

PARSONAGE TURNER SYNDROME AND COVID-19

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Background

- Parsonage Turner Syndrome (PTS), also known as idiopathic brachial plexopathy.
- It is a rare disorder involving the brachial plexus characterized by abrupt onset of unilateral shoulder and upper extremity pain along with weakness. [1]

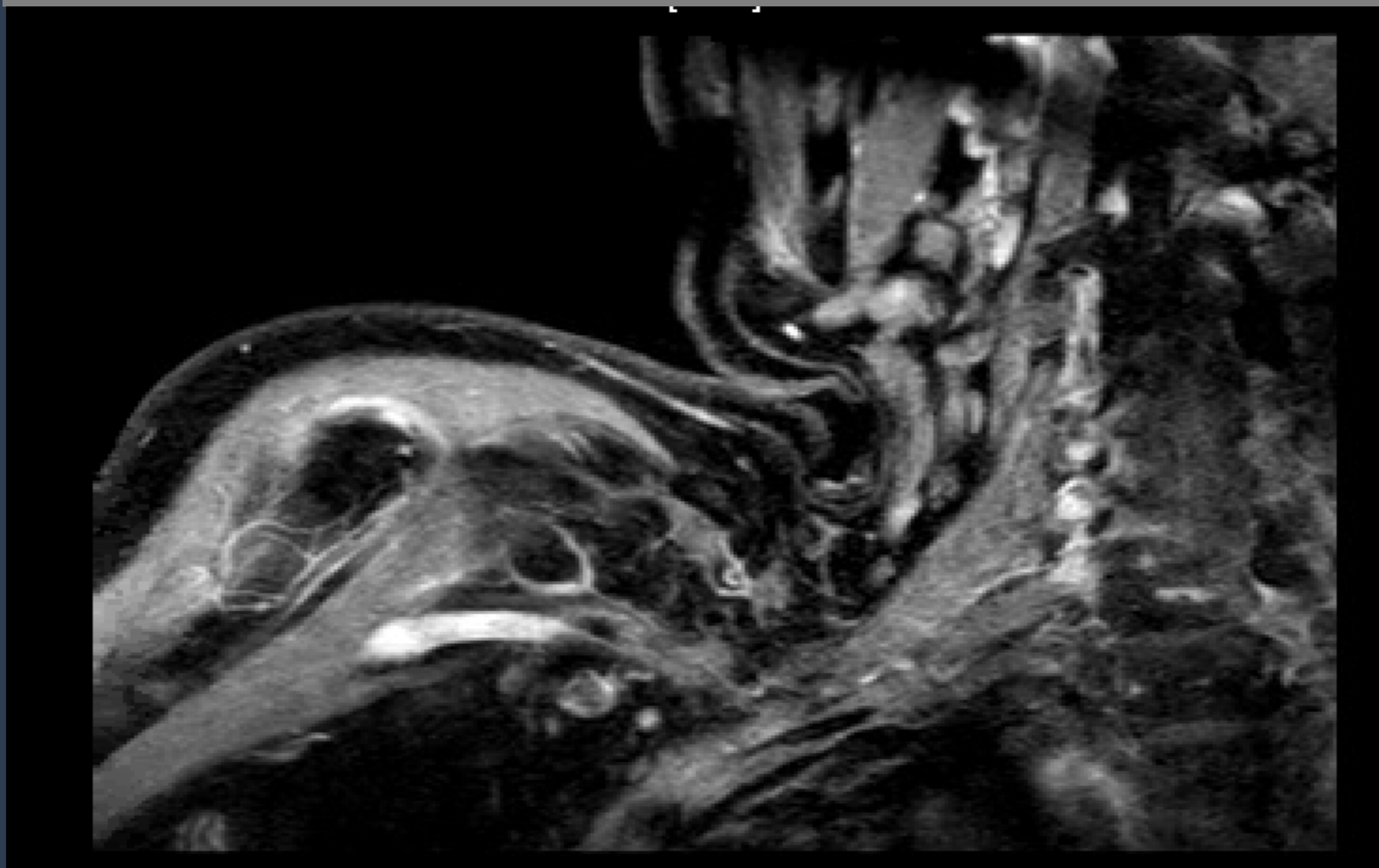
Case Description

- 46-year-old male with a past medical history of hypertension presented with shortness of breath that required immediate intubation.
- He was diagnosed with COVID-19.
- During recovery, developed sudden right upper extremity weakness with a limited range of motion.
- Noted to have subluxation of his right shoulder, a wrist drop, and paresthesias in C6 and C7 dermatomes. Deep tendon reflexes were symmetrical bilaterally. Adson, Lhermitte, Hoffman, Neer and Jobe tests were negative. No scapular winging was observed.
- MRI revealed supraspinatus tendinosis with a small tear and extensive edema in multiple shoulder muscles suggesting a brachial plexus injury.

Discussion

- There is no known cause for PTS, but it is likely related to an auto-immune inflammation. PTS is observed post-operatively, after infections (Epstein-Barr virus, cytomegalovirus, human immunodeficiency virus, mycobacterium tuberculosis and salmonella), post-vaccination and with medications (abacavir and infliximab). [2]
- Though COVID-19 mainly presents with respiratory symptoms, many atypical presentations including encephalitis, myocardial infarction and cerebral vascular accidents have been seen. To our knowledge, PTS with COVID-19 has not been reported as yet. It is quite possible that COVID-19 triggered an immune response in our patient that led to PTS.
- There was no trauma during his hospital stay to suggest direct injury to the brachial plexus. Subsequently, he was diagnosed with Parsonage Turner syndrome (PTS).

MRI



Conclusion

- During patient's inpatient stay, his COVID-19 related respiratory symptoms resolved, and he was provided with pain control, transcutaneous electrical nerve stimulation & physical/occupational therapy.
- He was discharged home with continued outpatient therapy for his right arm.
- Prognosis for PTS is usually good with expected recovery in 18 to 24 months.

References

- [1] Feinberg, Joseph H, and Jeffrey Radecki. "Parsonage-turner syndrome." HSS journal : the musculoskeletal journal of Hospital for Special Surgery vol. 6,2 (2010): 199-205. doi:10.1007/s11420-010-9176-x
- [2] Van Eijk, Jeroen J J et al. "Neuralgic amyotrophy: An update on diagnosis, pathophysiology, and treatment." Muscle & nerve vol. 53,3 (2016): 337-50. doi:10.1002/mus.25008

