Background
Ankylosing spondylitis (AS): form of arthritis characterized by chronic inflammation of the axial skeletal system that causes back pain and loss of mobility with strong potential for slow, eventual spinal fusion.
- Affects 0.2-0.5% of the United States population
- No known cure, yet greater than 60 genetic components are involved
- HLA-B27: genetic component highly correlated with AS
  - Affects 0.2-0.5% of the United States population
  - Presence creates inflammatory response at bony attachment sites of tendons, ligaments, and joint capsules.
- Peripheral joint involvement
- Intermittent and/or significant back pain and stiffness across sites of tendons, ligaments, and joint capsules.
- Activities of daily living: independent, modified or limited
- Neural assessment: parasthesia to left foot, occasionally to right knee
- Limitation of active range of motion (AROM): thoraco-lumbar flexion, lumbar lateral flexion and rotation (pain with all)
- Modality assessment: parasthesia to left foot, occasionally to right knee

Purpose: Describe a comprehensive approach for physical therapy (PT) management of AS to assist clinical decision reasoning and clinical decision making and enhance care management in this patient population.

Timeline
- Low back pain began 3 years prior
- May 2019: PT Initial Evaluation
- June 11: Initial US confirmed ovarian cysts, PT on hold
- July 5: US confirmed AS confirmed by a ray
- July 9: Cosentyx initiated
- July 10: Remicare biologics therapy initiated
- July 23: PT resumed
- July 31: PT Re-eval: ODI: 32% NPIRS: 5-10/10
- Sept 13: PT Re-eval: ODI: 50% NPIRS: 0-6/10

Outcomes
- Oswestry Disability Index
  - Initial: 32
  - Week 7: 32
  - Week 13: 50
- Numeric Pain Rating Scale
  - Initial: 10
  - Week 7: 10
  - Week 13: 0

Interventions
- Soft Tissue Mobilization
- Therapeutic Exercise
- Postural Re-education

Home Exercise Program
- Lumbar rotations
- Hamstring stretch
- Bridge with resisted abduction
- Resisted clam shells

Modalities
- Neuromuscular Re-education
- Joint Mobilization

Discussion
- Greatest improvement reported after initiation of Cosentyx and Remicare, immunosuppressant drugs utilized to decrease systemic inflammation.
- Soft tissue mobilization combined with interferential current therapy seemed to provide greatest pain relief during PT
- Goals seemed to provide little insight quantifying patient progress and condition

Limitations:
- Limited evidence available regarding PT management of AS, publication of this case report prior to patient discharge from PT
- Future research opportunities: clinical practice guideline, treatment guidelines for active vs. non-active AS

Take home point: This case demonstrated the evolving and ever-changing nature of AS. Collaborative care, pharmaceutical intervention, and patient-centered, symptom-focused intervention seemed to provide greatest benefit for this patient.

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Contact the author: jadkins1@une.edu