Management of recurrent gluteal abscesses following injection of a non-resorbable filler in a patient who developed ulcerative colitis

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CASE REPORT

Introduction

In 2020, Ms. J., 24 years old at the time, went to a clinic in Switzerland for some non-resorbable filler injections in her buttocks. The product used was marketed as a *copolyamide gel*, and it has since lost its European marketing authorization as of 2023 (1). Chemical tests later revealed that it was actually a *polyamide aquagel* (PAAG) (2), a well known substance that many countries have now banned due to a high number of complications reported after injections (3-5).

After two years, she progressively started experiencing complications in her left buttock. It began with local inflammation that progressed to tissue necrosis and led to abscess formation. Managing her condition required multiple washouts, drainages, and extensive debridements during a a hospital stay of several weeks. Due to ongoing infections, they had to stabilize her condition through guided wound healing, but this left her with significant cosmetic issues (Image 1).

Clinical case

We first met Ms. J. in May 2024, right as we were starting the reconstruction of her left buttock, which involved scar correction and lipofilling. At that point, her local situation was stable and looking promising.

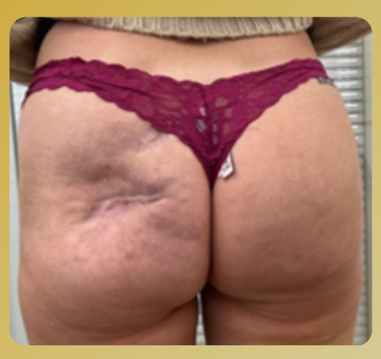

Image 1 : *sequelae left by the initial debridements on the left buttock.*

Image 2 : *Intermediate result after two corrections of the left buttock once the infection was treated*

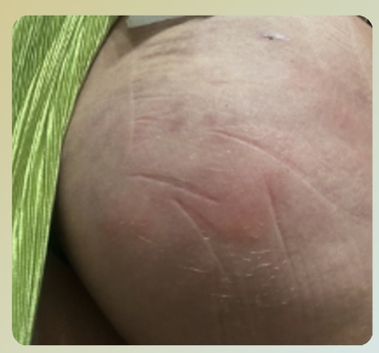

Image 3 : *first clinical manifestation of infection on the right side*

Post-reconstruction Complications – Left Buttock (2024-2025)

- **May 2024**: After the initial surgery for scar correction and lipofilling, Ms. J. experienced a persistent serous discharge and healing issue of the wound that raised alarms about a possible infection, even though cultures came back sterile. We started her on antibiotics, which helped stabilize the situation temporarily.
- **June 2024**: She was hospitalized due to a subacute wound infection, which was treated with antibiotics. An ultrasound revealed tissue infiltration but no clear collection. After several weeks of guided wound healing, we were finally able to close the surgical site, although the healing process took longer than expected.
- **January 2025**: A second surgery (scar correction and lipofilling) was performed, accompanied by two weeks of antibiotic prophylaxis. Three months after this procedure, there were no new complications to report (Image 2).

Onset of Complications – Right Buttock (February 2025)

- The right buttock, which had been fine until now, started showing spontaneous pain, with high fever (39 °C), and significant inflammatory signs like erythema and wound formation (Image 3).
  - Ultrasound showed multiple subcutaneous and intramuscular collections (Image 4)
  - CT scan confirmed the presence of multiple abscessed collections in the muscles that were communicating with the subcutaneous tissues (Image 5).

