

Surgical Management of Chronic Recurrent Thigh Seroma Post-Arthroplasty in a Massive Weight Loss Patient

James Pai, MS¹; Jessica Reid, MS¹; Cameron Belding, MD²; Abigail Chaffin, MD, FACS, CWSP, MAPWCA³

[1] Tulane School of Medicine [2] Tulane School of Medicine, Department of Surgery [3] Tulane Surgery, Division of Plastic Surgery

Introduction

- Patients who have undergone massive weight loss (MWL) present unique postoperative recovery challenges due to significant redundant skin and subcutaneous tissue laxity.
- In this population, the risk of seroma formation increases with greater volumes of tissue removal.¹
- While small seromas may resolve spontaneously, persistent or recurrent seromas can become chronic.
- Chronic seromas may develop a fibrous pseudocapsule (pseudobursa) that inhibits normal fluid reabsorption.^{2,3}
- This report describes the surgical management of a complex, recurrent chronic thigh seroma in a patient with a history of MWL following total hip arthroplasty (THA).

Case Presentation

- 68-year-old female with a history of gastric bypass surgery and approximately 200-lb weight loss
- Presented with painful, large, recurrent fluid collections in the thigh
- Symptoms developed seven months following total hip arthroplasty (THA)
- Prior management included >30 percutaneous aspirations, without durable resolution
- The patient had also undergone a previous surgical washout, which failed to prevent recurrence

Methods

- **Imaging:** CT revealed thick fibrous fluid collections extending from the inguinal region to the lateral thigh.
- **Operative management:** After verified smoking cessation, the patient underwent wide excision and complete capsulectomy for chronic encapsulated seroma.³
- **Reconstruction:** A 20 × 20 cm defect was reconstructed using a lateral adjacent tissue transfer advancement flap (600 cm²).
- **Dead space control:** Progressive tension quilting sutures were placed to secure the flap and reduce seroma risk.⁴
- **Postoperative care:** Negative pressure wound therapy (NPWT) was applied following closure to promote healing and minimize recurrence.³

References

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Results

Initial Presentation



Figure 1A: Initial presentation of patient with left thigh seroma and excess loose skin following hip arthroplasty (anterior view)



Figure 1B: Initial presentation of patient with seroma to the left thigh and excess loose skin following hip arthroplasty (lateral view)

