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ORIGINAL ARTICLE

Treatment of Idiopathic Granulomatous Mastitis in Patients Referred to Surgery Clinic of Urmia

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ABSTRACT

Background: Idiopathic granulomatous mastitis (IGM) is a benign rare inflammatory disease of breast. Due to its uncommon etiology, treatment is still unknown. This study is aimed to determine the treatment method of IGM. **Methods:** In this prospective review of patients with IGM between 2010 and 2015 were included and their medical records, follow-up information and recurrence rate of IGM were evaluated. **Results:** In this study, 68.75% of patients (n=33) had palpable mass, 45.83% of patients (n=22) had breast pain, swelling, erythema and 20.83% of patients (n=10) had purulent drainage. Minimum follow-up duration was 24 (range 24–56) months. **Conclusions:** Steroid therapy such as prednisolone was effective in the treatment of Idiopathic granulomatous mastitis by reduction in inflammation.

INTRODUCTION

Idiopathic granulomatous mastitis is an uncommon, benign and chronic inflammatory breast diseases that mainly involve women in childbearing ages (1-4). The diseases for first time described by kessler and wollock in 1972 (5). Although it is a benign condition but is important from several point of view: 1-it poses a diagnostic and treatment dilemma (2, 3), clinically and mammographically mimic breast cancer especially inflammatory type (4). On the other hand due to lack of definitive treatment plan, complication of empiric treatment, such as allergic reaction to antibiotics and poor cosmetic resulting following repeated surgical interventions threaten the patients (2, 4).

In fact, the etiology of IGM is unknown but some factors have been stated including reaction to chemical materials such as OCP, infectious disease, autoimmune diseases and immunologic response for milk leakage from breast's lobule (3, 6). On the other hand some conditions such as pregnancy, breast feeding, hyperprolactinemia, galactorrhea, alpha 1 antitrypsin deficiency have been associated with the risk of the disease (4, 6). Infection with corynebacterium kroppenstedtii have been suggested but is unconfirmed (6). The final word about etiology is that although the cause of the diseases is unknown but general concuss is that reproductive age,recent pregnancy,breast feeding and history of OCP use are most associated conditions with the diseases as our finding are.

The most common presenting sign is defined hard lump of breast. As the disease progress nipple inversion, peau'd oranges, tumorous in duration, ulcer and fistula can occur that easily can be mistake with cancer (5-7). The most common reported ultrasound (U/S) finding are: 1- irregular hypo echoic finding that connecting with tubular hypo echo area and 2-parenchymal heterogeneity and area of mixed echo pattern with parenchymal deformity, both of them can lead to diagnosis of malignant changes (4, 6).

Common finding in mammography imaging are asymmetric diffuse and skin thickness (4). As mentioned previ-

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ously none of U/s or mammography can differentiated IGM from malignant or other benign lesions especially inflammatory breast cancers (4, 5). It must be mentioned that FNA cannot confidently differentiated IGM and histopathological examination remain as cornerstones (5, 6). This study is aimed to help the treatment of idiopathic granulomatous mastitis and reply this question that which method can be useful for treating such patients, in fact we used steroid therapy method for treating such patients.

METHODS

In this study 48 patients were enrolled who had idiopathic granulomatous mastitis with pathologic findings. Mean age of patients was 27 years. All of them have at least one full term pregnancy. Mean number of term pregnancy was 1.65± 0.128. All patients have breast feeding with minimum 6 months. All patients have been used OCP with minimum 4 month before first pregnancy. 46 patients have received antibiotics before pathologic confirmation. 4 patients before our confirmation had undergone abscess drainage and abscess wall biopsy. In two of them granulomatous mastitis has been reported but in two case anti-tuberculosis (TB) drug was administrated and due to poor response of drugs, they had referred to our clinic. In two case inflammation and abscess formation was reported that in review of specimen, IGM was confirmed in one case and in other case rebiopsy was done and IGM was confirmed.

