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CASE REPORT/OLGU SUNUMU

GRANULOMATOUS MASTITIS DUE TO MYCOBACTERIUM ABCESSUS

Ayvaz Ulaş Urgancı[1], İlginç Yorulmaz[2], Banu Yıldız Karaca[3]

[1]İBB Eşrefpaşa Hastanesi, Genel Cerrahi, İzmir, Türkiye
[2]İBB Eşrefpaşa Hastanesi, Radyoloji, İzmir, Türkiye
[3]İBB Eşrefpaşa Hastanesi, Enfeksiyon Hastalıkları ve Klinik Mikrobiyoloji, İzmir, Türkiye

MYCOBACTERİUM ABSCESSUS'A BAĞLI GRANÜLOMATOZ MASTİT

ÖZET

Granülomatoz mastit memenin nadir görülen benign kronik enflamatuar hastalıklarından biridir. Klinik ve radyolojik olarak meme kanserini taklit edilebilir. Hastalığın tedavisi konusunda kesinleşmiş bir algoritim yoktur. Cerrahi girişim sonrası yüksek rekürrens oranları bildirilmektedir. Granulomatöz mastit etiyolojisi tam olarak açıklık kazanmamıştır; en çok ağırlık kazanan faktör otoimmun reaksiyondur. Atipik mikobakteriler granülomatöz mastitin nadir görülen bir sebebi olmakla beraber genellikle immunsupresyon olgularında hastalık etkeni olabilirler. Bizim olgumuzda 27 yaşında bayan hasta ağrı ve eline gelen büyük bir kitle ile başvurmuştur. Hastada immunsupresyon veya predispozan lokal faktörler bulunmamış ve yapılan tetkikler sonucu M. abscessus ' a bağlı granülomatoz mastit tanısı konmuştur. Olguda drenaj ve antibiyoterapi ile kür sağlanmış; rekürrens görülmemiştir. Hastamız M. abscessus' un başkaca faktörler olmadan spontan mastit nedeni olduğu ilk vaka olabilir. Olgu tanı ve tedavi açısından tartışmaya sunulmuştur.

Anahtar sözcükler: meme absesi, mycobacterium abcsessus, granülomatöz mastit

ABSTRACT

Granulomatous mastitis is a rare, benign , chronic inflammatory condition of the breast. Clinical and radiogical features may mimic breast carcinoma. It represents a therapeutic dilemma and treatment alternatives are still unclear. Generally high recurrence rates are reported after excision. Granulomatous mastitis is a disease of unknow etiology; the most favorable factor is autoimmune reaction. Atypical mycobacteria are a rare cause of granulomatous mastitis especially in immunosuppression patients. We present a 27 –year-old female patient with a large painful breast mass without any predisposing local factors or immunosuppression. The conducted examinations revealed granulomatous mastitis due to Mycobacterium abscessus. Drainage and antibiotic therapy effectively enabled the cure and no recurrence is detected. Our reported case may be the first patient with spontaneus mastitis due to M. abscessus in the absence of any predispozing factors. We herein present the diagnostic and therapeutic aspects.

Keywords: breast abscess, mycobacterium abscessus, granulomatous mastitis

introduction

Granulomatous mastitis is a rare inflammatory breast disease. It may imitate breast cancer in terms of clinical and radiological symptoms (1). It was initially described by Kessler in 1972. Following that, it was described in five women who were treated with the misdiagnosis of breast cancer (2). The etiopathogenesis of the disease has not been made completely clear so far. Moreover, there is no consensus for a treatment algorithm of this disease (2,3). In etiology, autoimmune diseases, infections, the use of oral contraceptives, lactation, and hyperprolactinemia are blamed (4,5,6). The most applied treatment methods in medical literature are antibiotheraphy, immunosuppression and surgery (wide excision or mastectomy).