Intraoperative



Figure 2A: Intraoperative view of chronic seroma to the left thigh

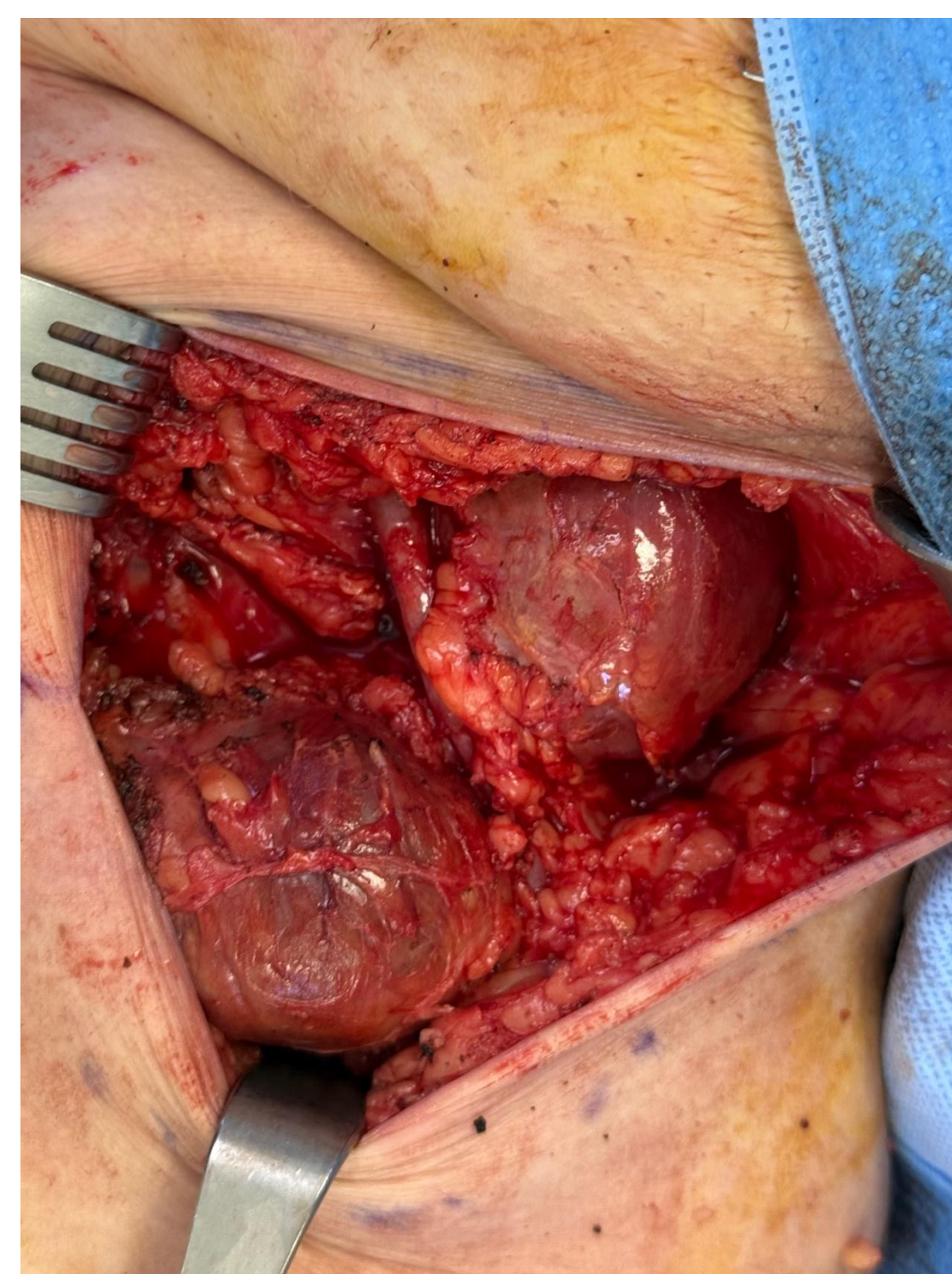


Figure 2B: Intraoperative view of chronic thigh seroma, revealing the presence of two pseudocapsulated seromas

