Risk Factors for Development and Recurrence of Primary Breast Abscesses

We investigated risk factors that predispose to the development of primary breast abscesses and subsequent recurrence.

This was a case control study of patients with a primary or recurrent breast abscess, with recurrence defined by the need for repeated drainage within 6 months.

A total of 68 patients with a primary breast abscess were identified. Univariate analysis indicated that smoking (OR 8.0 [3.4 - 19.4]), obesity (OR 3.6 [1.5 - 9.2]), diabetes mellitus (OR 5.7 [1.1 - 54.9]), and nipple piercing (OR 10.2 [1.3 - 454.4]) were significant risk factors for development of primary breast abscess. Multivariate logistic regression analysis confirmed smoking as a significant risk factor for the development of primary breast abscess (OR 6.15 [2.65 - 14.29]) and in the subtype of subareolar breast abscess, nipple piercing was identified as a risk factor (OR 20.26 [2.01 - 204.28]) in addition to smoking (OR 11.49 [4.41 - 29.94]). Recurrent breast abscess occurred in 36 (53%) patients. Multivariate logistic regression identified significant odds ratio for an increase in recurrence related to age (OR 1.08 [1.01-1.15] per year), smoking (OR 14.73 [2.01 - 204.28]), surgical treatment (11.94 [1.08-131.72]), and a decrease in recurrence after MRSA infections (OR 0.02 [0.00-0.72]).

Our results strongly suggest that tobacco smoking is significantly associated with primary breast abscess and its recurrence. Nipple piercing is associated with increased risk of developing subareolar breast abscess. Recurrence is associated with smoking, surgical treatment and increased age and is less likely with MRSA infections.