

# Quadratus Lumborum Myonecrosis as a Rare Etiology of Rhabdomyolysis

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## Introduction

- Rhabdomyolysis is a severe condition involving skeletal muscle breakdown, releasing intracellular components like creatine kinase (CK) and myoglobin into the bloodstream.
- Etiologies are diverse and diagnosis can be challenging due to variable symptoms and overlapping causes.
- This case explores an uncommon etiology—isolated quadratus lumborum myonecrosis—as a contributing factor in rhabdomyolysis, highlighting the diagnostic challenges and management of rare retroperitoneal muscle involvement.

## Case Presentation

### Initial Presentation

35-year-old female with history of substance use disorder presented to the ED in septic shock after being found unresponsive.

- Initial CK: 4,094; concern for necrotizing fasciitis due to tense, erythematous left calf.
- Emergent OR: No NSTI found, soft compartments.
- ICU admission for resuscitation and sepsis management.

### Hospital Day 5:

- CK jumped to 20,000 with new severe left calf and thigh pain → concern for compartment syndrome.
- Fasciotomy performed: compartment syndrome of superficial posterior compartment only.
- CK levels began to decrease.

## Case Presentation

### Hospital Day 7:

- CK rose to > 50,000.
- Aggressive workup:
  - Soft compartments in all other major muscle groups.
  - Pharmacy consult revealed no medication cause.
  - 3rd OR confirmed no incomplete fasciotomies.
  - CT showed left quadratus lumborum effacement with concern for myonecrosis (Figure 1).
- Given the significant morbidity of another exploration in this retroperitoneal location, the decision was made to proceed with aggressive hydration and serial monitoring.

### Hospital Day 9 onward:

- CK levels began to decline.
- Wounds were closed, and her convalescence was otherwise uneventful.
- Discharged to rehab on HD20

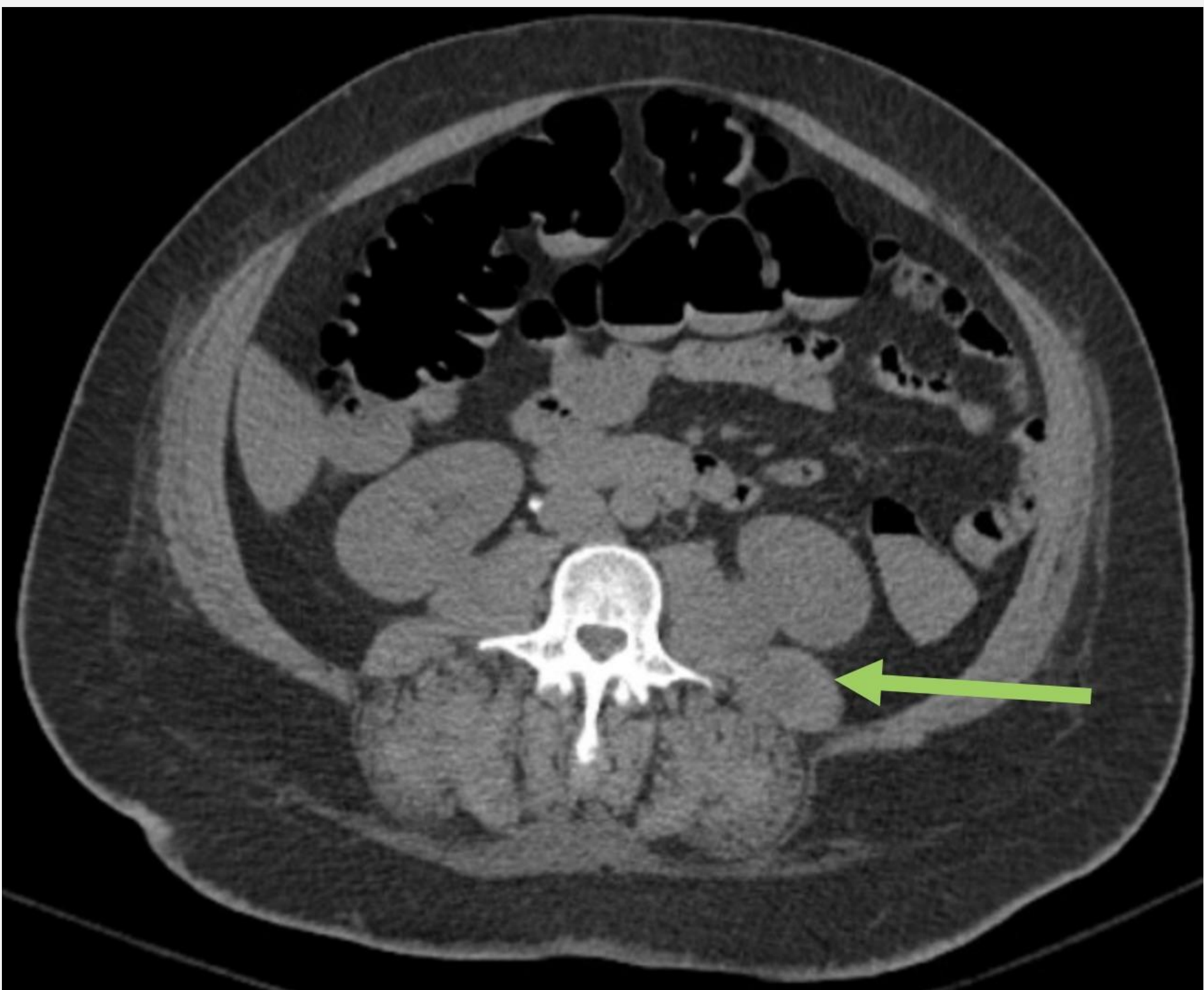


Figure 1. CT Abdomen and Pelvis

## Clinical Discussion

- CK levels indicated ongoing muscle damage despite extensive investigations revealing no definitive etiology, other than the isolated finding of quadratus lumborum effacement on imaging concerning for myonecrosis.
- Prolonged immobilization can cause muscle ischemia from vascular compression and result in rhabdomyolysis, potentially explaining isolated retroperitoneal muscle involvement—despite expectation that more superficial muscles would be affected.
- Operative management to rule out worsening compartment syndrome, combined with intensive critical care, ultimately led to a successful outcome

## Conclusions

This case highlights the complexities of managing rhabdomyolysis without a clear etiology and introduces quadratus lumborum myonecrosis as a potential contributing factor. Data on retroperitoneal/quadratus lumborum myonecrosis is limited and underscores the need for further research.