

CASE REPORT

Uncommon Presentation of a Common Aesthetic Procedure: Late Infection of a Ruptured Silicone Breast Implant

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ABSTRAK

Pembesaran payudara menggunakan implan silikon adalah prosedur estetik yang popular dengan profil keselamatan yang tinggi. Jangkitan implan silikon payudara adalah entiti klinikal yang jarang berlaku. Rawatan biasanya melibatkan pembuangan implan dan penggunaan antibiotik. Laporan ini mengetengahkan satu kes jangkitan implan payudara yang berlaku hampir 15 tahun selepas pembedahan pertama.

Kata kunci: payudara, implan, silikon, jangkitan, bengkak

ABSTRACT

Breast augmentation using silicone implant is a common and popular aesthetic procedure with a high safety profile. Infection of silicone breast implants is a rare clinical entity, with skin commensal organisms often implicated as causative pathogen. Surgical treatment often involves removal of the implant with salvage procedures limited to selected cases. This case highlights a delayed presentation of an infected silicone breast implant presenting as a chest wall abscess 15 years after initial surgery.

Keywords: breast augmentation, silicone, implant, infection, abscess

INTRODUCTION

In general, cosmetic breast augmentation with silicone implants is a safe procedure. It is associated with low surgical complications such as infection,

haematoma and wound dehiscence. Late infection of breast implant is rare, but if it does occur can cause a lot of issues especially to the surgeon in term of establishing the diagnosis, treatment options ranging from conservative

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Figure 1: Area of swelling and necrotic patch noted over anterior abdominal wall extending downwards from the chest wall superiorly



Figure 2: Another picture depicting the area of swelling and necrotic patch noted over anterior abdominal wall extending downwards from the chest wall superiorly



Figure 3: Coronal view of a CT scan. Blue arrow demonstrating the abscess collection tracking downwards from the chest wall to the left lumbar region

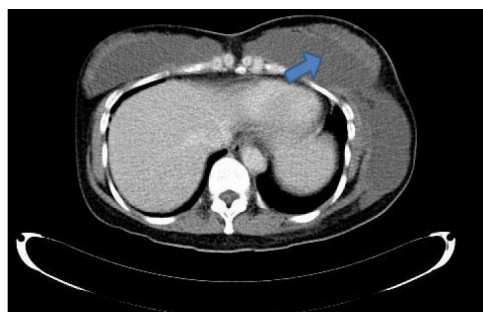


Figure 4: Axial CT scan view. Blue arrow showing the ruptured left silicone implant with surrounding abscess collection

treatment with antibiotic alone to surgical intervention. We present a case of peculiar late breast implant infection which involved large area of anterior and lateral abdominal wall area that eventually underwent massive wound debridement with good outcome.

CASE REPORT

A 33-year-old lady with a history of bilateral breast augmentation using silicone implants 15 years earlier, presented to the emergency department with complaint of left flank swelling, pain and fever for four days duration. The swelling was fluctuant,

tender and erythematous with a small necrotic patch. It extended from the lower chest wall on the left to the lumbar region on the same side. She remained hemodynamically stable but her infective parameters such as leucocyte count and c- reactive protein were markedly elevated. CT scan of the thorax and abdomen showed significant tissue streakiness in the left breast suggesting ruptured left breast implant with subcutaneous collection extending from the left chest wall to the anterior superior iliac spine and paraspinous region posteriorly. Emergency incision drainage and removal of the breast implant was undertaken with

1.9L of purulent material drained. Two separate incisions were made, one at the inframammary fold and a separate incision at the most dependent area of the swelling over the left flank region. Corrugated drains were placed in the abscess cavities after thorough debridement and irrigation. Histopathological examination of the silicone implant revealed foreign body granuloma, while microbiology culture of the purulent material was positive for *Staphylococcus Aureus*. Post operatively Cloxacillin was administered according to culture sensitivity report and subjected to daily dressing with saline. Five days later, the corrugated drains were removed and the patient was discharged home. She has since been followed-up in the surgical outpatient clinic and has shown full recovery. She is keen for insertion of a new implant on the same side, and she is presently awaiting her operation date.

DISCUSSION

Breast augmentation has become widely popular with increasing emphasis on achieving a more sexually appealing figure. In 2010, breast augmentation was the most opted for cosmetic surgery in America with almost 320,000 women reported to have undergone surgical enhancement (American Society of Plastic Surgeons 2012).

Similarly in Asia, there is also a rise in trend of breast augmentation especially among young women below the age of 19. This global hunger for fuller breasts has prompted the need to question and

establish the bio-durability of silicone implants. Although the exact bio-durability of silicone implants remains largely a mystery, previous studies have reported 10-year rupture rates to vary between 10-50% (Holmich et al. 2003; Heden et al. 2006; Thorton et al. 1988). This would mean that women are likely to require implant removal or change of implant at least once in their lifetime, if not more.

Infection of silicon breast implants is a rare yet the most dreaded complication with 1-2% of reported incidence. Skin commensals such as *Staphylococcus Aureus*, *Lactobacillus*, and *Alpha-haemolytic Streptococcus* have been implicated as common causative organisms in the immediate post-operative setting (Brown et al. 2000; Thorton et al. 1988). Delayed presentation has been attributed to secondary bacterial infection from invasive procedures distant to the breast tissue or peri-prosthetic infection from infection of the breast tissue itself leading to strong opposition from surgeons against procedures such as nipple piercing in patients with breast implants in-situ. Prosthetic contracture or rupture of implant has also been associated with infection and is often seen after many years following surgery. Cause of implant rupture besides being largely idiopathic, has also been reported following breast compression during routine mammography, and trauma (Brown et al. 1997). Optimum placement of implant in relation to maximizing its bio-durability and minimizing morbidity is an ongoing debate. Although submuscular placement of

silicone implant has been attributed to increased hematoma formation, there has not been any statistical significance reported between subglandular or submuscular placement in relation to infection or implant rupture (Hand et al. 2010). Women with silicone implant contracture are often asymptomatic and incidentally diagnosed during mammography. However, there has been an increase in evidence to link underlying subclinical prosthetic infection with development of contracture as late as 9 years following initial surgery (Pajkos et al. 2003; Virden et al. 1992). There is currently no consensus on removal of contracted silicone implant in asymptomatic women, although surgery is the preferred mainstay of treatment for Baker's grade 3 and beyond.

CONCLUSION

The traditional approach to management of infected silicone breast implants has always been removal of the offending prosthesis, treatment of the underlying infection with appropriate antibiotics and placement of a new implant at a later date. The advents of stronger antibiotics in addition to more accurate microbiology culture and sensitivity reports have paved the way for an alternative method of treatment. With careful patient selection, mild prosthetic infection can be treated non-surgically with antibiotic therapy alone for 10 to 14 days followed by clinical and radiological reassessment. Removal of implant is reserved for moderate to severe form of infection, and failure to respond to antibiotic

therapy (Spear & Seruya 2010). In our patient, the decision for debridement and removal of implant was made in view of severe ongoing infection involving a significant portion of chest wall and anterior abdominal wall. Subsequent decision to replace the removed silicone breast implant should depend on patient's preference, overall breast tissue condition and effectiveness of previous surgical and antimicrobial therapy (Pittet et al. 2005).

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