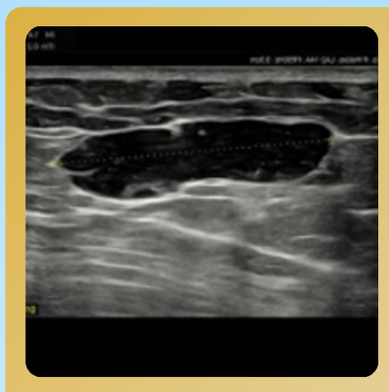

Image 4 : *Subcutaneous collection on ultrasound*

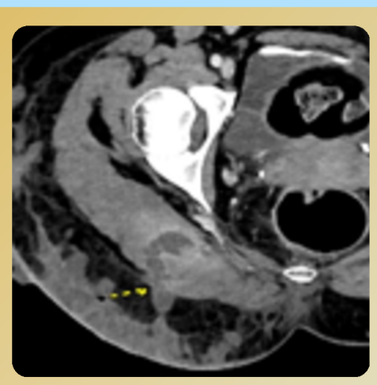

Image 5 : *Intramuscular collection with subcutaneous fistulization on CT-scan*

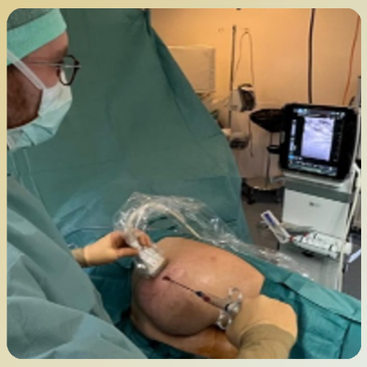

Image 6 : *Drainage of the collections using lipofilling cannulas under US guidance.*

Critical Period and Diagnosis of Ulcerative Colitis (February–March 2025)

- Multiple surgical interventions took place : three drainages and irrigations were performed using liposuction cannulas under ultrasound guidance to minimize cosmetic damage and remove some of the filler (Image 6).
- However, the collections continued to persist and CT-guided drainage was performed for a deep muscular collection that was not accessible through surgery (Image 7).
- Because of purulent anal discharge, we initially suspected rectal fistulization.
  - A rectosigmoidoscopy ruled out this diagnosis but revealed mucosal inflammation (Image 8) consistent with ulcerative colitis, which was later confirmed histologically .
  - The medical history indicated the patient had been experiencing bloody diarrhea and abdominal pain for over six months.
  - Anti-inflammatory treatment was initiated with oral and intrarectal Mesalazine.
- The patient underwent intensive antibiotic therapy, receiving IV Meropenem and Vancomycin for four weeks after a polymicrobial flora (*E. avium, B. fragilis*) was isolated.
- A follow-up CT scan one month later showed only partial regression (Image 9) leading to an additional two weeks of antibiotics.

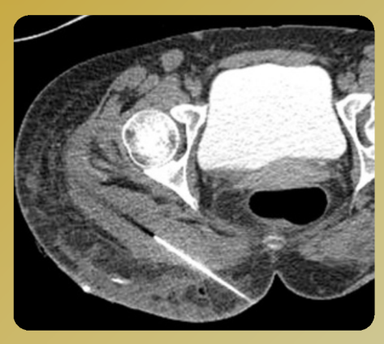

Image 7 : *aspiration-drainage of an intramuscular collection under CT-scan guidance*

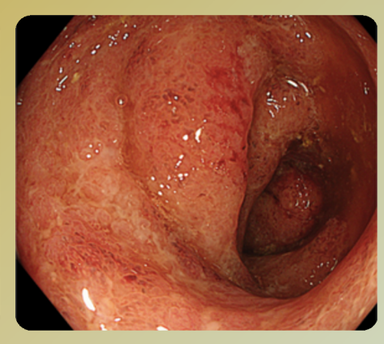

Image 8 : *Inflamed appearance of the colonic mucosa on endoscopic view*

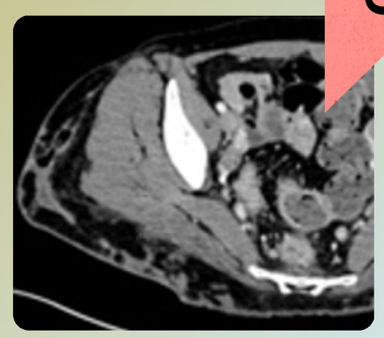

Image 9 : *Decrease but persistence of an intramuscular collection after 4 weeks of IV large-spectrum antibiotics*

