Phylloid Tumor of the Breast

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Mariapaola Cucinotta and Angelina Cistaro

Phylloid tumor, formerly called cystosarcoma phylloides, is a very unusual neoplasia. It accounts for <0.5 % of all breast neoplasms and approximately 2.5 % of fibro-epithelial tumors [1–3]. Like fibroadenoma, it histologically comprises two components, in which connective tissue predominates [3–5]. Hodges et al. studied the genome of a synchronous fibroadenoma and a phylloid tumor placed in the same breast mass and found that both neoplasms had an allelic loss at D7S522. However, in the phylloid tumor but not in the fibroadenoma, allelic losses also occurred at TP53 and D22S264. These latter mutations were suggested to be involved in the progression of fibroadenoma to phylloid tumor [5].

Phylloid neoplasias may be benign, borderline, or malignant [3]. They are generally seen in adult women and only rarely in girls (Fig. 15.1). In the study of Bässler and Zahner, 133 tumors occurred in the female and only 1 in the male breast [6]. In 1998, Blanckaert et al. described a case in an 11-year-old child, in whom the tumor presented as a painless, voluminous (6-cm diameter), and rapidly growing mass [4]. Among the clinical characteristics of phylloid tumor is a high local recurrence rate, independent of the tumor's degree of malignancy [1, 2]. Consequently, surgical therapy, either conservative or radical depending not only on the tumor grade and growth rate but also on the size of the neoplasm and the breast, should always consist of a complete resection, with tumor-free margins [1, 2, 6].

M. Cucinotta, MD
Nuclear Medicine Unit, Department of Radiological Sciences, Policlinico Gaetano Martino Hospital, University of Messina, Via Consolare Valeria, 1, Messina 98125, Italy
e-mail: mariapaola.cucinotta@gmail.com

A. Cistaro, MD (✉)
Department of Nuclear Medicine, Positron Emission Tomography Center IRMET S.p.A., Euromedic Inc., Via Onorato Vigliani 89, Turin 10100, Italy

Institute of Cognitive Sciences and Technologies, National Research Council, Rome, Italy
e-mail: a.cistaro@irmet.com

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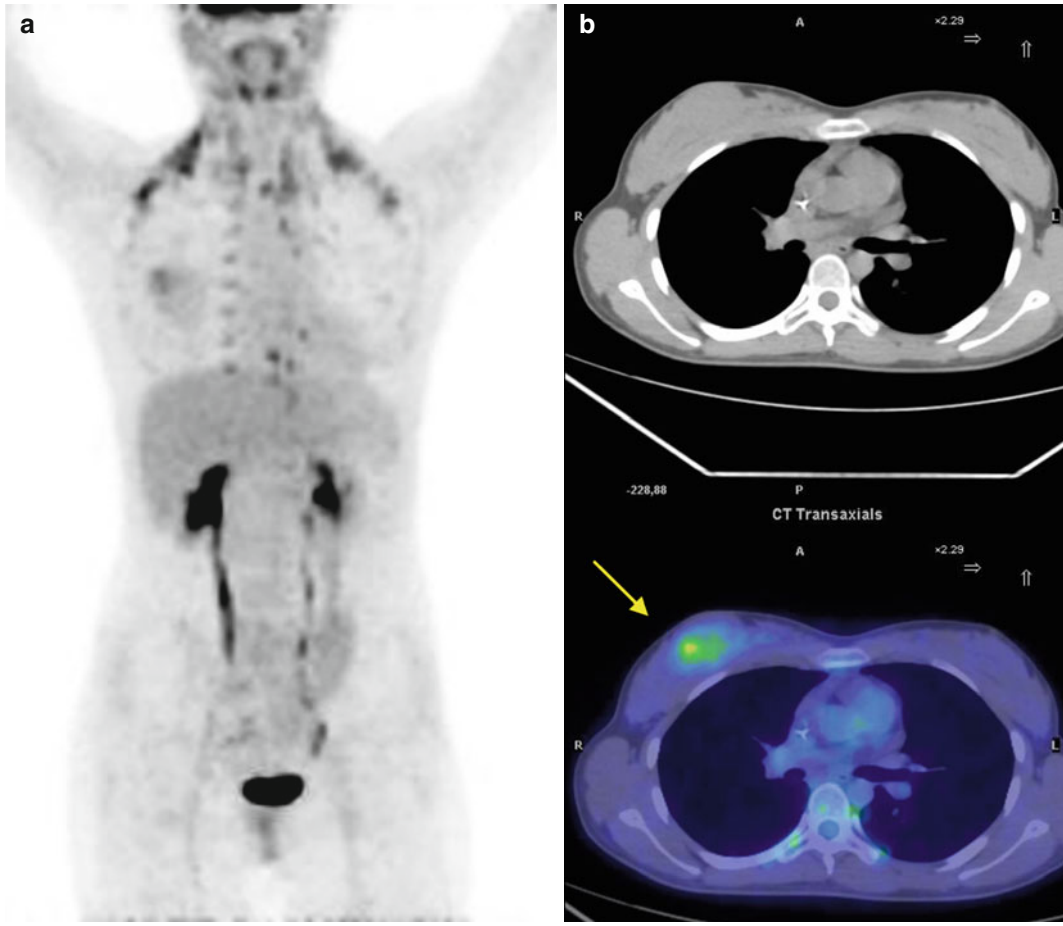

Fig. 15.1 A 14-year-old girl treated for Hodgkin's lymphoma. Maximum intensity projection (**a**) and axial CT and PET/CT fusion images (**b**) show moderately intense FDG uptake in the right breast, corresponding to phylloid tumor (*yellow arrow* in **b**)

References

1. Abdallah A, Saklaoui O, Stückle C, Sommerer F, Hatzmann W, Audretsch W, Wesemann A, Zink M, Skoljarev L, Papadopoulos S (2009) Case reports of operative management of very large, benign phylloid tumors – is a safety margin necessary? Gynakol Geburtshilfliche Rundsch 49:320–325
2. Finocchi L, Covarelli P, Rulli A, Servoli A, Noya G (2008) Bilateral phylloid cystosarcoma of the breast: a case report and review of the literature. Chir Ital 60:867–872
3. Norat F, Dreant N, Riah Y, Lebreton E (2009) Extraordinary case of malignant phylloid tumor of the breast: surgical reconstruction treatment. Ann Ital Chir 80:475–478
4. Blanckaert D, Lecourt O, Loeuille GA, Six J, Laurent JC (1998) Phyllodes tumor of the breast in an 11-year-old child. Pediatrie 43:405–408
5. Hodges KB, Abdul-Karim FW, Wang M, Lopez-Beltran A, Montironi R, Easley S, Zhang S, Wang N, MacLennan GT, Cheng L (2009) Evidence for transformation of fibroadenoma of the breast to malignant phyllodes tumor. Appl Immunohistochem Mol Morphol 17:345–350
6. Bässler R, Zahner J (1989) Recurrences and metastases of cystosarcoma phylloides (phylloid tumor, WHO). On the 150th birthday of a controversial diagnostic concept. Geburtshilfe Frauenheilkd 49:1–10