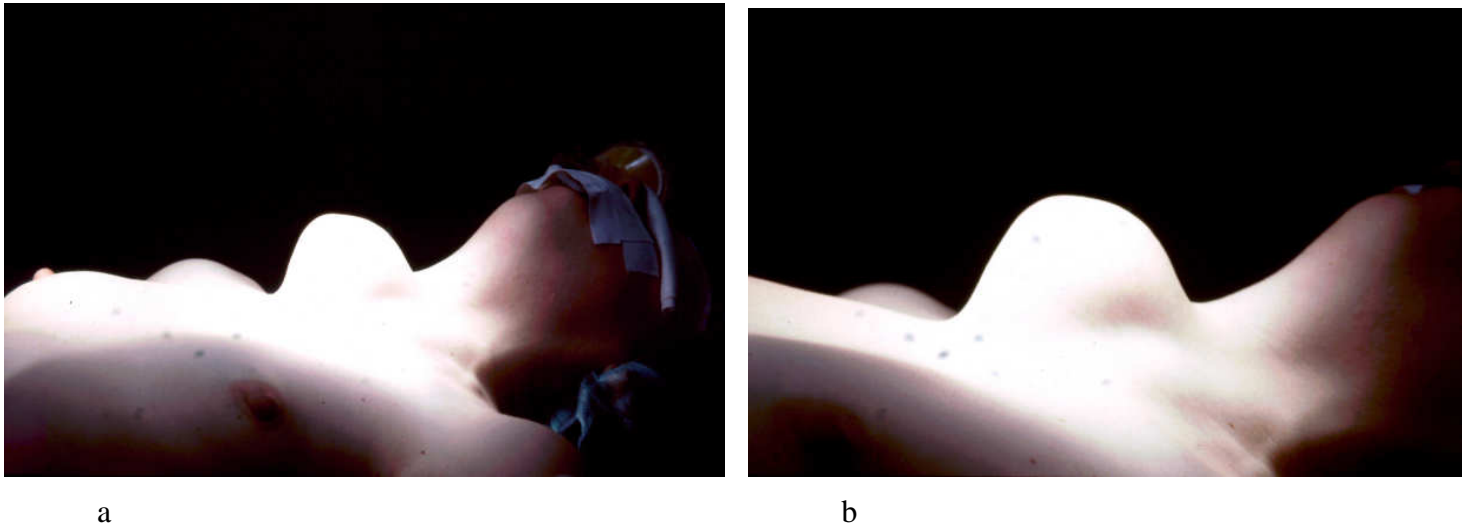


Fig. 4

Incision at the base of the neck.

The skin is cut back from the underlying mass. Regressive phenomena, likely from decubitus ulcers, are evident in the skin flap, that with stronger adhesion contracts with the underlying formation. The isolation of this from the muscular-aponeurotic plane is particularly difficult.

The mass is hourglass-shaped (see CT scan - Figs 2 and 3). The narrow portion corresponds to the divaricated space of the anterior neck muscles; the lower portion, more voluminous than the superficial part, sinks into the anterior mediastinum, binding with the thymic residual, with supraortic trunks and the anonymous venous trunk.

The thyroid gland appears unharmed.

Identification and preservation of the recurrent inferior laryngeal nerves; gradual extrication of the endothoracic part of the neoformation, with the demanding separation of this from mediastinal structures.

Removal of the mass.

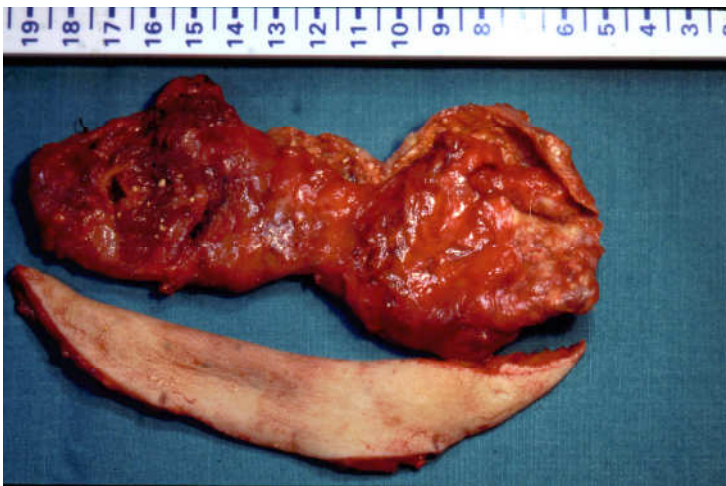
Hemostasis. Double tube aspiration drainage of residual spaces.

