

USING NEUROLYSIS AS A REGENERATIVE APPROACH TO RECOVERY FROM TRAUMATIC NERVE INJURY



Kanwardeep Singh, MD; Jack Leal, DO; Aniroodh Reddy, DO; Paul Pipia, MD

Department of Physical Medicine and Rehabilitation
Nassau University Medical Center, East Meadow, New York

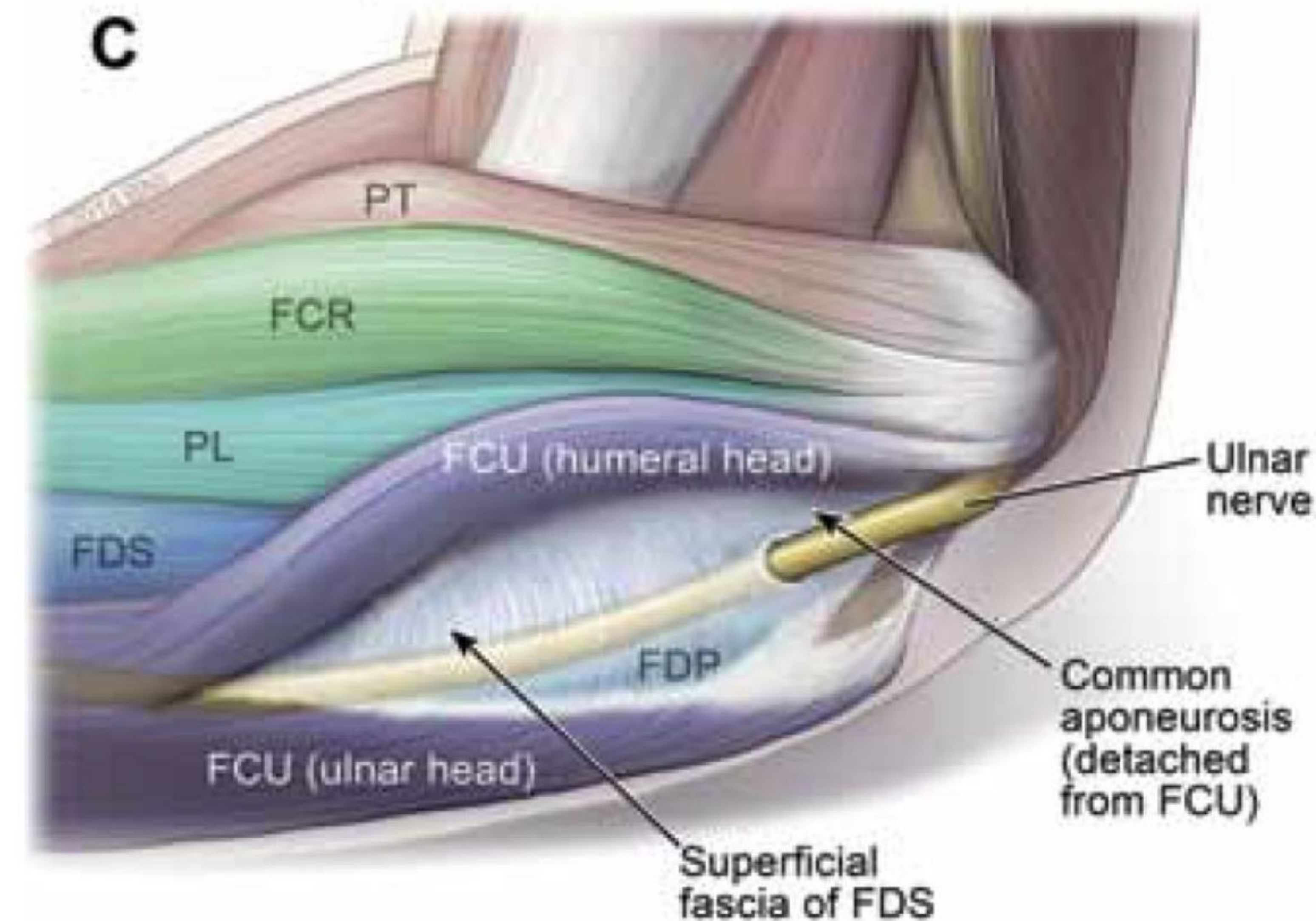


Case Presentation

35 year old male presents with stab wound left ulnar aspect of forearm with weakness and pain now s/p Left Ulnar Nerve Neurolysis with FDP and FCU tendon repair. Postoperative ulnar deviated pain, weakness and loss of sensation persisted. Patient began an occupational therapy program and advanced from non-weight bearing status to passive range of motion modalities with dorsal block splint. One month following surgery with a focused therapy program, the patient reports improvement in FDP function and some return of sensation in ulnar deviation.

References

1. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4731549/>
2. <https://thejns.org/view/journals/j-neurosurg/1/6/article-p400.xml>



Discussion

Ulnar nerve neurolysis is a surgical procedure performed to release or decompress the ulnar nerve. Ulnar nerve provides sensation to the little and ring fingers and controls some of the muscles in the hand. In some cases, neurolysis can be performed in such a way as to promote nerve regeneration. This typically involves using a technique called "controlled injury," in which the nerve is partially damaged or compressed, but not completely destroyed. This controlled injury can stimulate the body's natural healing processes and promote the growth of new nerve tissue. Overall, the goal of neurolysis with regeneration is to not only relieve pain and other symptoms associated with nerve damage but also to promote the growth of new nerve tissue and restore function to the affected area. However, it is important to note that the success of this approach will depend on various factors, including the extent and location of the nerve damage, the patient's overall health and medical history, and the specific techniques used during the procedure.

Conclusion

Left ulnar nerve EMG/NCS study with findings of EMG needle evaluation at left first dorsal interosseous muscle showed increased insertional activity and increased spontaneous activity, concluding findings as incomplete ulnar axonal neuropathy. Following the advancement of therapy modalities to include active range of motion at the left 4th and 5th digits and the intrinsic muscles, the patient continues to show resolution of pain and progression of muscle motor activity.