

Case Report

A lady with an axillary swelling

I Khan, SM Ahmed & I Mohammed

Imranuddin Khan

Junior Clinical Fellow
North Manchester General
Hospital
Delaunays Rd, Crumpsall,
Manchester M8 5RB
Email: Imranuddin.Khan@mft.
nhs.uk

Syed Masood Ahmed

Trust Grade SHO
York Teaching Hospitals
Wigginton Rd, Clifton, York
YO31 8HE
Email: Syed.Masood2@nhs.net

Ismail Mohammed

Junior Clinical Fellow
Manchester Royal Infirmary
Oxford Rd, Manchester M13
9WL
Email: Ismail.Mohammed2@
mft.nhs.uk

A young lady with an axillary swelling and abnormal imaging. Here we discuss a lady with an abnormal axillary swelling.

A 52-year-old woman known to have COPD and HIV was referred for cough of 2 months duration. She had no haemoptysis but was bringing up mucoid phlegm every day. She was on maximum inhaled treatment and mucolytics for COPD. She was an ex-smoker with a smoking history of 30 pack

years. She had a WBC count of 2.1, Haemoglobin of 86, platelets 19 and CRP <1. Her kidney function test showed sodium 135, potassium 4.8, Urea 9.1 Creatinine 99 and eGFR 57. On examination she had a lump in the right axilla.

She had a chest x-ray (fig 1) followed by a CT thorax (Fig 2) and ultrasound breast and axilla (fig 3 and 4). What do the chest x-ray, CT thorax and Ultrasound axilla show?

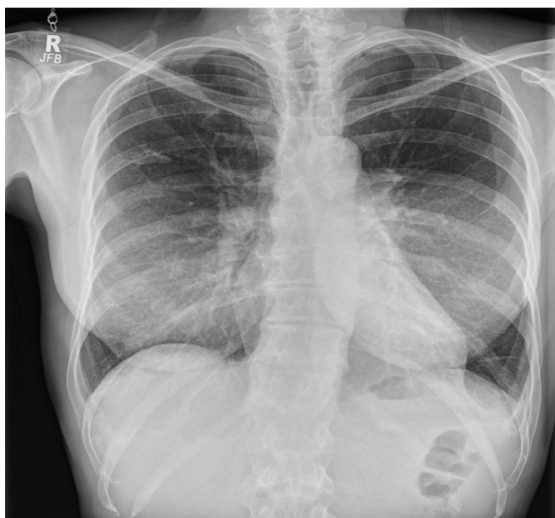


Figure 1.

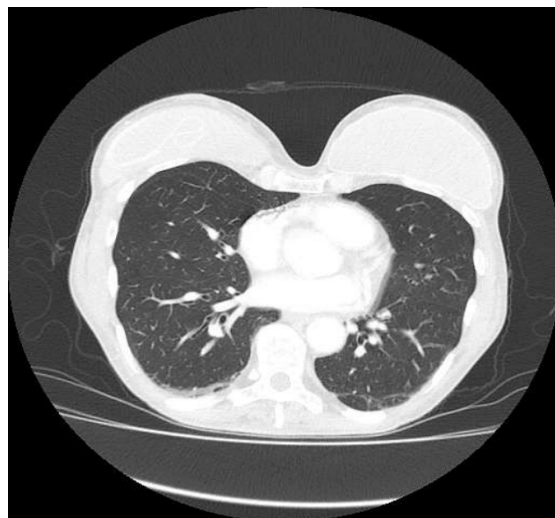


Figure 2.



Figure 3.