The redundant skin flap, altered due to the already mentioned decubitus lesions, is resected.

Suture of the platysma and skin.

Excised material

Voluminous, hourglass-shaped mass, which when cut is cystic with pus-like content, together with denser, yellowish material with evident agglomerates of crystals (cholesterol?), bristles and hair. The wall of the formation is thick, irregular and with calcified, bone and cartilaginous masses. These findings lead to the hypothesis of a cervical-mediastinal dysembryogenetic teratomatous neof ormation (Fig.s 5, 6, 7).



a

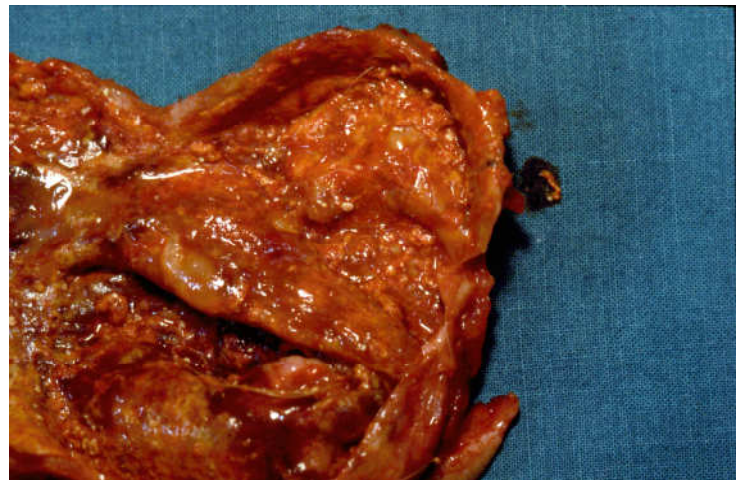


b

Fig. 5



a



b

Fig. 6

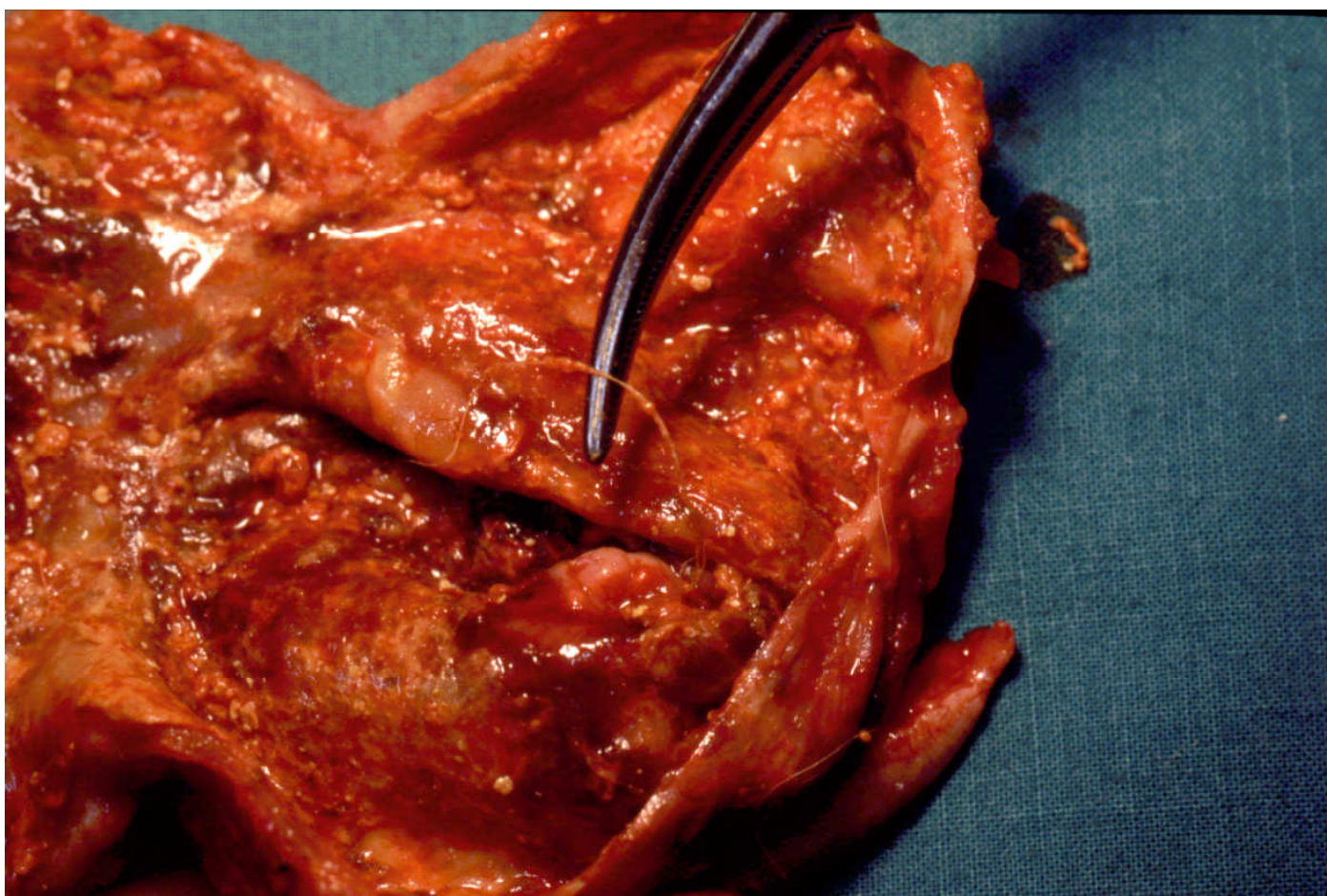


Fig. 7

The instrument stretches a hair

Pathological Anatomy

Macroscopic: see above.

Microscopic: histological examination reveals a mixture of various structures, such as mature squamous epithelium with cutaneous appendages and osseous-cartilaginous foci.

No evident signs of malignancy.

Diagnosis: mature teratoma of the mediastinum.

The post-operative course was uneventful and after short hospitalization the patient was discharged. Long-term follow up confirmed the patient's full recovery and achievement of satisfactory cosmetic outcome.

Remarks

This clinical case regards a young woman who at a certain age experienced the growth of a tumefaction at the base of the neck, which with time gradually grew to dimensions that drastically deformed her physical features.

The fact that both she and her relatives interpreted this growth as goiter is entirely understandable; less comprehensible is the same diagnosis by the primary attending physicians, who referred the case to us for surgical intervention of the thyroid gland. The misunderstanding is conceivable, given the neoformation's site. However, a more accurate semiologic examination would have revealed that the mass emerged at the jugular region without involving the subhyoid region, and that it was firmly in place and unmovable, either manually or by swallowing. Indeed, the tumefaction in question could hardly be mistaken for a thyroid structure, above all because (as was said) it did not conform to the movement, displacing itself upwards, of the laryngeal-tracheal axis with which the thyroid gland is unified.