Case Report

Case

A 27-year-old woman was referred with a 2-3-week history of a large and painful mass in her right breast. Physical examination revealed a painless breast mass, 8x8 cm, filling the upper outer quadrant of

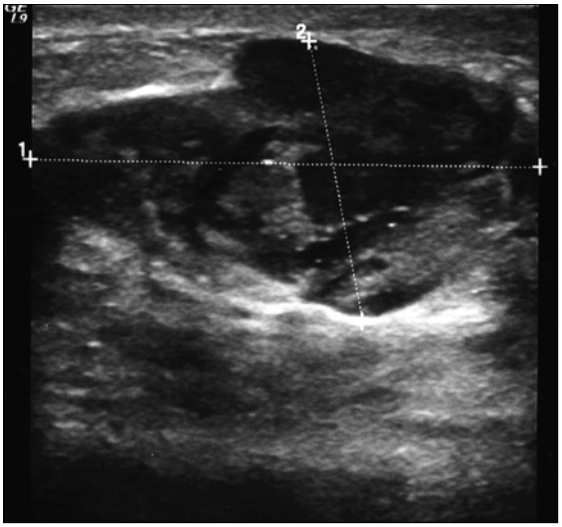

Figure1. Besides the symptoms which refer the infection, the giant solid lesion, which is limited multilobular and has heterogeneous internal structure, has been observed in the first USG survey

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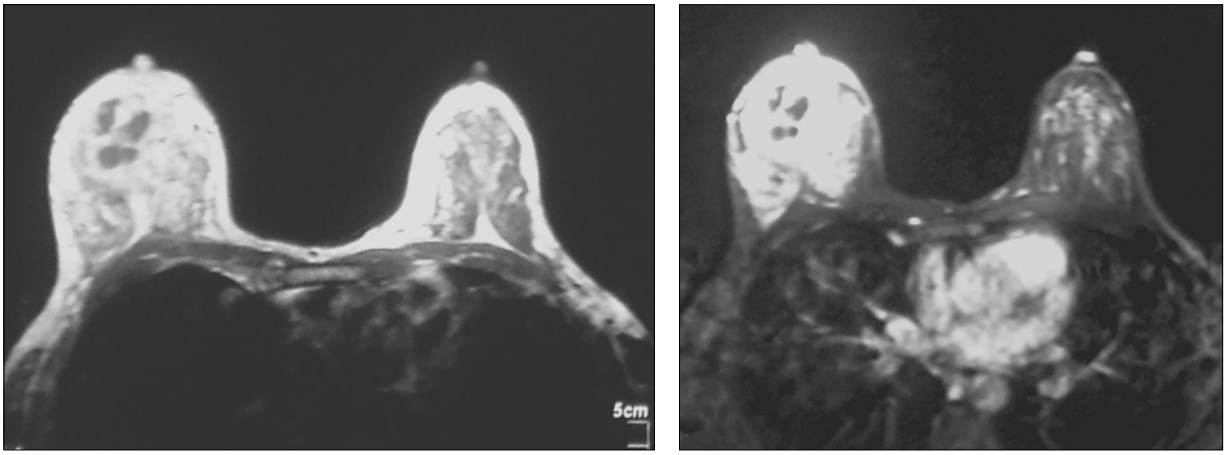

Figure 2. The qualified giant occupied lesion as centric cyctic or nectoric in right breast has been observed in contrasty dynamic MRG visualization (T1-T2) taken synchronously. The time-signal intensity curve suggested benign, The results has been thought in abscess formation.

the right breast and spreading to the surrounding areolar areas. There was no erythema of the skin. Axillary lymphadenopathy was not palpated. She did not have nipple inversion or nipple discharge. In the examination, it was understood that she had been suffering from fatigue and joint pain. In the patient anamnesis, there was no history of trauma, use of oral contraceptives or lactation during the last year. Furthermore, there was no history of any breast disease or treatment. There was no history of any significant disease in the family anamnesis. The patient's prolactin level was normal.

The breast USG examination showed that the skin and subcutaneous planes in the upper half of the right breast were thickened and the clivage planes were lost. There was a solid lesion with an irregular border and heterogenous internal structure filling almost the entire upper half of the right breast. A lobular contour mass and cystic areas were seen in the right breast. Multiple reactive lymph nodes were found in her right axilla. The largest lymph node was 11 mm in diameter (Figure 1).

The mammographic examination revealed a dense breast with no malign microcalcifications.

The patient's breast MRI showed a 5-cm-diameter central cystic, or necrotic lesion. Diffused edema around the lesion and engorgement were also diagnosed. It was thought that it may have been related to an abscess formation (Figure 2).