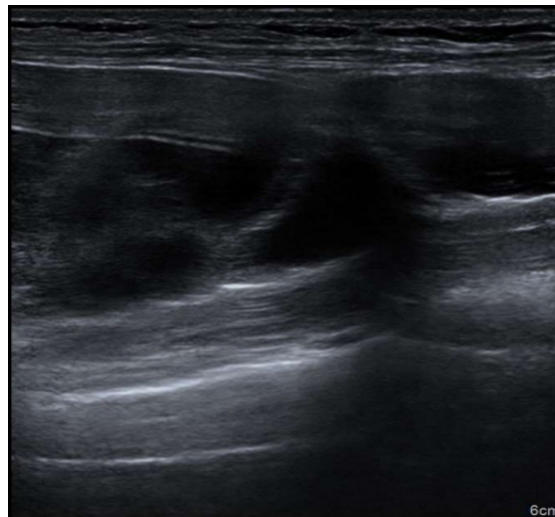


Figure 4.

A lady with an axillary swelling

Answers

1. Chest x-ray shows bilateral breast implants.
2. CT Thorax shows rupture of the implant on the right side
3. Ultrasound scans show rupture of the silicone implants.

Our patient had an **intracapsular rupture of the silicone breast implant** on the right side. The implant in the right side demonstrates definitive sonographic features of intra capsular rupture. Lymph nodes seen have a **snowstorm appearance** consistent with the presence of silicone.

Complications of Breast Implant

Breast implants are used in both reconstructive breast surgery and for cosmetic effects.

There are 3 types of breast implants:

1. **Silicone implants:** These consist of silicone gel filled in silicone shells. They are most popular as they imitate real breasts. A leaking silicone implant can lead to medical complications.
2. **Saline implants:** These consist of silicone shells filled with a sterile saline solution. A ruptured saline implant is less concerning than a ruptured silicone implant.
3. **Gummy Bear implants:** most expensive. They retain their shape even if they rupture, however undetected ruptures can lead to medical complications.

After breast implantation, an inflammatory response around the implant shell results in formation of a fibrous capsule enclosing the implant and keeping it in place.

Implant rupture may be intracapsular (when the silicone gel remains within the scar tissue surrounding the implant), extracapsular (when the silicone gel moves outside the capsule but remains within the breast tissue) or migrated gel when the

silicone gel moves outside the breast. The silicone gel that migrates outside the breast tissue leads to silicone granuloma formation.

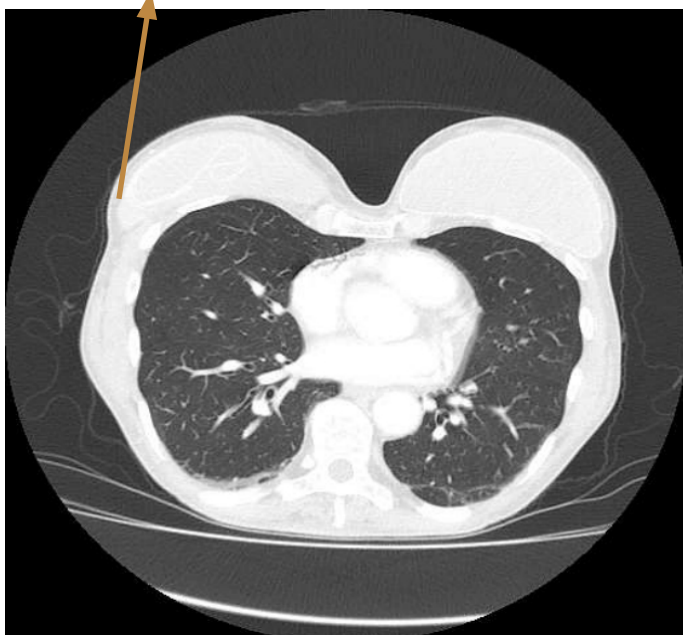
Rupture of silicone-based implants can lead to silicone reaching the regional lymph nodes and presenting with lymphadenopathy. In their review Bauer et al¹ identified 18 cases of silicone induced lymphadenopathy affecting the axillary, supraclavicular, internal mammary and mediastinal nodes. One of their patients had pulmonary opacities, retroperitoneal lymphadenopathy, hypercalcemia and silicone was confirmed to have reached the thyroid gland and the omentum. Lymph node biopsies confirmed granulomatous inflammation and giant cell reaction. It was believed that there was an association with silicone breast implants and connective tissue disease specially scleroderma, however so far there is no indication that there has been an increased incidence of autoimmune diseases in women with silicone implants.