“*Τέρας*”, in Greek, means monster, monstrosity. The mature teratoma, like the mediastinal one described here, is a neoformation composed of tissues and rudiments of organs deriving from all three germ layers (endodermic, ectodermic and mesodermic) and, as such, also takes the name of tridermic teratoma. The adjective “**mature**” in this case implies that the tissues making up the growth are well-differentiated, tending towards *organoid* and/or *systemoid*, and exhibiting non-tumoral growth. These specifics are used to distinguish mature from immature teratomas, also known as *embryonal*, *teratoid* or *teratoblastomas*: compared to mature forms, which are generally benign, these latter are made up of immature and often atypical embryonal tissues, show autonomous and infiltrating growth, and are, as a result, usually malignant.

A mature teratoma forms and grows with the subject that hosts it. Askanazy, in fact, defined them as “*coevals*”, and others have even labeled them as “*malformed twins*”, monstrous, that is, as the Greek root of the term would infer.

We can thus affirm that the neoformation affecting our patient was already present in the anterior mediastinal compartment from her first moments of life, and that it grew slowly upwards until it emerged above the jugular margin and thereby exposed itself.

Anterior mediastinal teratomas are fairly rare, they grow slowly, are generally asymptomatic, and more often than not are discovered incidentally by chest X-ray. Only recently has a case similar to

that described here been reported in the literature (Agarwal G., Kar DK. - Teratoma of the anterior mediastinum presenting as a cystic neck mass: a case report. J Med Reports 2008 Jan. 28;2:23).