The importance of completion the course of treatment were explained to all patients. Patients were explained that the mainstone of treatment is steroid. Complications of steroid therapy such as obesity, glucose intolerance, peptic ulcer disease and acne was explained to them and their husbands. Failure of low dose steroid was reported in previous studies as in one of our patients (pregnant one), for this reason we begun treatment with high dose steroid. Dosage of prednisolone gradually decreased, prednisolone 50 mg BID for two weeks, 50 mg daily for two weeks, 25 mg daily for 4 weeks, 10 mg daily for 2 weeks and 5 mg for one week, respectively. Cap cloxacillin 500 mg QID and cap clindamycin 500 mg were prescribed beside prednisolone for two week,also tab ranitidine 150 mg daily was prescribed at the side of steroid consumption. All patients were visited every two week regularly and were recommended to refer to the hospital as soon as they were in trouble. In one patient that she was pregnant after consultation with primatologist, we had to use low dose prednisolone 10mg daily. Unfortunately her response was not good and she had multiple abscesses in late pregnancy. 2 of 47 patients excluded the treatment due to obesity, and acne without coming back to hospital 4-6 week after beginning of treatment. Both of them returned 3-4 weeks later with draining abscess and we had to remove the necrotic skin. One of patients, one week after treatment came back with erythema nodusum and arthralgia signs and we had to hospitalize that patient. The mentioned patients was treated with erythromycin (discontinuation of cloxacillin and replacement with erythromycin) without discontinuation other drug that had no problem in follow up.

RESULTS

All patients (excluding one pregnant patient) were followed up at least 24 months (24-56 months), they were visited every 14 day until they were under treatment protocol, after that every 3 month until 12 months and finally every 6 months. During this period of follow up, only 3 patients experienced recurrence including the pain and firmness in biopsy site in one patient and erythema with collection in the same breast but other quadrant in two patients. IGM was confirmed in former one core needle biopsy and in two later drainage and open biopsy. These three patients were followed up by 36 months as others without recurrence.

DISCUSSION

Idiopathic granulomatous mastitis is an uncommon, benign and chronic inflammatory breast diseases that mainly involve women in childbearing ages (1-4). The diseases for first time described by kessler and wollock in 1972 (5).Although it is a benign condition but is important from several point of view: 1-it poses a diagnostic and treatment dilemma (2, 3), clinically and mammographically mimic breast cancer especially inflammatory type (4). Tissues for histopathological examination can be obtained with core needle biopsy, excisional biopsy and incisional biopsy of abscess wall in patients requiring drainage (4, 5, and 6). Characteristic pathologic finding include chronic granulomatous lobulitis with caseating necrosis plus giant cell, leukocytosis, epithelioid cells, macrophages and micro abscess (2, 4, 6). Complexity in treatment is more than diagnosis because in contrast to diagnosis, there is no definitive treatment (2, 4, and 5). Aviable options include observation, antibiotics, Steroids, immunosuppressive and surgical treatment from east to least (5, 6). Although antibiotics are widely used; however there is no proven benefit in studies (5) as in our study that only 3 of 21 resolved with only antibiotics. It is suggested that uncomplicated cases of IGM can be observed without treatment (2-6). In our study we don't use this option.

Although in most cases that presented with erythema and other signs that mimicking infection, usually systemic antibiotics started empirically (2), as we conducted in present study. Nevertheless there is proven benefit in most studies improvement with less than 5%(5).Most studies suggest that after ruling out the infectious processes,oral steroids is necessary (2, 5, 6). The steroid sparing agents such as methotrexate or azathioprine may be used for several reasons; facilitate tapering of steroids, in cases resistance to steroids, or recurrence after discounting steroids (2, 3, 4, and 6). We recommended steroid therapy in high dose to our patients after abscess drainage and antibiotics. Various studies had done about effect of steroid that confirmed its effect but in long time. In the study of Sakurai et al., complete resolution of mass lesions with corticosteroid was observed from 4 to 10 months (8, 9). There is no accepted optimal and standard treatment for IGM and needs more randomized trials and cohort studies related to method of treatment to solve this challenge of medical sciences.

CONCLUSION

The prevalence of IGM has increased recently in developing countries such as Iran and it seems that comprehensive studies are need to determine etiology and best treatment. There is no acceptable method of treatment for IGM. We found that High dose of steroid therapy is the choice treatment for IGM, if possible.

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