

Post-menopausal breast abscess

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Summary: Thirty post-menopausal women with breast abscess were treated at Port of Spain General Hospital, Trinidad, between 1976 and 1980. In this age group, breast abscess can be confused with cancer due to a lack of inflammatory features. History and physical examination are often not helpful in differentiating an abscess from carcinoma. Although the usual treatment of an abscess is incision and drainage, in post-menopausal women, excision of the lesion is helpful for accurate histological diagnosis.

Introduction

Breast cancer is the most common malignant tumour of women. However, many benign conditions of the breast clinically resemble carcinoma (Haagensen, 1951; Robitaille *et al.*, 1974; Milward & Gough, 1970). Though suppurative mastitis is becoming less common, a localized abscess may mimic carcinoma (Ajao & Ajao, 1979). The present study was undertaken to examine the characteristics and diagnosis of localized breast abscess in the post-menopausal woman.

Material and Methods

The surgical pathology records of the Port of Spain General Hospital, Trinidad between 1976 and 1980 were reviewed. All the cases diagnosed as having breast abscess in post-menopausal women formed the basis of this study. Relevant clinical details were extracted from the charts and patients more than one year past the last menstrual period were considered post-menopausal.

Results

During the 5 year period, 495 breast lesions from post-menopausal women were examined histologically. Of these, 30 (6%) were localized abscesses. During the same period, 274 cases were diagnosed as breast cancer.

The age range of the post-menopausal women with breast abscess was 47-73 years (mean 56 years). All

these patients had a natural menopause and none was taking, nor had taken, oestrogenic preparations after menopause. The duration of breast symptoms before presentation varied from a few days to two years. None of the patients had a history of previous biopsy, and seven patients had long standing inverted nipples on the breast with the abscess. The associated diseases were diabetes mellitus, hypertension and osteoarthritis.

The pre-operative history and physical examination contributed little to an accurate diagnosis of an abscess due to lack of inflammatory features. Skin tethering and peau d'orange was seen in twelve cases.

The pre-operative diagnosis was cancer in 19 (63%) cases. Of the remaining 11 patients in whom abscess was suspected, bacteriological cultures were completed in 6 and the common organisms were *Staphylococcus aureus*, *Staphylococcus epidermidis* and *Proteus mirabilis*. Anaerobic cultures were not done.

The abscess was located in various quadrants of the breast and subareolar in 6 patients. Pathological examination showed acute and chronic non-specific inflammatory reaction with a varying degree of fibrosis surrounding the abscess. The associated conditions were duct ectasis, cystic dilatation of the ducts and apocrine metaplasia

Discussion

There is a varying incidence of breast abscess in different age groups, the highest being in lactating women. The exact incidence of breast abscess in pre-menopausal, non-lactating women is unknown; it is generally considered to be rare. Specific histological abnormalities such as mammary duct ectasia and squamous metaplasia of the proximal ducts, may cause a breast abscess in the pre-menopausal female (Walker & Sandison, 1964).

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Abscess in the post-menopausal breast is rare, presumably because the duct activity and the blood supply to the breast decreases with decreasing hormonal activity, with a result that the ductal tissue becomes atrophic and inactive. During the 5 year period in which 30 post-menopausal women presented with breast abscess, 274 post-menopausal women had breast cancer. In their study of breast abscess in non-lactating women, Ekland & Zeigler (1973) found that 12% occurred in women over the age of 50 years.

The pathogenesis of breast abscess in post-menopausal women is not clear. Nipple inversion is thought to be a factor (Caswell & Maier, 1969), though, it cannot be determined whether it is the cause. Moreover, it may be that nipple inversion results from thickening and shortening of the ducts due to chronic inflammation (Kleinfeld, 1966). In one study nipple inversion was noted in 10% of pre-menopausal patients with breast abscess (Ekland & Zeigle, 1973). Seven of our post-menopausal women

had nipple inversion in the breast with the abscess. Oral-mammary sexual activity may rarely be the cause of a breast abscess.

The difference between pre-menopausal and post-menopausal breast abscess is the lack of inflammatory features in the latter. This often results in misdiagnosis as carcinoma clinically, as happened in 63% of our cases. The probable reason is that the post-menopausal collapsed, inactive ductal tissue may tend to contain infection better than the pre-menopausal branching, dilated ductal system.

Pre-operative history and physical examination may not be helpful in the diagnosis of post-menopausal breast abscess. Even on mammography, these abscesses can mimic carcinoma (Teixidor & Kazam, 1977). Although the ideal treatment for abscesses is incision and drainage, in post-menopausal women, in whom the diagnosis of carcinoma is suspected; total excision of the mass is necessary for accurate histological diagnosis.

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