Recurrences and Current Status (April–May 2025)

- **April 2025** : the patient experienced an infectious recurrence, presenting with fever and a subcutaneous collection confirmed via ultrasound. This led to new drainage procedures and a return to treatment with Meropenem and Vancomycin.
- A follow-up colonoscopy revealed ongoing rectal inflammation. Despite persistent colitis, we've had to postpone starting immunosuppressive biotherapy due to the ongoing infection.
- **May 2025 :** an MRI indicated widespread subcutaneous and intramuscular infiltration, with several collections, including a deep fusiform one (Image 10). Surgical drainage was carried out on the same day.

Discussion

This case highlights the late inflammatory and infectious complications that can arise from polyacrylamide gel injections. Distinguishing between inflammatory flares and infections can be quite challenging and it is quite difficult to identify when surgery is necessary and when it should be treated conservatively.

We made the observation that during inflammatory flares that clinically manifests with relatively mild local damages (and sterile bacteriologic samples most of the time), only CRP levels was elevated, while leukocytosis and positive bacterial cultures were primarily associated with genuine infectious episodes, often necessitating urgent surgical intervention. We noted that patient experienced reccurent fever, about once a month, without the gluteal region necessarily being clinically involved.

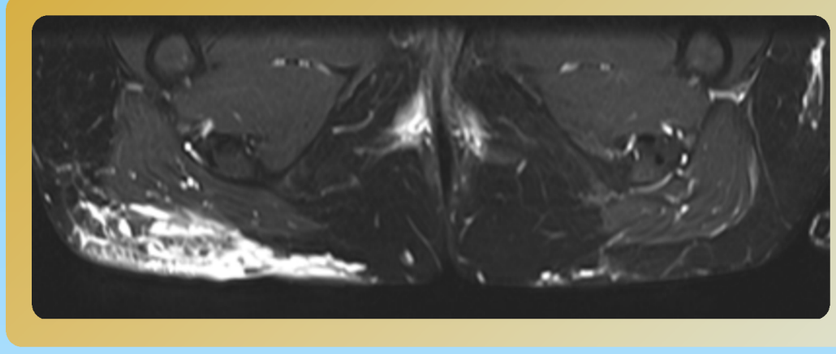

Image 10 : *subcutaneous infiltration of the right gluteal region, with the presence of a deep fusiform intramuscular collection on MRI.*

We also made the hypothesis that bacteremia related to UC might promote hematogenous infection spread to the implanted material, leading to major locally complications.

Regarding UC in this situation, we considered whether the close anatomical relationship between the rectal mucosa (where autoimmune disease occurs) and the gluteal region (where chronic post-injection inflammation happens) could contribute to the development of UC, but there's no supporting data in the literature for this idea.

Regarding auto-immune complication in general, some research indicates that fillers like PAAG might trigger local autoimmune disorders (6), but their impact on systemic diseases is still uncertain, even though they could play a role in Autoimmunity/Autoinflammatory Syndrome Induce by Adjuvant (ASIA). (7)

Conclusion

- Distinguishing between inflammatory flares and infections can be quite challenging. It was also difficulty to differentiate between residual filler and septic abscesses on radiological imaging. We still don't have a clear-cut management strategy for these patients when inflammatory flares occurs.
- Our treatment plan focused on addressing infections while trying to preserve as much tissue as possible.
- While completely removing the filler would be the best option, it poses significant cosmetic risks, making it not always practical.
- To take care of patients with such issues takes time and patience, as both inflammatory and infectious complications can delay reconstruction. This can be really tough for the patient.
- A collaborative approach with the right technical resources and pluridisciplinary decision making is crucial.
- In this situation, developement of an autoimmune disease (UC) adds another layer of complexity

Perspectives

- Look into whether the progression of UC affects the likelihood of infections recurring
- Assess how biologic therapy influences inflammatory and infectious recurrences.

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