

## IMAGES

## Late-Onset Methicillin-Resistant *Staphylococcus aureus* Infection after Facial Poly-L-Lactic Acid Injection

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No potential conflict of interest relevant to this article was reported.

Received: 7 Dec 2016 • Revised: 16 Feb 2017 • Accepted: 4 Mar 2017  
pISSN: 2234-6163 • eISSN: 2234-6171  
<https://doi.org/10.5999/aps.2017.44.3.248>  
Arch Plast Surg 2017;44:248-249



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Poly-L-lactic acid (PLLA) is widely used in lipotrophy and facial rejuvenation for its ability to stimulate collagen neogenesis. Although its safety and efficacy have been established, adverse effects have been reported [1,2]. Late-onset adverse effects, occurring 6 months or more after injection, include granulomas, nodules, and pseudoabscess [1].

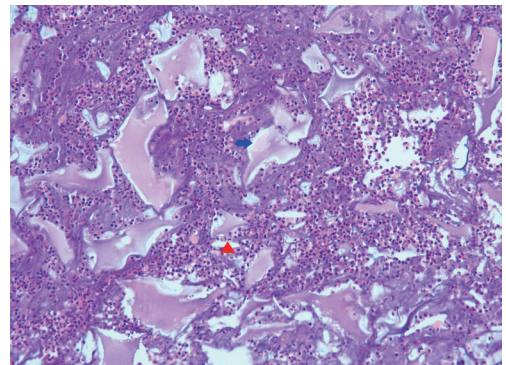
A 43-year-old woman presented with painful erythematous nodules on the left temple (Fig. 1), where PLLA had been injected for augmentation 14 months previously. She had no predisposing factors, and empirical antibiotic treatment did not lead to improvement. After incision of the nodules, pus and tissue materials were drained (Fig. 2), Histopathologic findings showed an abscess without granulomatous features around foreign body

materials (Fig. 3), and methicillin-resistant *Staphylococcus aureus* (MRSA) was cultured. We therefore made the diagnosis of late-onset MRSA infection after PLLA injection.

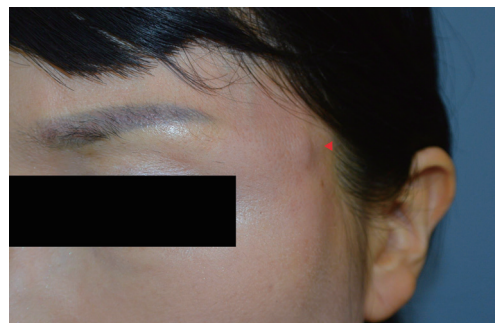
In this case, the subcutaneous nodules showed no sign of a granulomatous reaction, and MRSA was grown in a bacterial culture. Bacterial contamination of the filler materials may have been the cause of these nodules, which is related to the biofilm theory. Biofilms, defined as communities of microorganisms, are attached to the inert surfaces of catheters, and *Staphylococcus aureus* is frequently found in a dormant state within biofilms. It can be reactivated by external triggering factors (e.g., trauma), causing low-grade infection and abscess [3]. Our patient had not undergone any additional procedures, but repetitive traumas in daily life may have served as the triggering factor. Intravenous vancomycin was administered accordingly, and the



**Fig. 2.** After incision of the nodule, material including pus and tissue was drained.



**Fig. 3.** Skin biopsy revealing numerous inflammatory cells with fragments of foreign materials (H&E, ×200; neutrophil infiltration [red arrowhead], foreign body [blue arrow]).



**Fig. 1.** Several painful erythematous nodules (red arrowhead) on the left temporal area of the patient's face.

nodules recovered completely without scarring. Therefore, physicians who perform aesthetic procedures should be aware that late-onset painful nodules are likely to be caused by a bacterial infection such as MRSA, and identification of the bacteria may be preferable to hastily pursuing other treatment possibilities.

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spontaneous pseudoaneurysm of the proximal occipital artery that presented as a neck mass.

A 44-year-old male patient presented with a pulsatile swelling lesion in the neck that had grown spontaneously over the course of a year (Fig. 1). The swelling had gradually progressed, and he had no previous history of head trauma, infection, or a genetic disorder. The patient was found to have a firm, non-tender, pulsating mass in the left side of the neck that measured 4×3 cm. Ultrasonography showed turbulent flow and dilatation of the involved vessel. Neck computed tomography showed partial opacification of the swelling and revealed a pseudoaneurysm arising from the left proximal occipital artery (Fig. 2). The decision was made to embolize the lesion via angiography (Fig. 3). The mass was treated successfully by endovascular coil embolization (Fig. 4). One year postoperatively, the swelling had improved and recurrence was not detected.

Most occipital artery pseudoaneurysms are consequences of trauma, or are secondary to

## Spontaneous Pseudoaneurysm of the Proximal Occipital Artery Presenting as a Neck Mass

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No potential conflict of interest relevant to this article was reported.

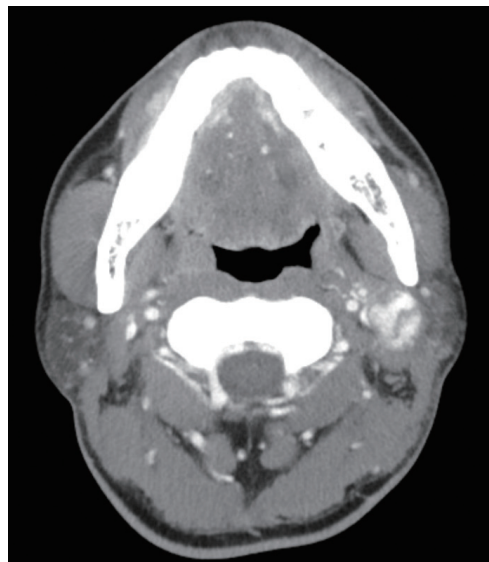
Received: 23 Feb 2017 • Revised: 28 Mar 2017 • Accepted: 28 Mar 2017  
pISSN: 2234-6163 • eISSN: 2234-6171  
<https://doi.org/10.5999/aps.2017.44.3.249>  
*Arch Plast Surg* 2017;44:249-250

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Occipital artery pseudoaneurysms are rare vascular lesions, and are most often reported as a consequence of trauma [1,2]. We report the rare case of a



**Fig. 1.** Preoperative photograph showing a lesion on the left neck.



**Fig. 2.** Computed tomography scan (axial section) shows a left proximal occipital artery pseudoaneurysm.