

Breast fat injection confuses mammograms

Calcifications at follow-up are indistinguishable from breast cancer, new study reports.



(image: Wikimedia Commons)

A breast augmentation procedure in which fat from other parts of the body is transferred to the breasts can cause false suspicion of breast cancer on follow-up mammograms, according to a study in the April issue of *Plastic and Reconstructive Surgery*, the official medical journal of the American Society of Plastic Surgeons (ASPS).

The mammographic changes occurring after fat injection are indistinguishable from abnormalities associated with breast cancer, according to the study by Dr. Cong-Feng Wang of Meitan General Hospital, Beijing. Based on this "mammographic confusion," the authors conclude that the use of autologous fat injection for breast augmentation should be "prohibited continuously."

Microcalcifications cause confusion on mammograms after fat injection

Dr. Wang and colleagues report on 48 women who underwent autologous fat injection for breast augmentation between 1999 and 2009. In this procedure, small amounts of fat obtained by liposuction from one area of the body (such as the hips or thighs) are injected to shape the breasts.

In the study, mammograms obtained some years after fat injection showed "clustered microcalcifications" in eight of the 48 women - a rate of 16.7%. In all eight cases, the microcalcifications were regarded as "highly suspicious" for breast cancer.

The abnormalities prompted surgical biopsy to remove and examine the breast area showing microcalcifications. None of the biopsies revealed breast cancer. Instead, the calcifications appeared to be related to death (necrosis) of the injected fat cells.

There is a long history of debate over the use of injected fat for breast augmentation. In the late 1980s, the ASPS issued a strong statement against the use of this procedure, citing the risk of difficulties in early diagnosis of breast cancer.

However, more recent studies have reported that autologous fat injection provides very good results, and that any changes seen on mammograms are easily distinguished from abnormalities related to breast cancer.

In contrast, the new study finds mammographic abnormalities suspicious for breast cancer in 1 out of 6 women undergoing fat injection for breast augmentation. The clustered microcalcifications are

indistinguishable from those associated with breast cancer, requiring biopsy to make the correct diagnosis. Because of this issue - and independent of the aesthetic results achieved - Dr. Wang and colleagues strongly believe the use of autologous fat injection for breast augmentation should be discontinued.

However, that recommendation conflicts with a paper published in the March issue of *PRS*, which concludes that "Radiographic follow-up of breasts treated with fat grafting is not problematic and should not be a hindrance to the procedure." The conflicting results highlight the need for caution - and for more scientific evidence on the mammographic changes occurring after fat injection.

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