

Collegiate Soccer Athlete

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BACKGROUND

PATIENT

- 18 year old division III female soccer athlete

HISTORY

- Amplified Musculoskeletal Pain Syndrome in an 18-Year-Old Female Collegiate Soccer Athlete.
- Over the span of 2 weeks she had multiple hospital visits because of the severe 9/10 pain.
- She was diagnosed with a kidney infection from the Extended spectrum beta-lactamases (ESBL) bacteria, which caused ulcers to react with the surrounding nerves creating a constant sharp pain.
- Once the ulcers subsided, the patient reported amplified pain with activities such as lying, sitting, standing, walking, and sleeping.
- She reported to soccer preseason approximately 6 months after the original infection having lowered pain levels but still not fully participating in sport activities.

Special Test

- A physical and psychological exam were done to diagnose patient.

DIFFERENTIAL DIAGNOSIS

- Amplified Musculoskeletal Pain Syndrome
- Pyelonephritis
- Vesicoureteral Reflux

TREATMENT

INITIAL CARE

- Patient was treated for kidney infection by bed rest for 2 months.
- The patient was given Invanz from a PICC line.
- Patient was kept out of play due to the depilating pain, post recovery from kidney infection.
- Patient was referred to psychologist.

PHYSICIAN FOLLOW UP

- Patient had increased debilitating pain after her kidney infection subsided.
- Patient was referred to 5 weeks physical therapy.
- Diagnosis: Amplified Musculoskeletal Pain Syndrome

TREATMENT

- The rehab consisted of a "Return to Run Guideline" and several strengthening exercises.
- Strengthening exercises consisting of Lateral Band Walks, Hamstring Stretches with a Strap, Transverse Abdominal Exercise with Bent Knee Fall Outs, and Planks.
- The return to run guidelines consisted of warm up, stretching, jogging/walking, workouts, stretching, and ice; done twice a week with one day of rest in between.
- The workouts started at 1:1-minute jog/walk ratio and progressed to a 2:2, 3:2, 3:1, 4:1, 4:.30, 5:.30, 10:1, 20:0, 25:0.
- Patient could only move on in progression if the workout was done pain free. There were 11 progressions that varied in minutes.

RETURN TO PLAY

- Following physical therapy, the patient began a return to play program consisting of a core stabilization program and progressions consisting of individual drills, live drills, scrimmages, and games with gradual increased time and intensities.
- Patient was instructed to play as tolerated and often did alternative drills during practice.
- Patient reported having reduced pain at rest and increased pain occurring when stressed, increased intensity of activity, or playing more than 20 minutes, 2 months post rehab.
- Patient was monitored for an increased perception of pain for preseason and 6 weeks of the season.

FOLLOW UP

- Patient completed the soccer season with full participation.
- 1 year and 4 months post initial injury, patient is due for surgery to clean up scar tissue and damage from the injury.

UNIQUENESS

- Amplified musculoskeletal pain syndrome is an umbrella term which incorporated most musculoskeletal pain syndromes.
- Most cases are female (80%) and the mean age of onset is 12 to 13 years.
- Patients usually experience this syndrome in combination with a predisposing factor of illness, injury, or stress.
- Signs of allodynia make the pain extreme, like "the breeze of someone walking by hurts".

RELEVANT EVIDENCE

- In cases of treated patients there is a 15% relapse rate with patients in the first 6 months.¹ AMPS is recognizable by autonomic signs, allodynia, autonomic dysfunction of the limbs, or localized pain at the back, chest or jaw, from stimuli elsewhere.¹ Rehabilitation consists of a formal intensive program that focuses on re-establishing function without medication or use of modalities.¹ Treating the pain by desensitization takes about 3-4 weeks.

CONCLUSIONS

- AMPS is very painful syndrome that is brought on by a neurologic response to injury, illness, or stress.
- This syndrome once recognized, is treatable but patients have long term complications which may rule them out from playing.
- As athletic trainers it is important to educate ourselves with AMPS and how we can recognize, treat and rehabilitate patients.

REFERENCES

1. Sherry DD. Diagnosis and treatment of amplified musculoskeletal pain in children. *Clinical and Experimental Rheumatology*. 2001; 19:617-620.
2. Sherry DD. Amplified Musculoskeletal Pain: Treatment Approach and Outcomes. *Journal of Pediatric Gastroenterology and Nutrition*. 2008;47(5):693-694.