

SKINimages

A Woman with Plaques: An Atypical Mycobacterial Infection Case Report

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ABSTRACT

Cosmetic enhancement products administered by injection are readily available online. These materials circumvent both the quality control manufacturing process and physician supervision. One of the most serious complications is infection with *Mycobacterium abscessus*. Described is the case of a forty-six-year-old female who purchased a compound promoted for dermal injection and subsequently developed a persistent skin infection with *M. abscessus*.

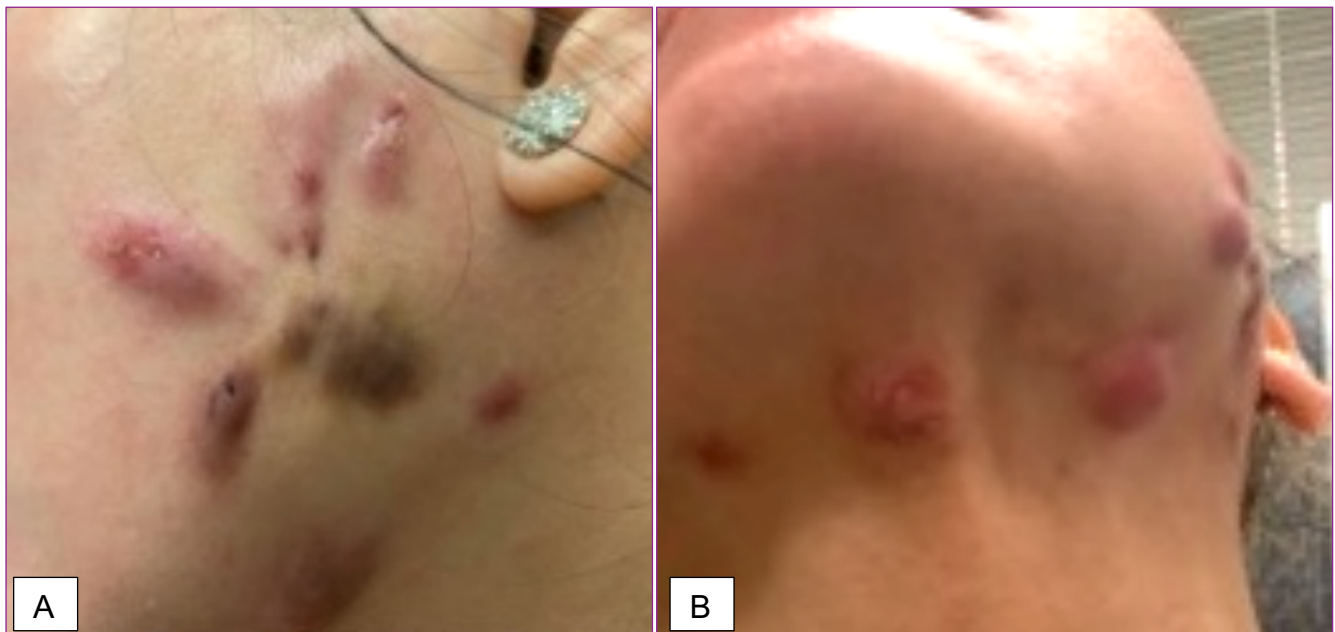


Figure 1. (A) and (B) Multiple nodules at initial presentation in the emergency department

INTRODUCTION

Phosphatidylcholine (PPC) dissolved in Deoxycholate (DCA) is a common compound utilized for body modification. Lecithin, the major component of PPC, restricts the buildup of fat. The function of DCA in this compound is to enhance the dissolution of PPC.¹ PPC, syringes and needles are available to consumers online. Complications of self-injection include fat embolism and infection.²

CASE REPORT

A forty-six-year-old female presented to the emergency department with multiple erythematous nodules of her face, lower chin, and bilateral arms (**Figure 1**).

In the emergency department, the patient underwent an incision and drainage and wound culture. She was started on doxycycline and cephalexin. Eleven days later, the patient returned to the emergency department. The nodules were noted to be worsening on the bilateral face and arms. At this presentation the patient complained of a headache and malaise. A chin nodule was excised and drained and additional cultures obtained. The initial aerobic cultures showed no growth. Doxycycline and cephalexin were discontinued, and clindamycin was initiated. The patient followed up in outpatient clinic six weeks later where the patient again presented with large draining nodules and plaques. She was referred to dermatology and admitted to self-injections of a PPC formulation purchased online for “fat burning” four months prior to evaluation. She stated that all sites became red, raised, and tender within three weeks of injection.

Prior cultures were still negative for bacterial growth. A tissue biopsy was obtained and culture from the biopsy grew *M. abscessus*. She was subsequently referred to infectious disease and treated with a multi-drug combination of amikacin, omadacycline, azithromycin, and linezolid. The infection cleared after several months but resulted in considerable scarring.

DISCUSSION

An uncommon skin infection, *Mycobacterium abscessus*, may be seen as a complication of patients self-treating with PPC using online supplies. *M. abscessus* is identified as a complex, the *M. abscessus* complex (MABC) that contains the subspecies: *M. massiliense*, *M. bolletii*, and *M. abscessus*.³ Common presentations include chronic skin infection, lung disease, and disseminated infections in the immunocompromised.⁴ If the MABC contains the erm (41) gene it can be associated with macrolide resistance. The erm (41) gene encodes erythromycin ribosome methylase, which methylates A2058 nucleotide of the 23S rRNA gene. Methylated rRNA gene results in a diminished binding of the macrolides to their target.⁵ With the MABC commonly being resistant to macrolides (among other treatments), *M. abscessus* is difficult to treat.

CONCLUSION

The ability of patients to purchase PPC online and self-inject at home is a danger to consumers seeking self enhancement. Infection with *M. abscessus* is one of many complications that patients may experience and should be considered when working up a patient with refractory nodules whenever self-injection is admitted or suspected.

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