

Case Report

Breast implant rupture: removal and re-implantation: a dual case report

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ABSTRACT

Breast implant surgery is now among the top five plastic surgeries done for cosmetic purpose globally. Silicone implants are the most common type of implants used whereas saline implants are used by very few. In the long run, rupture of the breast implant is a complication of these kind of surgeries. As per one study, over a period of 3-20 years, the silicone implants are likely to rupture. After three years of the breast implant surgery, it has been estimated that the survival rate for the silicone breast implants is around 83-85%. Some implant ruptures are silent or asymptomatic. Early diagnosis by routine ultrasonography is essential to manage the ruptures early. There is very less amount of information available related to breast implant rupture. Here, we present a dual case report related to breast implant rupture one saline and one silicone.

Keywords: Breast implant, Case report, Ultrasonography

INTRODUCTION

Once, accessible and affordable to few, breast implant considered as luxury, now has acquired dimension of essentiality as it is being used by many. In the year 2021, more than three hundred thousand women had undergone breast implant surgery for augmentation of their breasts. It is now among the top five plastic surgeries done for cosmetic purpose. Silicone implants are the most common type of implants used whereas saline implants are used by very few.¹ In the long run, rupture of the breast implant is a complication of these kind of surgeries.

As per one study, over a period of 3-20 years, the silicone implants are likely to rupture.² After three years of the breast implant surgery, it has been estimated that the survival rate for the silicone breast implants is around 83-85%. It has also been observed that older the implant, lesser is the survival rate.³ Use of underwire bra after the breast implant surgery can lead to rupture of the breast implant over the time. Regular use of seat belts with long

driving hours over a long period of years, can also be considered as a risk factor for the rupture of the breast implant. Even breast tests like mammography have also been considered as an important risk factor for rupture of the breast implant.⁴ After the breast implant is done, the free silicone present in the implant undergoes reaction with the tissues surrounding the breast. This leads to the formation of the fibrous capsule. Silicone gel is cohesive.

Even when the implant ruptures, due to this particular property, the gel remains adhered within the given area and the shape and the contour of the breast is not altered even after the rupture of the breast implant. In this case, there are not signs and symptoms suggestive if rupture of the breast implant. Hence, it is called as silent or asymptomatic breast implant rupture. Such cases can constitute about 8% of the total cases while symptomatic cases can go upto 33%.⁵ In the symptomatic cases, there is change in the size of the breast which is affected, it may also be associated with pain. Sometimes, it presents as a lump in the breast. There can contracture of the capsule of the breast. Obvious asymmetry between two breasts is another clinical feature of rupture of the

implant of the breast.³ As stated above, all cases may not symptomatic. The asymptomatic cases constitute about 8% of the total cases. Hence, it has been recommended that after the breast implant surgery, the woman should undergo initial scan either magnetic resonance imaging or ultrasound of the breast after 5-6 years of the surgery. It should be repeated every 2-3 year for the early diagnosis of the so called silent or asymptomatic rupture of the breast implant.⁶

Present dual case reports describe the rupture of one silicone breast implant rupture and one saline breast implant rupture which were slightly early than predicted.

CASE REPORT

Case 1

A 29-year-old female patient presented to the out-patient department with change in the shape of right breast and feeling of giveaway since past one week. At first visit the patient was concerned about change of the shape of the right breast with something given away feeling in the axillary area of the right breast, associated with pain for the past one week. Patient gave the written informed consent to publish the case with photographs.

On examination, change in the shape of upper pole of right breast was observed. Right breast upper pole towards the axilla was deformed. However, left side breast was normal and there were no signs of rupture. She underwent bilateral breast implant five years ago in Columbia. The make was not known, however it was made in China and it was 400 cc silicone implants, round and textured. She also came with the ultrasound report which showed the right breast implant rupture. She had fever for which she used antibiotics and analgesics.

There was no significant medical or family history of benign breast tumor or breast cancer. There was no history of trauma to the breast. No history of receiving breast massage. Breast sonography showed ruptured implant right side. Breast MRI was not done as patient not willing.

