

X-RAY BREAST INCIDENTALOMA A FIBROADENOMA RADIOPAQUE ON RANDOM CHEST X-RAY

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I **mportance.** Breast lesions usually are not visible on radiography. Case Report. We report the finding of a breast incidentaloma on a chest X-ray of a symptomatic patient with pneumonia. Subsequent studies have shown that it is a radiopaque fibroadenoma.

Conclusions and Relevance. The case is unique and without a similar report in the medical literature. It should raise the need for doctors to have multiple incidences and pay close attention to the minutiae of imaging tests.

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Keywords: fibroadenoma, mammary incidentaloma, chest radiography.

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ИНЦИДЕНТАЛОМА МОЛОЧНОЙ ЖЕЛЕЗЫ ПРИ РЕНТГЕНОГРАФИИ ГРУДНОЙ КЛЕТКИ

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А **ктуальность.** Патология молочной железы обычно не видна при рентгенографии. **Материалы и методы.** Нами представлено клиническое наблюдение инциденталомы молочной железы при рентгенографии органов грудной клетки у пациента с пневмонией. Дальнейшее обследование выявило у пациента рентгенпозитивную фиброаденому.

Выводы. Данное клиническое наблюдение уникально и в медицинской литературе ранее не встречалось. На данном примере показана необходимость врачам рентгенологов обращать пристальное внимание на детали при интерпретации результатов методов визуализации.

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Introduction.

Chest radiographs (X-rays) are commonly used in emergency services in order to exclude possible pulmonary involvement in patients with respiratory symptoms. Incidentalomas and potentially malignant asymptomatic lesions are relatively uncommon in radiological examinations such as computed tomography (CT) and magnetic resonance imaging (MRI), with a frequency of less than 0.1% and 0.01% for breast cancers[1]. However, the finding of breast incidentalomas on chest X-rays is extremely rare, and there are no reports in the literature to this date.

Purpose.

To report a clinical case of breast incidentaloma on chest X-ray and its subsequent pathological investigation.

Case report.

A 26-year-old patient seeks emergency service at an Emergency Care Unit due to a productive cough for 4 days, associated with dyspnea and high fever. Physical examination showed regular general condition and crackling in the left lung base.

Chest radiography showed no parenchymal changes suggestive of a pneumonic process, but a regular nodular image with foci of internal calcification in the topography of the left lower lobe was seen in the anteroposterior (AP) view, which in sagittal view was revealed breast location (Fig. 1, 2).

Due to the suspicion of breast cancer, the patient was asked and reported a family history of 4 cases (diagnoses between 38 and 40 years), including infiltrating ductal breast cancer in 3 cousins – leading to death after pulmonary and cervical metastasis – and cancer of Paget mama in great-aunt. On physical examination, a nodular mass was detected in the inferolateral quadrant of the left breast, with a characteristic pistachio, regular and well-defined and mobile limits, associated with papillary effusion. Investigation continued with ultrasound of the breasts due to the patient's age, with a solid nodule at the junction of the lateral quadrants, oval, hypoechogenic, with well-defined margins and parallel to the skin, containing macrocalcifications, measuring 2.4 x 1.3 cm, classified as Birads-3 (Fig. 3).

Histopathological evaluation was performed with thick needle biopsy, showing fibroadenoma.

Informed consent was obtained from the patient to publish this case report and all accompanying images. The patient consented to publish this case report, read the article and confirm its content.

Discussion.

Fibroadenoma is a benign breast lesion, being the most common among the changes. In general, it affects young women between 20 and 30

years old (it can be present in up to 20% of women in this age group). It is classified into juvenile fibroadenoma (10-18 years old) and adult type (older than this age). A fibroadenoma can be classified as giant if it is greater than 500 grams or a diameter greater than 5 cm [6,7].

Fibroadenoma, in general, is asymptomatic. However, its responsiveness to hormonal changes, can increase in size and increase in sensitivity when close to menstruation. The association of clinical and imaging findings makes monitoring these lesions quite reliable. It must be differentiated from lipoma, phylloid tumor, physiological hyperplasia and hamartoma [7].

