

Multiple Facial Abscesses as an Adverse Outcome of Cosmetic Dermal Filling: A Case Report

S.A. Salati, B al Aithan

Department of Surgery , College of Medicine , Qassim University, KSA

Correspondence to: Dr Sajad Ahmad Salati, Email : docsajad@gmail.com

Dermal fillers have been globally introduced over the last few decades as relatively harmless agents of body rejuvenation. But complications do occur if due care is not exercised. We treated one such case who reported with multiple facial abscesses after dermal filler injections.

Introduction

Dermal fillers have virtually revolutions the field of cosmetic surgery in recent times due to their ability to restore youthful appearances without undergoing any surgical operations. However the widespread use of these dermal fillers has brought in a new disease entity in form of dermal filler complications. Infection at the dermal filler site is one such important complication which is reported in literature. We present a 39 years old lady who presented to us with multiple facial abscesses after injection of unknown dermal filler.

Case report

A 39 years old lady reported with left facial swelling and pain of 4 days duration. The patient initially denied any sort of intervention but after proper counseling, revealed the history of having received facial dermal filler injections at the hands of an uncertified practitioner. The patient was totally unaware of the nature of the dermal filler or the possible complications of the procedure. On examination, the patient was febrile and had erythema and tenderness over left side of face with pus pointing at one spot (Fig1). Laboratory works showed leucocytosis with shift to the left (WBC- 18200/cc with 91% Neutrophils). Imaging by ultrasound revealed multiple small abscesses over the left face ranging in size from 5mm to 7 mm (Fig2) and a single big abscess measuring 35mm x 29mm (Fig 3). The bigger abscess was stabbed and drained under conscious sedation. The abscess contained frank pus which grew *Staphylococcus aureus* sensitive to amoxicillin/clavulanic acid. After 8 days of antibiotic intake, the patient became asymptomatic and all features of inflammation subsided and there were no residual cosmetic deformities. She was followed up for 6 months and there were no further events.



Figure 1. Left Facial Abscesses 7 Days after Dermal Filler Injections

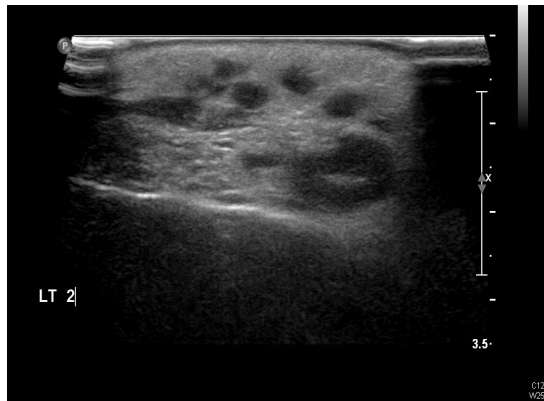


Figure 2. Ultrasonography Image Showing a Multiple Superficial, Left Facial Abscesses

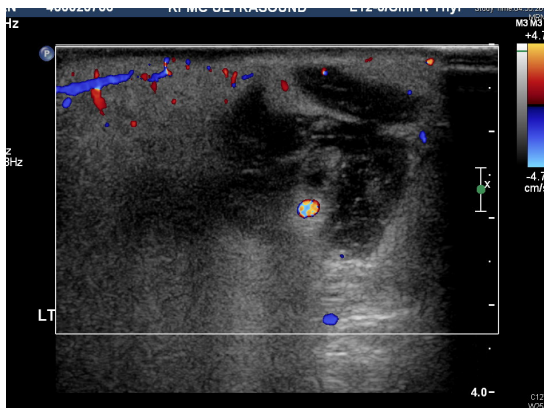


Figure 3. USG Image Showing a Large Superficial Multiloculated Facial Abscess

Discussion

Over the last two decades, there has been a revolution in the approach to facial rejuvenation due to evolution of wide range of dermal fillers. The fillers have gained unprecedented popularity due to the ability of regaining a more youthful appearance in aging population without the involvement of surgical blades, as well as the ease of office procedures without anesthesia offering minimal downtime and predictable results¹. The other major cause for this widespread use includes emergence of corporate culture which regards youthful labor as an asset and puts older ones at disadvantage and hence the urge of aging workers to seeks means of regaining a youthful look. In experienced hands, fillers of reputed companies have been found to be effective and extremely safe². However, fillers are foreign bodies and need to be injected blindly at a certain level of the skin and hence have the potential to end up in wide range of complications³ particularly in the hands of inexperienced. Most of the complications of fillers are self-limiting and mild including bruising, ecchymoses and burning sensation at the site of injection. However there are major adverse outcomes mentioned in literature which include injection site infection, allergic reactions, granuloma formation, angioembolisation, Tyndall effect, soft tissue necrosis, panniculitis and permanent scarring.

