INTRODUCTION

- More common, less severe complications of prone positioning are pressure ulcers while more severe complications, such as rhabdomyolysis and compartment syndrome of the quadriceps have also been reported.
- Hereditary spherocytosis (HS) is a hemolytic disorder with altered red cell deformability that can rarely be associated with leg ulcers.
- It is unknown if HS is a predisposing risk factor for pressure-related injuries.
- We present two adolescent patients with HS who underwent revision posterior spinal instrumentation and fusion (PSIF) who developed bilateral myonecrosis of the quadriceps.

METHODS

- Two adolescent patients underwent PSIF and both developed myonecrosis of the quadriceps.
- Retrospectively, both patients found to have HS.

RESULTS

- **Case 1**: 18 year-old-male with HS and subsequent splenectomy.
  - 9 hour surgery
  - Post-operatively developed pressure ulcers along the areas of thigh pads
  - Continued thigh pain one month post-op
  - MRI obtained showed myonecrosis of the quadriceps - managed conservatively
  - Thirteen months post-op, thighs soft, with strongly positive Ely test to 90 degrees.

- **Case 2**: 17-year-old female with HS and subsequent splenectomy.
  - 6 hour 51 minute surgery
  - Area of erythema and superficial abrasion seen post-operatively.
  - Persistent pain two weeks post-op
  - MRI showed concern for pyomyositis
  - Taken urgently to operating room for irrigation and debridement with no evidence of infection.
  - Wound cultures negative, tissue biopsy showed fragments of fibroconnective tissue and muscle with necrosis consistent with ischemia.
  - Full range of motion two-months post-op.

CONCLUSION

- Prone position puts patients at risk for spectrum of myocutaneous complications.
- Leg ulcers in HS likely secondary to increased blood viscosity leading to decreased skin perfusion.
- We hypothesize these patients developed tissue ischemia at the sites of padding due to compression of microvasculature in conjunction with decreased erythrocyte deformability.
- Further studies needed to assess correlation.

Credits/Disclosures/References


Caimi GG. Clinical hemorheology and microcirculation: Clinical conditions responsible for hyperviscosity and skin ulcers complications. IOS Press; 05/2017:1.

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