After the examinations, periareolar incision and abscess drainage was performed. Some samples were taken from the abscess wall and the drainage fluid in order to be analyzed. The patient was started on cephuroxime axetil with a dose of 500 mg twice a day and metronidazole with a dose of 500 mg three times a day empirically. During the patient check-up ten days later, it was observed that multiple fistulas were formed in the drainage area. Palpation showed that the mass size had not changed. The USG showed that there was no abscess pouch. However, the mass was constant (Figure 3).

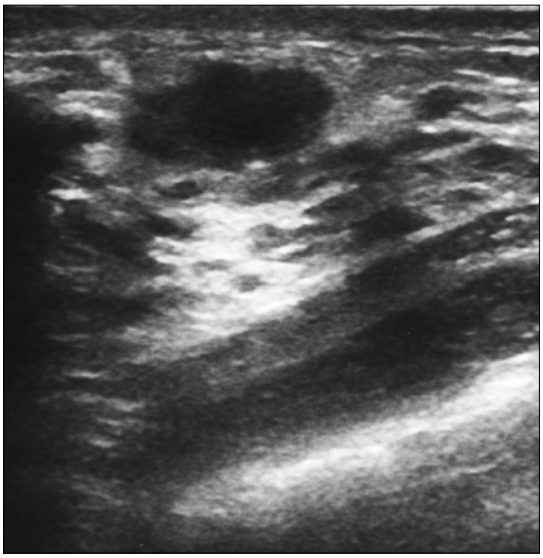

Figure 3. After draining, the persevering of lesion has been observed in the control USG.

During the pathological analysis of the abscess wall, "granuloma structures" were diagnosed. During the tissue culture of the abscess wall, acid-fast bacteria (atypical mycobacterium?) were observed and following that Mycobacterium abcsessus was isolated. The patient was started on clarithromycine with a dose of 500 mg twice a day. Antibiotic Sensitivity Testing showed sensitivity to clarithromycine. Therefore, the treatment was discontinued. Meanwhile, during the examinations, immunodeficiency PPD was negative.The patient was negativefor HIV . Thorax CT did not show any sign of thoracic lesions.

During a check-up 15 days later, it was seen that the fistula tracts were closed and the mass was smaller. During a check-up 4 weeks later, no mass was diagnosed on palpation and an MRI examination was scheduled. The MRI examination showed that there was no subsequent pathology except minimal edema on the lesion

area (Figure 4). Antibiotherapy was stopped at the end of the 6th week. During the next year, no recurrence was diagnosed. It was also observed that the patient was no longer suffering from polyarthralgia or fatigue.

Discussion

Granulomatous mastitis is a rare benign chronic inflammatory breast disease. This disease may be misdiagnosed as breast cancer in terms of clinical and radiological symptoms. Furthermore, there is no an agreement on the correct form of treatment. High recurrence rates (5.5 - 50 %) after surgical intervention are also referred in medical literature (7). The etiology of granulomatous mastitis is still unknown. Because a lot of factors such as trauma, hyperprolactinemia, lactation, oral contraceptives, and infection are blamed, the most important factor is autoimmune reaction (1,3,7,8). With reference to the cases shown in the medical literature, granulomatous mastitis may be divided into two groups such as idiopathic and in which an etiology can be determined. This can be very advantageous in shaping the treatment (7,8).

In our case there was no erythema of the skin although there was a large mass. The first USG examination showed a solid lesion with an irregular border and heterogenous internal structure. Moreover, the USG showed that there were some clues indicating the lesion was infected rather than a malign mass such as thickening of the skin and the subcutaneous planes because of the skin, the subcutaneous planes and the loss of the clivage planes. USG was an important modality because it narrowed the diagnostic spectrum and helped to differentiate between malign and benign. The MRI examination confirmed the sonographic impressions.

As a result of biopsy, M. Abscessus was isolated as an etiologic agent. Atypical mycobacteria are opportunistic pathogens which may have an infection factor beside the factors such as immunosuppression. In our case, there was no immunosuppression. Atypical mycobacterial infections and the factors such as nipple piercing (9), silicone injection (10), augmentation mammoplasty (11) were all noted in the medical literature. There were some case reports speculating that atypical mycobacteria cause spontaneous mastitis in the literature researched (12,13), however, we have not seen any case evidence to suggest M. Abscessus caused spontaneous mastitis. In fact, our case may be the first case showing that M. Abscessus causes spontaneous mastitis without any other factors.