Patient was willing for bilateral breast implant replacement in this hospital. After ascertaining the patient fitness with surgical profile, the surgery was carried out. Thorough wash given and hemostasis secured. 400 cc round high-profile smooth MENTOR brand implants were placed both sides.

Procedure was uneventful. Specimen was not sent for histopathology, as the patient was not willing. The patient was discharged from the hospital very next day. The patient was asked to contact immediately in case of any issue arises. The patient visited for clinical examination after one month. There were no problems and the patient was satisfied (Figure 1, 2 & 3).

Case 2

Another case of 35-year-old female came for bilateral breast implant removal. She had undergone the breast implant surgery 10 years back in Armenia. She was feeling something given away in the left breast for which she had undergone the ultrasonography which showed rupture of implant. She wanted to remove both the implants. There were no associated symptoms. There were no skin changes on clinical examination. Right breast shape was slightly altered. There was no significant medical or family history of benign breast tumor or breast cancer. There was no history of trauma to the breast. No history of receiving breast massage. Breast MRI was not done as patient not willing. 10 years back in Armenia, details of the implant not known and it was 250 cc saline implants, round and textured. Patient was concerned with change of shape of breast at first visit.

Bilateral breast implant removal under general anesthesia was planned. After ascertaining the patient fitness with surgical profile, the surgery was carried out. Bilateral breast implants removed from the previous inframammary incisions. Both implants were saline implants. Pocket thoroughly cleaned, hemostasis secured and wound closed. Procedure was uneventful. Specimen was not sent for histopathology, as the patient was not willing.

The patient was discharged from the hospital very next day. The patient was asked to contact immediately in case of any issue arises. The patient visited for clinical examination after one month. There were no problems and the patient was satisfied (Figure 4 & 5).



Figure 1: Before removal of ruptured breast implant in case 1.



Figure 2: After removal of ruptured breast implant in case 1.



Figure 3: Removed ruptured breast implant in case 1.



Figure 4: Removal of ruptured breast implant in case 2 during surgery.



Figure 5: Removed ruptured breast implant in case 2

DISCUSSION

The major cause of breast implant rupture is capsule formation. Breast implant is actually a foreign body for the human body. As a normal physiologic response, the capsule forms in reaction to breast implant. After implantation, the implant is engulfed by the inflammatory cells mostly macrophages which lead to fibroblasts proliferation. In response to this process, the collagen is formed which forms the capsule.⁷ Whenever the capsule tightens, the contraction of the capsule occurs leading to rupture. Incidence of contraction of the capsule ranges from 3-17%.^{8,9} The patient complains of pain as a result and on examination there is tenderness, deformity.⁷ But,

over the period of time, identifying risk factors leading to capsule contracture, the advancements have been made in the breast implants which reduced its incidence by more than 50%.¹⁰ In the present dual case, though the rupture is seen very early, i.e., one within five years and the other within 10 years, we could not locate the capsular contracture. Neither any specific reason could be identified in these cases.

In majority of the cases of breast implant, usually there are no clinical manifestations neither it appears to produce the immune response. Local reactions or problems are also rare and those which occur are due to surgical procedures only.¹¹ However, in rare cases, it may cause disorders of the immune system, lymphomas and sometimes systemic illnesses. There is possibility of movement of the silicone from breast to the surrounding tissue and may lead to the formation of siliconoma which are nothing but the silicone granulomas.¹² These siliconoma are firm masses which may lead to damage to the nerve, destruction of the tissues, scarring or ulceration. They may be local or distant. Location at distant place can be cervical or axillary lymph nodes.¹²

In the present case report, the patients were not having any such kind of clinical manifestations. However, these should be kept in mind as a surgeon.

CONCLUSION

The breast implants, especially the silicone is now the most popular globally. But their life cannot be guaranteed. They can rupture over a period of time. The risk of formation of the capsule and also the rupture has though decreased significantly. As seen from the present case report where rupture occurred within five years in one case and within 10 years in another, it is important to inform the same to the patients before surgery. Once accepted, the patients should also be educated to undergo ultrasound at regular intervals to identify the silent or asymptomatic breast implant rupture.

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