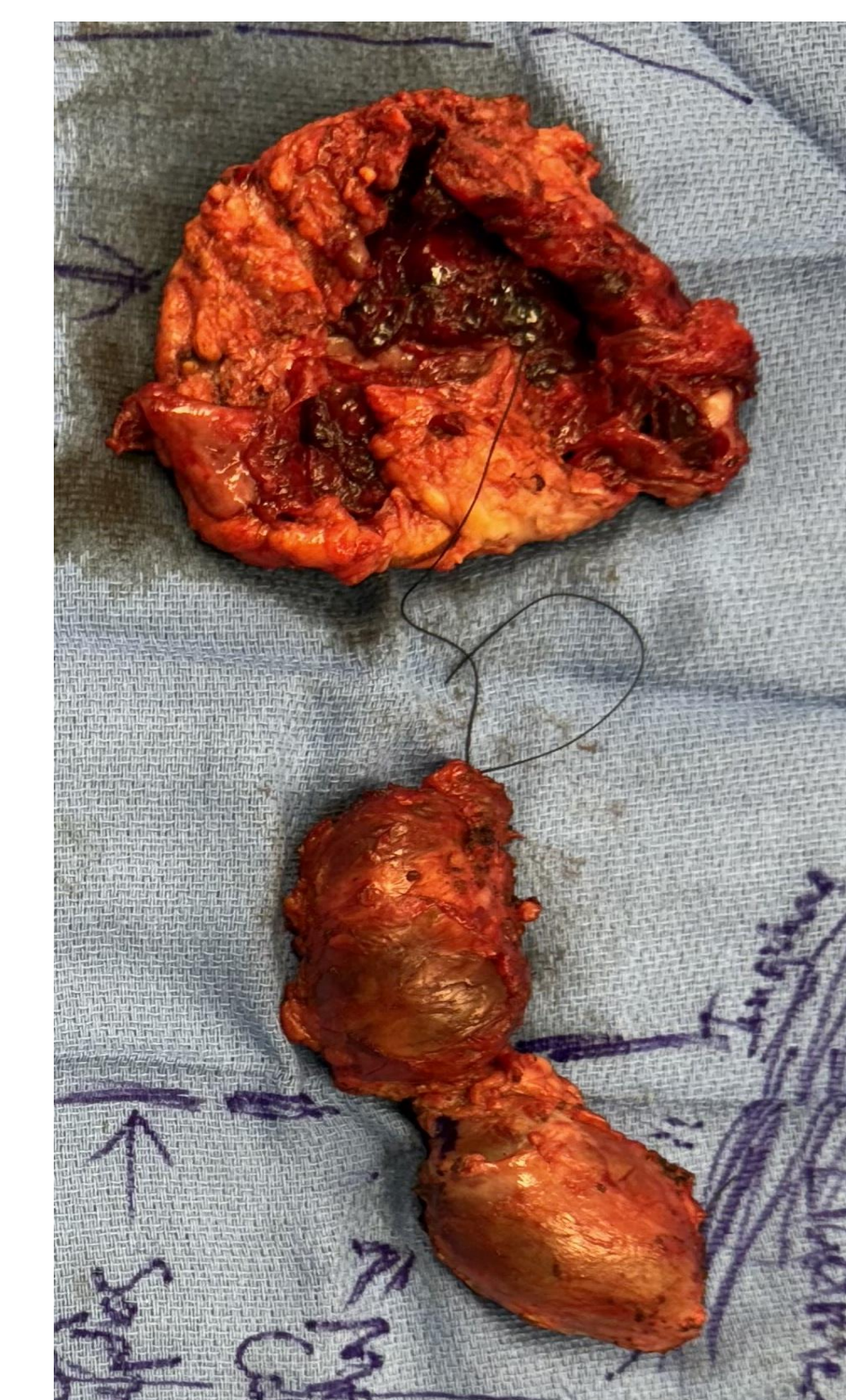


Figure 2C: Intraoperative view of excised seromas from left thigh

3 Days Post Operative



Figure 3A: Left thigh incisions healing well 3 days postop



Figure 3B: Lateral incision at 3 days postop



Figure 3C: Median incision at 3 days postop

Key Pearls

- **Chronic seromas in massive weight loss patients often behave as encapsulated lesions resistant to aspiration.**
- **Definitive treatment typically requires complete capsulectomy rather than repeated drainage.**
- **Meticulous dead-space control with progressive tension sutures helps reduce recurrence and optimize reconstruction.**

Results

- **Pathology:** Histologic evaluation confirmed a chronic seroma with foreign body giant cell reaction, without evidence of malignancy or infection.
- **Reconstruction outcome:** The advancement flap achieved successful closure of the 400 cm² soft-tissue defect with excellent perfusion.
- **Postoperative course:** The patient experienced no immediate complications following surgery.
- **Seroma resolution:** Combined capsulectomy and progressive tension suturing resulted in effective elimination of the fluid collection.
- **Follow-up:** At 3-month evaluation, there was no evidence of recurrence.

Conclusion

- Chronic seromas in patients who have undergone massive weight loss may behave similarly to Morel-Lavallée lesions
- Patients with massive weight loss possess unique risk factors, including extensive tissue laxity and increased shearing forces, which predispose them to seroma formation that is often refractory to conservative management.¹
- Persistent or recurrent fluid collections should prompt clinicians to consider early operative intervention, as these lesions frequently represent mature pseudobursas that are resistant to repeated percutaneous aspiration.^{2,3}
- Definitive management typically requires aggressive capsulectomy to remove the fibrotic lining, as simple drainage alone is unlikely to achieve durable resolution.³
- In addition, the use of progressive tension sutures can effectively secure advancement flaps and obliterate dead space, providing a reliable reconstructive strategy for managing complex soft-tissue defects in this high-risk population.^{4,6}