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Clay Shoveler's Fracture in a High School Pole Vaulter

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OBJECTIVE

To recognize the typical signs and symptoms of a Clay Shoveler's fracture as it can be frequently overlooked due to its rareness.

MEDICAL HISTORY

16 year old male pole vaulter presented to the athletic training room initially on 01/31/19 with right sided neck pain/upper back pain. Patient states that injury occurred while he was participating in off-season weight lifting with his team and max deadlifted 275 pounds. He also admits that he had "poor form" during this particular lift and immediately felt sharp pain and a "pop" in the mid-aspect of his upper back/neck region. After initial onset, pain then became more "achy" and "sore" in nature. Pain was rated 5/10 in severity at time of injury and 3/10 during clinical evaluation. No obvious deformity, ecchymosis, or swelling present. Mildly tender to palpation over lower cervical spine, upper thoracic spine, and muscle belly of trapezius. Full cervical and shoulder ROM bilaterally. Negative Lift-Off Test. Negative Spurling's Test. No neurovascular issues. Patient was eventually referred to Team Physician, Dr. Paul Saluan on 02/13/19 for further evaluation and imaging. Imaging revealed a displaced C7 spinous process avulsion fracture ("Clay Shoveler's fracture.

DIFFERENTIAL DIAGNOSIS

Trapezius Strain, Cervical Spine Osteoarthritis

RELATED LITERATURE

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TREATMENT

Initial treatment regimen consisted of ice and rest; follow up examination scheduled for 03/20/19 with repeat xrays. Follow up radiographs showed interval healing and patient was cleared to progress back into running but was not cleared to progress back into pole vaulting or weight lifting at that time.

EXPECTED/UNIQUENESS

This case was unique in that the athlete sustained a fracture that is rarely reported in athletes. Although the Clay Shoveler's fracture does not occur frequently in athletes, it is well documented as being an occupational or laborer injury. It is also now commonly seen in traumatic falls and motor vehicle accidents.

CONLCUSION

After 10 weeks of healing, patient was cleared to fully return to pole-vaulting with no

restrictions on 04/15/19. Patient was able to successfully compete for the remaining part of his junior year track and field season with no issues.

KEY WORDS: *Clay Shoveler, Fracture, Cervical, Stable, Spinous Process, Avulsion*