The medical literature presents several treatment methods, such as wide excision, mastectomy and adjuvant immunosuppression. These are discussed in granulomatous mastitis cases -including the cases caused by atypical mycobacteria-. However, drainage and antibiotherapy were sufficient for the treatment in our case without any surgical excision or adjuvant treatment. In this case, determining the etiologic agent which caused granulomatosis breast disease and the treatment choice with regard to Antibiotic Sensitivity Testing left no need for surgical interventions such as wide excision or mastectomy. During the year following the treatment, no relapse was observed and it seems a cure has been provided.

In differential diagnosis of breast masses, the probability of granulomatous mastitis certainly should be taken into consideration. Because mycobacteria are endemic in this country, it is vital that clinical and laboratory tests are undertaken. First isolating the etiologic agent completely and then planning the treatment are essential to minimize unnecessary surgical interventions and the risk of recurrence.

References

1. Erhan Y, Veral A, Kara E, Ozdemir N, Kapkac M, Ozdedeli E, Yilmaz R, Koyuncu A, Erhan Y, Ozbal O. A clinicopathologic study of a rare clinical entity mimicking breast carcinoma: idiopatic granulomatous mastitis. Breast 2000;9:52-56. (PMID: 14731585)
2. Kessler E, Wolloch Y. Granulomatous mastitis: a lesion clinically simulating carcinoma Am J Pathol 1972;58:642-6. (PMID: 4674439)
3. Cohen C. Granulomatous mastitis. A review of 5 cases. S Afr Med J 1977;52:14-16 (PMID: 560723)
4. Taylor GB, Paviour SD, Musaad S, Jones WO, Holland DJ. A clinicopathological review of 34 cases of inflammatory breast disease showing an association between corynebacteria infection and granulomatous mastitis .Pathology 2003;35:109-119. (PMID: 12745457)
5. Cserni G, Szajki K. Granulomatous lobular mastitis following drug-induced galactorrhea and blunt trauma. Breast J 1999;5:398-403. (PMID: 11348321)
6. Murthy MS. Granulomatous mastitis and lipogranuloma of the breast. Am J Clinic Pathol 1973;60:432-433. (PMID: 4728145)
7. Akcan A, Akyıldız H , Deneme MA, Akgun H , Arıtas Y. Gtranulamatous lobular mastitis: A complex diagnostic and therapeutic problem Word J Surg 2006;30:1403-1409. (PMID: 16847715)
8. Imoto S, Kitaya T, Kodama T, Hasebe T, Mukai K.. Idiopatic granulomatous mastitis. Cases report and review literature. Jpn J Clinic Oncol 1997;27:274-277. (PMID: 9379518)
9. Trupiano JK, Sebek BA, Goldfarb J, Levy LR, Hall GS, Procop GW. Mastitis due to Mycobacterium Abscessus after body piercing Clinic Infect Dis 2001;33:131-134. (PMID: 11389508)
10. Perry RR , Jaques DP, Lesar MS, d'Avis JC, Peterson HD. Mycobacterium Avium infection in a silicone-İnjected breast.Plas Reconst Surg 1985;75:104-106. (PMID: 4038425)
11. Clegg HW, Foster MT, Sanders WE jr, Baine WB. Infection due to organisms of the Mycobacterium fortuitum complex after augmentation mammaplasty: clinical and epidemiologic features. J Infect Dis 1983;147:427-433. (PMID: 6833792)
12. Hanson PJV, Thomas JM, Collins JV. Mycobacteriumchelonei and abscess formation in soft tissues.Tubercle 1987;68:297-299. (PMID: 3455569)
13. Cooke FJ, Friedland JS. Spontaneus breast abscess due to Mycobacterium Fortitum. Clic Infect Dis 1998;mar26(3):760-761. (PMID: 9524858)

İletişim

Ayvaz Ulaş Urgancı
Telefon : 0(232) 2938414
E-Posta : ulasurganci@yahoo.com