**BACKGROUND**

Rhabdomyolysis is an acute striated muscle breakdown from various causes, including toxic, metabolic, vascular, and direct pressure. It ranges from asymptomatic elevation in creatinine kinase (CK) to a potentially life-threatening state. Classically, diagnosis consists of a symptomatic triad of muscle pain, weakness, and dark urine, as well as a CK level greater than 5 times the upper limit of normal (normal level 45-250IU/L). Prompt diagnosis of rhabdomyolysis is vital to prevent serious complications such as acute renal failure, compartment syndrome, and disseminated intravascular coagulation. Recognizing rhabdomyolysis clinically is becoming more difficult as many patients do not have a classic presentation. Greater than 50% of patients may not report any muscular symptoms, and laboratory values may be inconclusive as CK also slowly rises after injury with peaks 24-72 hours afterwards. Imaging techniques may aid in diagnosis when there is clinical suspicion in unclear cases. This can prevent unnecessary biopsies, plan urgent decompressive fasciotomies, and greatly help with cases involving altered mental status.

**CASE 1: MASTICATOR SPACE INVOLVEMENT WITH SEQUELAE**

- **HPI:** 39 M, Found down, unknown duration, after running in cold weather. Complained of right sided facial and bilateral lower extremity pain
- **PMH:** None
- **Physical Exam:** Swelling and tenderness in right facial area. Tenderness and weakness in bilateral lower extremities
- **Labs:** CK: 300 IU/L Cr: 5mg/dL

[**Images**](Image 1)

**Axial T1 and T2** MR images: diffuse edema of masticator space muscles on the right with subcutaneous edema (arrow). T1 post-contrast (C) axial and (D) coronal MR images: diffuse enhancement of right masticator space muscles.

**CASE 2: LUMBAR AND GLUTEAL INVOLVEMENT**

- **HPI:** 36 M, Found down, feverish. Complained of lower back and lower extremity pain.
- **PMH:** Polysubstance abuse, HepC
- **Physical Exam:** Respiratory distress
- **Labs:** CK: > 8,000 UA: Dark urine
  - Urine tox: (+)THC, (+)Cocaine, (+)Heroin

[**Images**](Image 2)

**Axial Non-contrast CT (A and B), level of the lumbar region:** Enlargement from edema and hemorrhagic component of the posterior paraspinal muscles on the right.

**CASE 3: RIGHT LOWER EXTREMITY INVOLVEMENT**

- **HPI:** 50 M, found acutely intoxicated of alcohol and drugs
- **PMH:** None
- **Physical Exam:** Altered mental status, Right lower extremity (RLE) weakness
- **Labs:** CK: 3030 IU/L Cr 4.2 mg/dL Urea 82 mg/dL

[**Images**](Image 3)

**Sagittal T2 (A) with fat saturation shows diffuse edema of the muscles within the posterior compartment of the calf.

**REFERENCES**