The diagnosis is made by nodule biopsy and anatomopathological examination, but it is not necessary in most cases. When indicated, the biopsy can be performed through fragment biopsy - core biopsy or mammotomy – or by surgical biopsy. In mammography, fibroadenoma is usually oval and circumscribed, and may contain gross calcifications in hyalinized cases. On ultrasound, the fibroadenoma is oval, with orientation parallel to the skin (wider than the height) and circumscribed margins. On the other hand, breast carcinoma presents to the imaging methods, irregular shape, non-circumscribed margins and orientation not parallel to the skin [2]. Fibroadenoma has a malignancy rate of less than 3%.

The treatment of fibroadenoma is expectant. However, lesions greater than 3.5 cm or in patients older than 35 years old require resection. In these cases, simple excision is usually indicated [6].

Studies on breast incidentalomas are scarce and, in general, address radiological findings on tomography, MRI and PET-CT. Furthermore, they identify relative rarity, with a high rate of malignancy. A radiographic case report – like the present study – is unprecedented, with no similar description in the literature.

In a series of tomographic studies, Healey et al covered 41,217 computed tomography scans of the chest, in which 258 mammary incidentalomas (0.62%) were found, 17.3% of which were malignant. The high malignancy rate thus justifies the need for a detailed investigation of incidentalomas[3].

PET-CT studies also explain its low frequency and high malignancy of incidentalomas. Dunne et al described a series of 6050 positron emission tomographic studies, detecting 50 asymptomatic breast lesions (0.53%), 53.8% of which were malignant and 38.5% of them representing breast metastases [4]. Another study with PET-CT in patients with suspected neoplasms, it showed breast incidentalomas in 8 patients [5].

In the present case, histopathological examination was necessary due to family history and the presence of gross calcifications. However, the

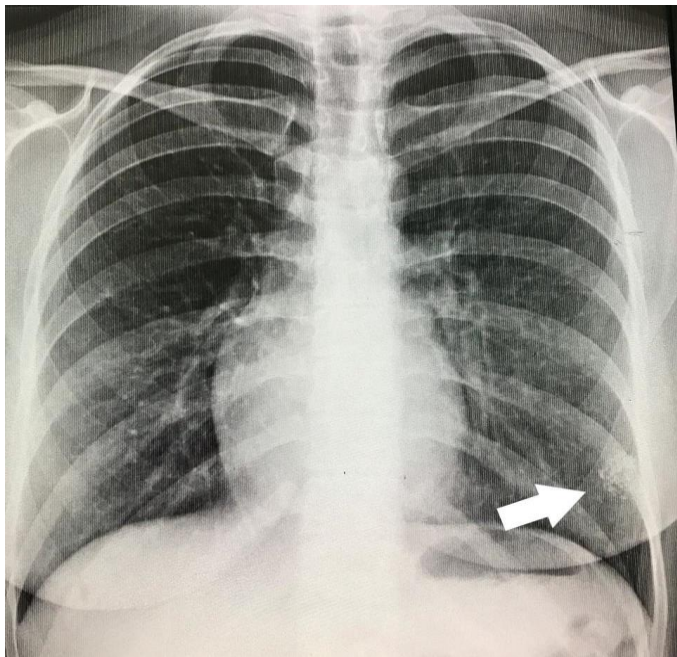


Fig. 1 (Рис. 1)

Fig. 1. X-Ray chest.

Anteroposterior chest radiography showing a radiopaque nodular foci, oval, regular and with gross calcifications, 2.4x1.3 cm in the inferolateral quadrant of the left breast.

Рис. 1. Рентгенограмма органов грудной клетки, передне-задняя проекция

В нижне-латеральном секторе левой молочной железы визуализируются рентгенопозитивные узловые очаги, овальной формы, с выраженной кальцификацией, размерами 2,4x1,3 см.



Fig. 2 (Рис. 2)

Fig. 2. X-Ray chest.

Chest radiography, sagittal view, showing radiopaque nodular foci in the superficial anterior region of the chest, extra-pulmonary, topography of breast tissue.

Рис. 2. Рентгенография органов грудной клетки, боковая проекция.

Визуализируются рентгеноконтрастные узловые очаги переднего отдела грудной клетки, внелёгочной локализации, в области молочной железы.

