**Mycobacterium abscessus** Infection After Breast Implantation

Mohammad Ansarib, a John Sujithb, Arman Mushtac, Mohamed Osmana, Waqas Jehangira, Shuvendu Sern, John Middletoa, Abdalla Yousifb

**Abstract**

*Mycobacterium abscessus* is an acid-fast bacillus which is known to be found in water, soil and dust. It is well known to contaminate medical/surgical instruments which are not stored appropriately. It is also found on skin surfaces and can be inoculated due to poor disinfection procedures prior to surgeries. A 57-year-old female, who recently returned from a trip to Dominican Republic, presented with fever and chills. She had a breast augmentation surgery during the visit. Workup revealed an infection in her right breast which resolved after removal of the implant and antibiotic therapy.

**Keywords:** Acid fast staining; *Mycobacterium abscessus*; Sterile techniques

**Introduction**

Infection with *Mycobacterium abscessus* is uncommon after breast implantation, occurring in about 1-3% of the cases [1]. *M. abscessus* has an incubation period of 2 - 18 weeks with an average span of 7 weeks [2]. It presents as painful, swollen skin along with pus filled vesicles or abscesses. Associated symptoms are usually fever, chills, muscles aches and malaise [2]. If clinical presentation and history evoke high suspicion, then acid-fast staining can guide treatment. Definitive diagnosis is through culture on Lowenstein-Jensen medium which takes up to 6 weeks to grow. Treatment is hindered by poor response of antibiotics on *M. abscessus*. If an abscess is present, incision and drainage along with prolonged antibiotics are recommended. Timing of drainage does not appear to influence outcome [2]. Choice of antibiotics regimen includes a combination of a macrolide, preferably clarithromycin, along with cefoxitin, imipenem, amikacin, and or linezolid [2]. Studies show the course of treatment to be 2 - 12 months with a median span of 9 months to be most curative [2]. If aggressive antibiotic treatment fails, then the patient requires surgery including exploration, capsulotomy and washout [1].

**Case Report**

A 57-year-old Hispanic female with a significant past medical history of bilateral breast augmentation presents with a 2-week history of fever and chills. She recently traveled to Dominican Republic and underwent bilateral breast implantation 7 weeks ago. She had tenderness of her right breast and subjective fever and night chills. The patient denied any recent weight loss. After her surgery, she had some breast tenderness which she attributed to the healing and recovery process. She noticed a draining sinus in her right lower outer quadrant of the right breast which drained yellowish-whitish discharge for 3 weeks. She had some nausea but no vomiting and denied any palpable or painful lumps under the right or left axillae. The patient was born in the Dominican Republic and used to work for the custodial services at a funeral home. She denied any smoking, alcohol, or drug use. She was febrile with a temperature of 100.6°F, but looked non-toxic. Other vitals were normal. Breast exam revealed diffuse breast tenderness in all quadrants with no nipple discharge. Right lower quadrant of the right breast shows draining sinus with visible yellowish discharge and a necrotic floor with some fluctuation under the skin. The left breast was normal. Axillary lymph nodes are non-palpable. The patient’s CBC showed a white blood cell count of 13,500/µL and absolute neutrophil count of 11,100/µL. Chest X-ray showed no acute infiltrates. The patient was admitted and started empirically on vancomycin and zosyn. Subsequent workup was significant for a breast sonogram that failed to demonstrate any abscess. Breast CT showed bilateral implants with fluid surrounding both implants (Fig. 1). QuantiFERON testing was negative for TB. Deep wound cultures showed acid-fast bacilli, which eventually grew *M. abscessus* (Fig. 2). The patient had persistent fever. Infectious disease and surgical consults were called and patient’s right breast implant was removed with excision of the sinus tract, along with drainage of the abscesses. Cultures of the excised tissue and implant were positive for *M. abscessus*. Once the sensitivity results were available, she was started on clarithromycin, and the patient’s symptoms resolved. Leukocytosis and fever resolved as well. She was discharged and followed up at the outpatient in
The average cost for breast implants is estimated between $5,000 and 7,000 in the United States, whereas it amounts to $1,500 - 2,000 in the Dominican Republic [2]. There is a massive financial driving force for medical tourism. Unfortunately standard of care is unpredictable and outcome measurement is quite impossible. Also the exact frequency of *M. abscessus* infection is difficult to determine. From the preventative aspect, the CDC provides guidelines for individuals seeking medical care abroad. It is imperative to counsel a patient on the risks involved based on epidemiology. As we saw in this presented case, there posed a serious complication of *M. abscessus* infection. Early detection and proper treatment is the key. Recent travel especially to south/central America along with cosmetic procedure and a median onset of symptoms for 7 weeks should make one suspicious of *M. abscessus*. Due to being fastidious, in the case of a sterile culture with signs of infection, one should be suspicious of this particular organism [2]. Single treatment with clarithromycin as we saw in the case is effective along with drainage of the abscess(s) if present and removal of the infected implants.

**Conflicts of Interest**

The authors declare that there are no conflicts of interest regarding the publication of this article.

**References**