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Archivio della ricerca – postprint

Adolescent with right axillary swelling

Question

A 17-year-old postmenarchal girl presented with a painful swelling in the right axilla. On physical examination, a smooth mass was palpable in the anterior axillary line covered by normal skin (Fig. 1a). She was prescribed oral amoxiclav suspecting an onset of lymphadenitis. One week later, she came back to the hospital because she had not improved. Ultrasound scan (Fig. 1b) and magnetic resonance imaging (Fig. 1c) demonstrated a projection of normal fibroglandular tissue, which was bilateral, but more prominent on the right side. What is the likely diagnosis (Answer on page 1339)?

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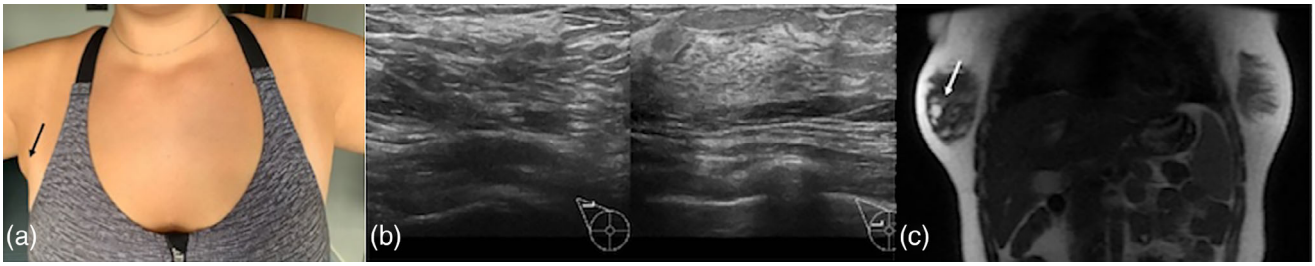

Fig 1 (a) Right accessory breast tissue (arrow) in a 17-year-old girl. (b) Ultrasound scan showing that the tissue in the axillary swelling (left panel) is similar to breast tissue (right panel). (c) Coronal magnetic resonance imaging showing bilateral accessory breast tissue, however, it was more pronounced on the right (arrow).

Young asymptomatic soccer player with a 'chaise long' spirogram

Question

A 13-year-old boy was evaluated for a second opinion concerning a pathological spirometry performed for a routine certification of fitness to agonistic activity, as required by Italian laws.

The spirometry was confirmed on two occasions at 1-year interval and was remarkable for a truncated aspect of the expiratory phase. A chest radiograph performed 3 months before was normal.

The patient's history was remarkable for recurrent lower respiratory tract infections from 2 to 6 years of age, without complaints in the following years. He was performing nicely as a centre field in the local junior soccer team. Physical examination was unremarkable.

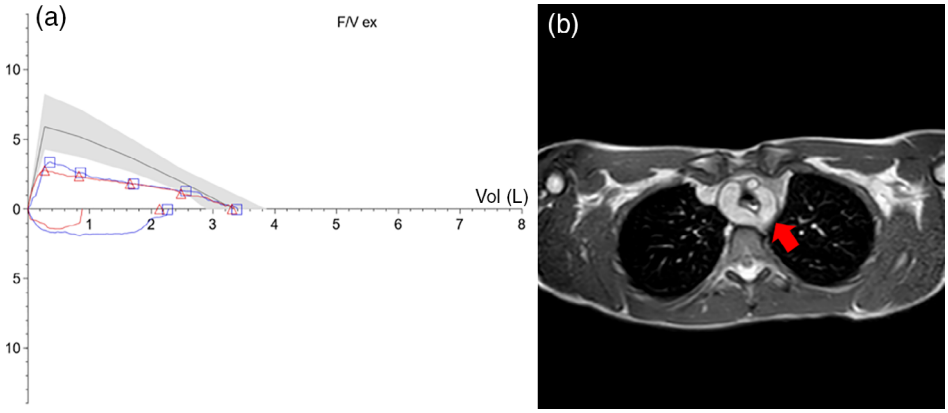

Fig 1 (a) Spirometry, showing a truncated expiratory phase, without bronchodilator reversibility (—□—, pre; —△—, post). (b) Magnetic resonance imaging. Balanced turbo spin echo axial image showing a complete vascular ring (red arrow), surrounding the trachea and oesophagus.

Table 1 Spirometry of the patient

Parameters	Expected values	Pre-bronchodilator	Post-bronchodilator
FVC (L)	3.34	3.39 (101%)	3.30 (99%)
FEV_1 (L)	2.78	2.26 (81%)	2.13 (76%)
FEV_1/FVC (%)	83.2	66.7	64.5
PEF (L/s)	5.90	3.38 (57%)	2.74 (46%)
FEV_1/PEF (mL/L/min)	<8.8	11.1	13

FEV_1, forced expiratory volume in 1 s; FVC, forced vital capacity; PEF, peak expiratory flow.

The flow–volume loop showed a pattern suggestive of a variable intrathoracic obstruction with a truncation of the envelope of the maximal expiratory curve, resulting from expiratory flow limitation with decrease of forced expiratory volume in 1 s (FEV_1), force expiratory rate and peak expiratory flow (PEF). No modification after a bronchodilation test was observed (Fig. 1a, Table 1).

A magnetic resonance angiography (MRA) study was performed (Fig. 1b). An echocardiography did not show any associated cardiac malformations.

On the basis of the case presentation and on what you see in Figure 1 and Table 1, what is your diagnosis and how would you manage this patient? (Answer on page 1339)

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Something is growing out of my baby's vagina

Answer

A pelvic ultrasound revealed an extensive proliferative lesion, extending from the bladder neck to the vaginal opening, following the entire urethral path, causing obstruction of the bladder and the left vesicoureteral meatus with consequent left ureterohydronephrosis. The histology of the incisional biopsy revealed an embryonal rhabdomyosarcoma (RMS) of the bladder. Staging did not identify metastatic disease.

The differential diagnosis of a vaginal mass is extensive and must consider tumours of the urogenital system.[1] Bladder cancers are rare in paediatrics, with RMS being the most common among them.[2] RMSs are malignant tumours deriving from the embryonic mesenchymal cell, arising from the genitourinary tract in about 15–20% of all cases.[3] They are more frequent in boys, with a better prognosis if the diagnosis is made between 1 and 9 years old. Embryonal RMS is the most common