

## **Fat Necrosis Following Breast – Cancer Surgery and Radiotherapy**

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**Background:** Local recurrence is the most devastating complication post breast cancer surgery and radiotherapy. It is difficult to differentiate it from fat necrosis, which has higher incidence.

**Objective:** Investigate the incidence of fat necrosis after breast cancer surgery with radiotherapy.

**Design:** Retrospective review study.

**Setting:** Surgical department, Salmaniya Medical Centre, Kingdom of Bahrain.

**Method:** Between August 1999 and September 2007, eighty-seven patients of breast cancer patients were diagnosed in our firm. Patients with recurrent masses in the treated breasts or scars were 17.

**Data** was collected mainly from the histopathology department and medical files. It included: the number of patients involved, the stage of the disease, the details of the original surgery and if radiotherapy was administered or not, the method of diagnosing fat necrosis and the method of management.

**Result:** Analysis of these 17 patients showed that their breast mass was diagnosed to be secondary to fat necrosis and radiation changes in 15 and recurrence of malignancy in 2 patients. The diagnosis was reached either by fine needle aspiration cytology or biopsy either true-cut or excisional.

The TNM classification of these 15 patients at presentation, was T2 (13 patients), No (9 patients), and all the patients were M0. The original surgery was mainly breast conserving surgery in 10 patients. All patients except one received radiotherapy. These masses were diagnosed after one year. The diagnosis was suspected clinically in 10 patients.

**In 15 patients, fine needle aspiration cytology was done. True-cut biopsy was needed in two patients. Excisional biopsy was done in 6 patients, one had mastectomy and 8 patients were kept on observation (i.e. regular clinical, radiological and cyto-or histopathological evaluation / 6 weeks-3 months).**

**Conclusion: Fat necrosis following breast cancer surgery and radiotherapy is a common complication that could be expected more than local recurrence of cancer.**

**Fat necrosis differential diagnosis necessitates improvement in the radiological and pathological investigation to reach the diagnosis and to avoid unnecessary surgery.**

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