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Breast tumor in a 63-year old woman

Anca I. Ciurea[1], Loredana Ile-Pirtea[2], Radu Motocu[2]

[1] „Iuliu Haţieganu" University of Medicine and Pharmacy Cluj-Napoca, Cluj-Napoca, Romania
[2] Emergency County Hospital, Cluj-Napoca, Romania

Clinical case: Female patient, 63-years old, was referred to our department for a slow growing tumor in her right breast. The tumor was discovered by the patient approximately 4 years ago and grew ever since. No previous examination was performed. Palpation of the breast revealed a palpable mass occupying the outer quadrants of the breast. The mass was lobulated, tender at palpation, with local redness and marked superficial blood supply, mobile on the chest wall (no invasion) (fig.1). The palpation of the axilla was negative, with no enlarged lymph nodes.

Because of the breast tenderness and tumor volume, the mammography was impossible to perform as first imaging method.

Ultrasonography evidenced a hypoechoic, lobulated mass, non-homogeneous, with multiple irregular anechoic areas (fig.2 a, b). The Doppler ultrasound revealed a hypervascular tumor (fig.3 a, b). There was no evidence on ultrasound of malignant lymph nodes in the axillary region.

Fine needle aspiration biopsy with evidence of malignant cells was performed and the indication was surgical treatment with mastectomy and axillary dissection (fig.4).

Questions:

1. What is your ultrasound diagnosis?
2. What are the particular features of the case?
3. What is the differential diagnosis?

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Address for correspondence: Anca Ciurea
Radiology Departament,
Emergency County Hospital,
Str Clinicilor Nr 1-3, 400006,
Cluj-Napoca, Romania
E-mail: ancaciurea@hotmail.com

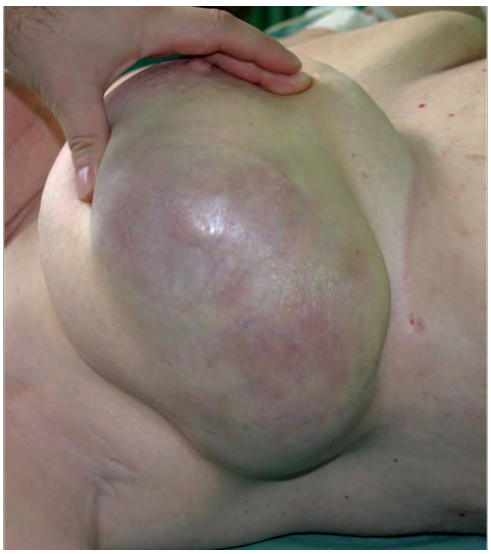

Fig 1. Lobulated mass, occupying the outer quadrants of the right breast, mobile on the chest wall, with marked superficial blood supply.

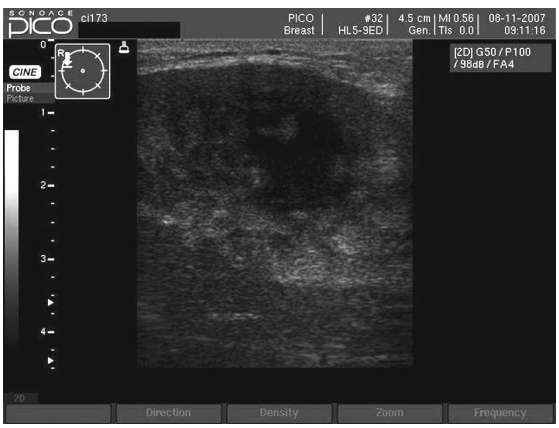

Fig 2. On ultrasound examination, hypoechoic, lobulated mass, non-homogeneous, with multiple irregular anechoic areas, separated by hyperechopic septae.

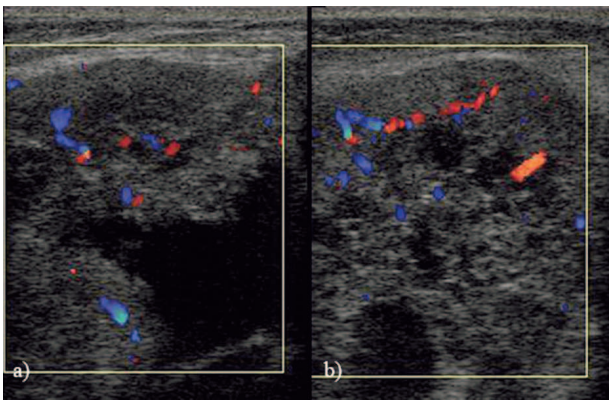

Fig 3a and 3b. The Doppler ultrasound reveals a hypervascular tumor.

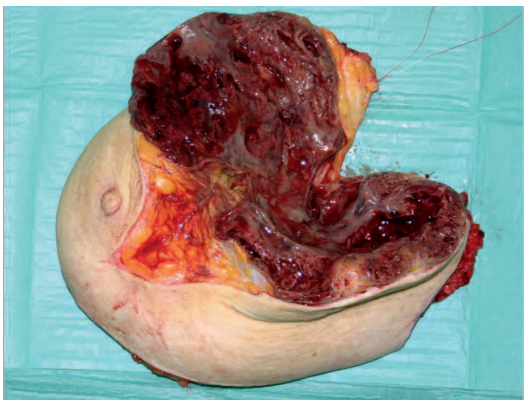

Fig 4. Dissection of the mastectomy specimen reveals the multiple necrotic and hemorrhagic areas within

Answer Quiz vol 12 no. 1

Left laterocervical mass in a 2 month old newborn

Călin Moş

University of Oradea, Faculty of Medicine and Pharmacy, Romania

Answers to the questions mentioned in the previous number of the journal:

1. What muscle is involved in this pathology and what is the diagnosis?

The muscle involved in this pathology is the sternocleidomastoid muscle and the diagnosis is fibromatosis colli. This condition is diagnosed based on the clinical exam and the ultrasound aspect alone, no further imaging investigations being necessary.

2. What are the possible ultrasonographic findings of this condition?

Fibromatosis colli appears as markedly, fusiform thickening of the sternocleidomastoid muscle. It is developed by newborns until up to 2 months. Initially the mass grows fast, it stabilizes for a few months and then in 80% of the cases it subsequently starts to regress and finally disappears in 7-24 months.

The structure of the lesions may have a variable appearance on ultrasound: diffuse (diffuse, fusiform, almost always hyperechoic thickening of the muscle), nodular (distinct, hyperechoic mass within the muscle) or mixed (inhomogeneous, distinct hyperechoic structure with hypoechoic areas inside, sometimes with an inhomogeneous, striated aspect).

3. What differential diagnosis should be considered?

The differential diagnosis of fibromatosis colli involves other neck masses like: neoplastic lesions (rhabdomyosarcoma, fibrosarcoma, neuroblastoma, lymphoma), congenital masses (hemangioma, cystic hygroma, thyroglossal duct cyst, branchial cleft cyst, dermoid cyst, teratoma) or other tumors of various origins (hematoma, abscess, lymphadenitis).

4. What are the treatment and the possible evolution of this condition?

The treatment of the condition consists of physiotherapy. Fibromatosis colli usually has a good, but very slow response to therapy, surgical intervention being considered only after a year of physiotherapy without response. After the age of 2, in about 10-20% of the cases, congenital torticollis develops (a band of fibrous tissue grows within the sternocleidomastoid muscle), an entity that can have serious consequences (like the shortening of the muscle, muscle atrophy and cranial and facial deformities) and may lead to surgical intervention.