Granulomatous Mastitis in Rheumatoid Arthritis, Presenting as Breast Lumps - A Case Report

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INTRODUCTION

Granulomatous mastitis (GM) of the breast is a rare inflammatory disease. We report a case of a 56 years old woman presenting with breast lump associated with history of rheumatoid arthritis (RA). Rheumatoid arthritis is a chronic inflammatory autoimmune condition that induces inflammation, stiffness, rigidity, and lack of mobility in the joints and affects the peripheral joint synovial membrane,¹ which affects approximately 1 - 2 % of the world's population with an annual incidence rate between 0.5 % and 1 %.² Rheumatoid arthritis is an important cause of granulomatous mastitis. GM is an inflammatory disease in which granulomas form in breast tissue. It strikes mostly young to middle-aged women with painful and firm breast masses.³

PRESENTATION OF CASE

A 56-year-old woman presented to the physician complaining of painful breast. The patient was a known case of rheumatoid arthritis since 8 years. On physical examination, rheumatoid nodules were seen in joint areas, her breast veins were prominent with small lumps. In the meantime, patient was started with Tab Naproxen (500 mg) after food for 10 days, Tab Prednisolone (10 mg) thrice a day then followed by (10 mg) twice a day for 5 days then followed by (10 mg) once a day for 5 days. Tab Methotrexate (7.5 mg) once a week and tab Folvite (5 mg) once a week was given to her. Patient was recommended to do blood investigation. Her liver function test and kidney function test were normal but abnormal lipid profile was seen, with reduced level of high-density lipoprotein (HDL) (20.18 mg/dl) and uric acid was 8.4 mg/dl. A high level of rheumatoid factor was detected, and other biochemical parameters were decreased.

Serum calcium level was (7.2 mg/dl) which is below then normal range, serum magnesium level was decreased (1.30 mg/dl) and the levels of Vitamin D was also decreased (14.20 ng/ml). Figure shows second and third toes crossed over an adjacent toe which is called cross over toe. (Hammer toes). The affected toes were very painful and hard to move.

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Figure 1.
Indicates that Inflammation Can Cause the Toes to Twist Leading to Pain, Deformity and Dysfunction

Figure 2.
Deformity of Toes Affected by Rheumatoid Arthritis.

Figure 3.
Prominent Veins and Lumps in Breast

DISCUSSION OF MANAGEMENT

Rheumatoid arthritis occurs in about 5 per 1000 people and leads to severe joint damage and deformity. Early diagnosis and treatment of RA can avert or slow down the progression of joint damage in up to 90 % of patients by doing early treatment with Methotrexate plus other disease modifying antirheumatic drugs (DMARD) improves the outcome and prevents RA related disability. Levels of Calcium and Vitamin D was lower in patient hence we recommended calcium and vitamin D supplements with lifestyle modification. As in present case, the patient developed lumps in breast. After taking prescribed medications, there was reduction of swelling and pain as granulomatous mastitis is a rare chronic inflammatory disease in the breast with no consensus on management which is seen in patients with chronic inflammatory conditions such as rheumatoid arthritis. So, persons with RA have to take extra care of themselves by doing exercise, eat a balanced healthy diet and weight management, stress reduction, and add extra vitamins and minerals in their diet. With lifestyle management and proper intake of prescribed medicine and routine health check-up, it will make the symptoms manageable.

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Written informed consent form was obtained from the patient for publication of the case and accompanying images.

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