

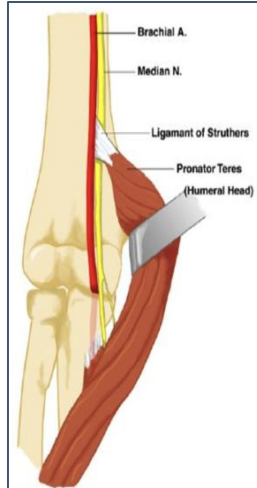
# An unusual presentation of Median Nerve Entrapment at the Ligament of Struthers

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## Case Presentation

- A 65 year old female with pain, numbness, and tingling of the right arm, had prior history of bilateral carpal tunnel release, no other significant history.
- The patient exhibited weakness in wrist pronation and flexor pollicis longus (FPL) activation as well as numbness of the right forearm .
- Initial electrodiagnostics showed median neuropathy across the right wrist, appearing as recurrence of carpal tunnel syndrome.
- After three weeks of worse symptoms, electrodiagnostics revealed fibrillations and sharps of the pronator teres and decreased recruitment of the FPL and pronator quadratus, raising concerns for a more proximal median nerve entrapment.
- MRI confirmed presence of a Ligament of Struthers (LS) compressing the median nerve at the right elbow. Patient underwent decompression of the median nerve.



**Above** shows the Median n. and Brachial a. passing under the Ligament of Struthers, creating a potential site of compression. **Left** shows results of follow-up EMG.

## Discussion

- The LS is a structure that originates from a supracondylar process and inserts into the medial condyle of the humerus.
- Both the median nerve and brachial artery pass under the LS creating a potential source of compression, leading to paresthesias and numbness of the hand and forearm, also known as supracondylar process syndrome.
- The prevalence of the LS in the general population is 0.1% to 2.7%.
- Electromyography, ultrasonography, and MRI can help confirm clinical findings and to rule out other causes of median nerve compression.
- In symptomatic cases, surgical interventions are often curative.

## Conclusion

Median nerve compression under the LS is a rare process that can lead to supracondylar process syndrome, presenting similarly to carpal tunnel syndrome in addition to symptoms in a more proximal distribution. Electrodiagnostics and imaging followed by surgical intervention are keys to diagnosis and treatment.

EMG Summary Table										
Muscle	Spontaneous					MUAP			Recruitment	Add'l Comments
	IA	Fib	PSW	Fasc	Other	Amp	Dur.	PPP	Pattern	
R. Pronator quadratus	Normal	None	None	None	None	Normal	Normal	None	2+ Red	None
R. Biceps brachii	Normal	None	None	None	None	Normal	Normal	None	Normal	None
R. Triceps brachii	Normal	None	None	None	None	Normal	Normal	None	Normal	None
R. Pronator teres	Normal	3+	3+	None	None	Normal	Normal	None	Normal	None
R. Abductor pollicis brevis	Normal	None	None	None	None	Normal	Normal	None	Normal	None
R. Flexor pollicis longus	Normal	None	None	None	None	Normal	Normal	None	2+ Red	None