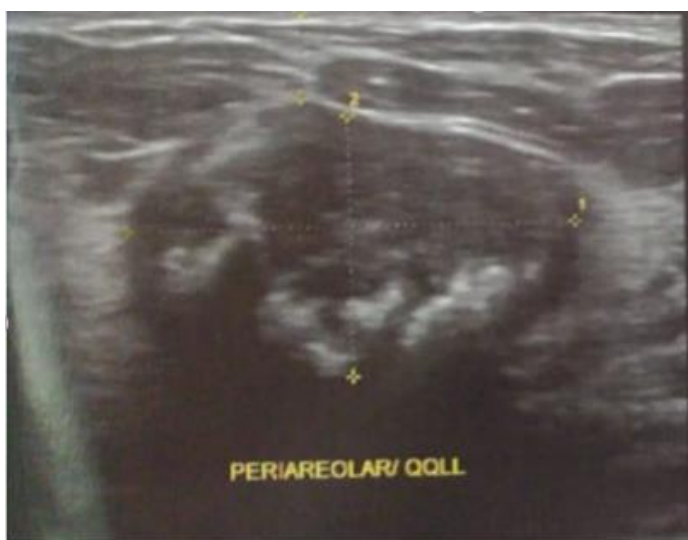


Fig. 3 (Рис. 3)

Fig. 3. Ultrasonography.

Ultrasonography demonstrates an oval, hypoechoic nodule, with well-defined margins and orientation parallel to the skin, containing macrocalcifications that produce posterior acoustic shadow.

Рис. 3. Ультрасонография.

Визуализируется овальный, гипоехогенный узелок с четко очерченными краями и ориентацией параллельно коже, содержащий макрокальцинаты с задней акустической тенью.

study proved to be benign.

Conclusion.

Although cases of breast incidentalomas are rare, histopathological examination after positive radiological examination is justified in order to

detect asymptomatic neoplasms.

Conflict of interest.

We declare that are no financial interest and no conflict of interest exists.

References:

1. Falomo E, Strigel RM, Bruce R, Munoz Del Rio A, Adejumo C, Kelcz F. Incidence and outcomes of incidental breast lesions detected on cross-sectional imaging examinations. *Breast J.* 2018; 24 (5): 743-748. doi: 10.1111/tbj.13040. Epub 2018 Apr 23. PMID: 29687537
2. Bland KI, Copeland III EM (eds.). *The breast: comprehensive management of benign and malignant disorders* 3rd. ed. St. Louis: Elsevier, 2004, 1628 p.
3. Healey TT, Agarwal S, Patel R, Ratanaprasatporn L, Ratanaprasatporn L, Lourenco AP. Cancer Yield of Incidental Breast Lesions Detected on Chest Computed Tomography. *J Comput Assist Tomogr.* 2018; 42 (3): 453-456. doi: 10.1097/RCT.0000000000000696. PMID: 29016373
4. Dunne RM, O'Mahony D, Wilson G, McDermott R, O'Keefe SA. The role of the breast radiologist in evaluation of breast incidentalomas detected on 18-fludeoxyglucose positron emission tomography/CT. *Br J Radiol.* 2013; 86 (1026): 20130034. doi: 10.1259/bjr.20130034. Epub 2013 Apr 8. PMID: 23568361; PMID: PMC3664982.
5. Chen CJ, Ma SY. Prevalence of clinically significant extraosseous findings on unenhanced CT portions of ¹⁸F-fluoride PET/CT bone scans. *ScientificWorldJournal.* 2012; 2012: 979867. doi: 10.1100/2012/979867. Epub 2012 Sep 10. PMID: 22997503; PMID: PMC3446638.
6. Islam S, Saroop S, Bheem V, Naraynsingh V. Largest giant juvenile fibroadenoma of the breast. *BMJ Case Rep.* 2019; 12 (1): e227277. Published 2019 Jan 28. doi:10.1136/bcr-2018-227277
7. Alhefdhi A. Gigroadenoma gigante que imita o tumor de Phylloleoyeds. *Obstet Gynecol Int Jю* 2017; 6 (4): 00213. DOI: 10.15406 / ogij.2017.06.00213
8. Lim GH, Ng RP, Leong LCH. Development of a surgical algorithm by using preoperative imaging to predict mammoplasty cosmetic outcomes for large nonmalignant tumours. *Gland Surg.* 2017; 6: 649-53.