Besides rupture, capsular contracture and infection may occur. On occasions, the capsule around the implant contracts resulting in pain and deformation of the breast. MRI scan is the gold standard for diagnosing capsular contraction. Treatment is surgical and may involve:

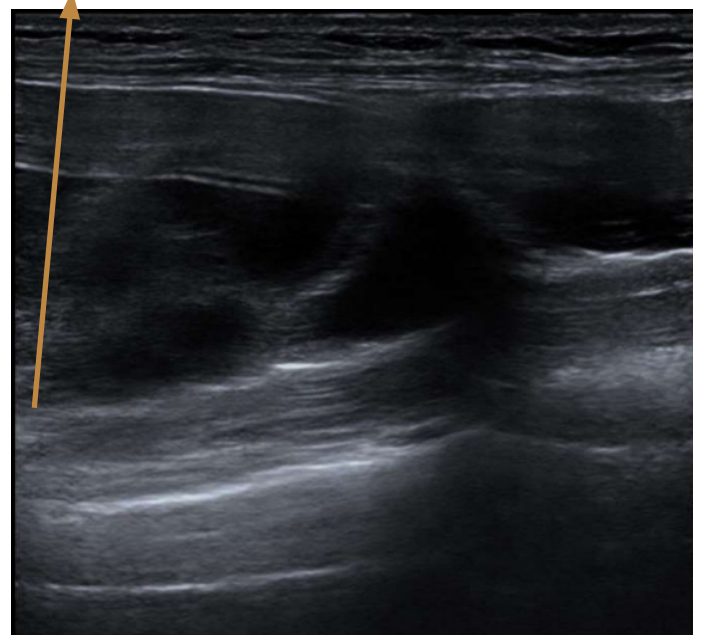
1. **Capsulotomy:** the tight fibrous bands are cut, releasing tension, and restoring the shape of the breast
2. **Capsulectomy:** this involves complete removal of the fibrous tissue capsule.
3. Implant replacement

A rare new type of lymphoma breast implant-associated anaplastic large cell lymphoma (BIAALCL) has been described in a few case reports.^{2,3,4} The first case of BIAALCL was described in 1997⁵ and the World Health Organisation recognised it as a

Possible rupture of the implant



Snowstorm appearance on Ultrasound depicting silicone



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disorder in 2016.⁶ Though it is not very common, it is still largely unreported⁷. An increase in incidence occurred between 1990 and 2016 and so far there have been 1363 patients with BIAALCL in 48 countries with 59 deaths. The absolute risk of developing BIAALCL still remains small⁸. Once an implant is put in place, the body detects a foreign object and as part of the healing process, a capsule develops around the implant with the aim of isolating the foreign body within fibrous tissue. BIAALCL is a form of T cell non-Hodgkin's lymphoma that develops within the inner layer of the capsule. It can be associated with a small effusion and can spread locally or to distant sites⁹.

Most patients present with a painless breast swelling due to an effusion. If left untreated cells within the effusion coalesce

and form solid tumours. Around 15% of patients have localised lymphadenopathy or distant spread and may complain of pain, skin changes, a swelling, asymmetry of breasts and distortion of the implant. Upto 9% of patients develop B symptoms including night sweats, fever and weight loss¹⁰.

This is usually treated with implant removal, capsulectomy and some patients may need chemo-radiotherapy. In their case series, Johnson et al⁴ found good response to Brentuximab. Clinicians need to be aware about this potential late complication when dealing with a patient with silicone implants.

Declaration of competing interests

Nothing to declare

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