As far as the infection at filler site is concerned, it is generally reported to be result of breach of aseptic techniques and use of unsafe and spurious products by unqualified practitioners. This sort of malpractice is being widely reported due to ever increasing profitability of the dermal filler market. Our case had also been

treated by an unqualified person and that our case was neither aware of the nature of the product nor the adverse consequences of the procedure. In a series of post dermal filler granulomas published by Lombardi et al⁴, only 3 out of 11 patients were aware of the nature of injected filler.

In the infective complications which manifest within 2 weeks of injection, the causative bacteria are the usual flora like Staph. aureus, etc as was cultured in our case. However, in infections manifesting later on, even atypical Mycobacteria have been cultured by many workers⁵. Buttock augmentation can get complicated with fecal flora like E.coli⁶. Dermal filling has also been reported to lead to reactivation of Herpes simplex infection. In chronic infections due to dermal fillers, some workers have proved the role of biofilms⁷ particularly with hydrophobic silicone and combination gels. Management may be medical in form of specific antibiotics and psychological support or surgical in form of drainage of abscesses⁸ or debridement and wound coverage as required.

The aspect which needs to be stressed is the importance of disseminating proper information about dermal fillers among general populations particularly with reference to complications so that the patients do not get exploited due to ignorance. There is also a need to educate the general practitioners and emergency physicians about this evolving branch so that the complications are properly detected and treated. For the physicians offering dermal filling services, it is recommended in literature that they should have a thorough knowledge of their characteristics and of the anatomy of the area to be treated and the proper techniques of filling to ensure correct administration and optimal aesthetic results^{1,3,9}. Prior to any treatment, details of the procedure, the desired effects, durability, and potential risks of the filler to be injected should be discussed with the patient and fully informed consent secured.

Acknowledgement

To our respected patient for allowing us to use the images for academic purposes.

References

1. Bassichis BA. Facial dermal fillers: selection of appropriate products and techniques. *Aesthet Surg J.* 2008; 28(3):335-47.
2. Alam M, Dover JS. Management of complications and sequelae with temporary injectable fillers. *Plast Reconstr Surg* 2007; 120 (Suppl 6):98s-105s.
3. Lafaille P, Benedetto A. Fillers: contraindications, side effects and precautions. *Cutan Aesthet Surg.* 2010; 3(1):16-9.
4. Lombardi T, Samson J, Plantier F, Husson C, Küffer R. Orofacial granulomas after injection of cosmetic fillers. Histopathologic and clinical study of 11 cases. *J Oral Pathol Med.* 2004; 33(2):115-20.
5. Toy BR, Frank PJ. Outbreak of Mycobacterium abscesses infection after soft tissue augmentation. *Dermatol Surg.* 2003; 29 (9):971- 73.
6. Campana M, Lazzeri D, Rosato L, Perello R, *et al.* Late-onset gluteal Escherichia coli abscess formation 7 years after soft tissue augmentation with Bio-Alcamid in a HIV-positive patient. *J Plast Reconstr Aesthet Surg.* 2010; 63(9):e709-10.
7. Christensen L, Breiting V, Janssen M, Vuust J, Hogdall E. Adverse reactions to injectable soft tissue permanent fillers. *Aesthetic Plast Surg.* 2005; 29(1):34-48.
8. Goldan O, Georgiou I, Farber N, Winkler E, Haik J, Orenstein A. Late-onset facial abscess formation after cosmetic soft tissue augmentation with bio-alcamid. *Aesthet Surg J.* 2007; 27(4):416-18.
9. Cohen JL. Understanding, avoiding, and managing dermal filler complications. *Dermatol Surg* 2008; 34 (Suppl.1):s92-99