

RIGHT GLUTEAL COMPARTMENT SYNDROME AFTER
A LEFT RADICAL NEPHRECTOMY: A case report.

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INTRODUCTION

- Acute compartment syndrome is **challenging to diagnose**.
- If unrecognized > **permanent neurologic deficit** and significant disability.
- Physicians must have a **high index of suspicion** to avoid a delay in diagnosis.
- **Out of proportion pain** is a **cardinal clinical feature**.
- Dense anesthesia/analgesia using regional/neuraxial techniques has been implicated to mask these symptoms.
- Gluteal Compartment Syndrome is a rare subtype: especially after non-orthopedic surgeries.
- It is most commonly seen after injuries/surgeries to the extremities.

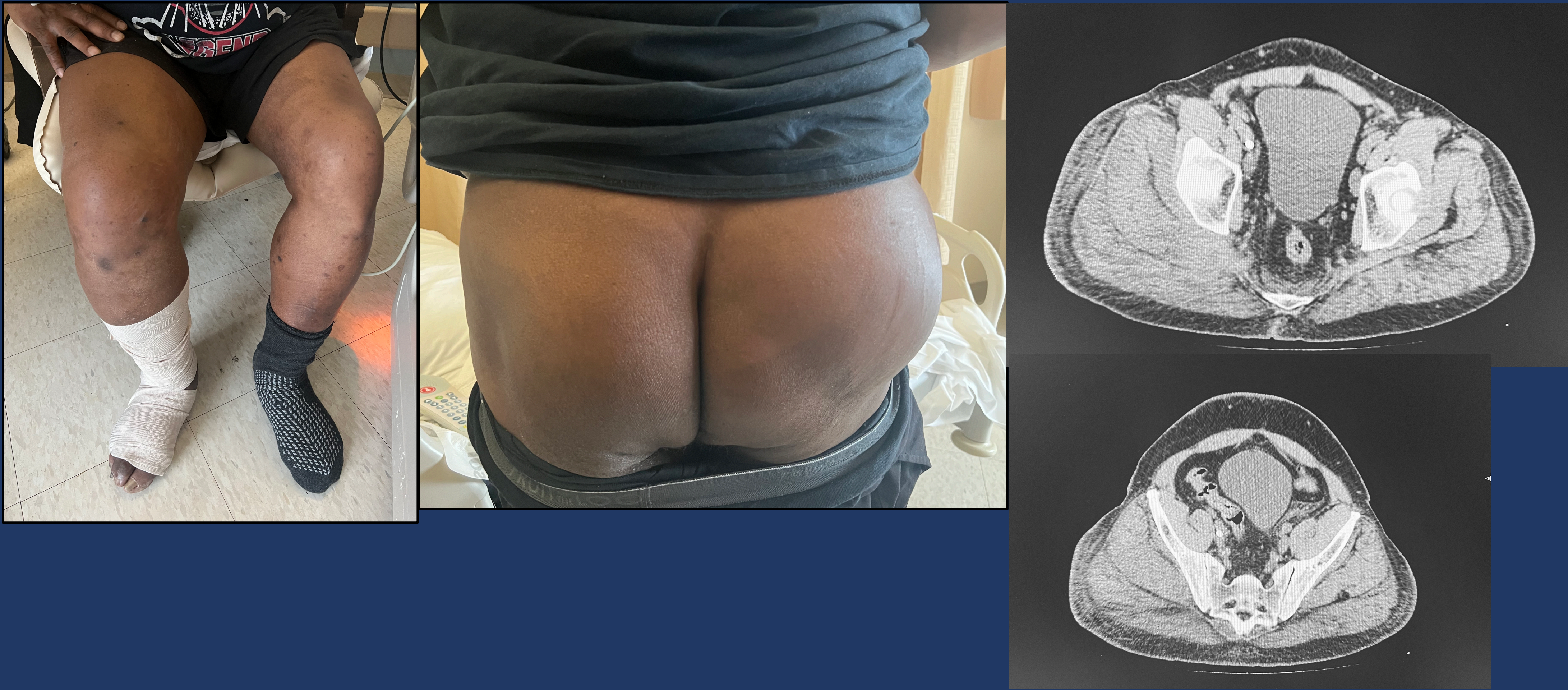
CASE PRESENTATION

- 62 year old 103-kg male underwent an 8-hour left radical open nephrectomy for renal cell mass.
- PMH: HTN, DM, CKD stage 3, COPD, former heroin user on methadone.
- For post-op pain, a thoracic epidural was placed before the case at T7-8 and test dose given.
- Upon arrival to PACU the patient was complaining of severe right lower extremity weakness and patchy sensory loss. Epidural catheter was left in place and continuous infusion was not started.
- Exam revealed **no back pain, tenderness or swelling**, posterior aspect of the right leg with mild swelling and weakness, warm lower extremities, and **palpable DP/PT pulses bilaterally**.
- The patient was monitored closely overnight with neuro checks every 2 hours.

POD 1

- The right buttock was markedly deformed when compared to the left, edematous, firm and tender to palpation.
- Significant pain located in his right buttock radiating to his leg, associated with patchy sensory deficits over the entire RLE and weakness on right foot dorsiflexion.
- The patient had no paraspinal or midline tenderness and no swelling over epidural insertion site.
- Distal pulses were intact.
- Compartment syndrome was suspected and Emergent Lumbar/pelvic MRI and CK were ordered.
- Epidural catheter was removed later.

IF YOUR PATIENT HAS WEAKNESS AND SENSORY LOSS
AFTER PLACEMENT OF AN EPIDURAL ..
.....WATCH TWICE!
IT MAY NOT BE WHAT YOU ARE THINKING.



MATERIALS AND METHODS

Patient consent was obtained for the submission of this case report.

Workup

- MRI reported: **diffuse edema involving right posterior buttock including muscles and adjacent soft tissues, with hyperintense collection within the nephrectomy bed and extension inferiorly along the lateral conal fascia and along the left pelvic sidewall anteriorly.**
- **CK results > 40.000 units/L.**
- **Gluteal compartment syndrome was confirmed**, orthopedic and vascular services were consulted and the patient transferred to the surgical ICU for close monitoring.

Treatment

- Surgical management was recommended but the patient declined since had been experiencing improvement in his pain, and was managed conservatively.

DISCUSSION & CONCLUSIONS

- An increase in the volume of the gluteal compartment associated with inflammatory changes, trauma, pressure due to positioning, and decreased venous and lymphatic drainage can increase the pressure of this compartment and lead to compartment syndrome.
- Compartment syndrome has been described in relation to operative positioning and obesity in association with neuraxial analgesia, orthopedic surgeries being one of the most commonly cited.
- In our review of the literature gluteal compartment syndrome after nephrectomy is extremely rare. We believe that the length of the procedure, positioning, and the characteristics of our patient predisposed him to develop this condition.
- The sensory and motor impairment in patients with compartment syndrome can be clinically similar to patients receiving epidural infusions, which our patient did not receive.
- We advocate for the identification of at-risk patients in the perioperative period and a discussion with the surgeons in regard to length of surgery and position of the patient.
- Whenever compartment syndrome is suspected clinically, an aggressive management should be taken in order to prevent long-term complications.