



TARGETED MUSCLE REINNERVATION FOR PROSTHESIS CANDIDATE

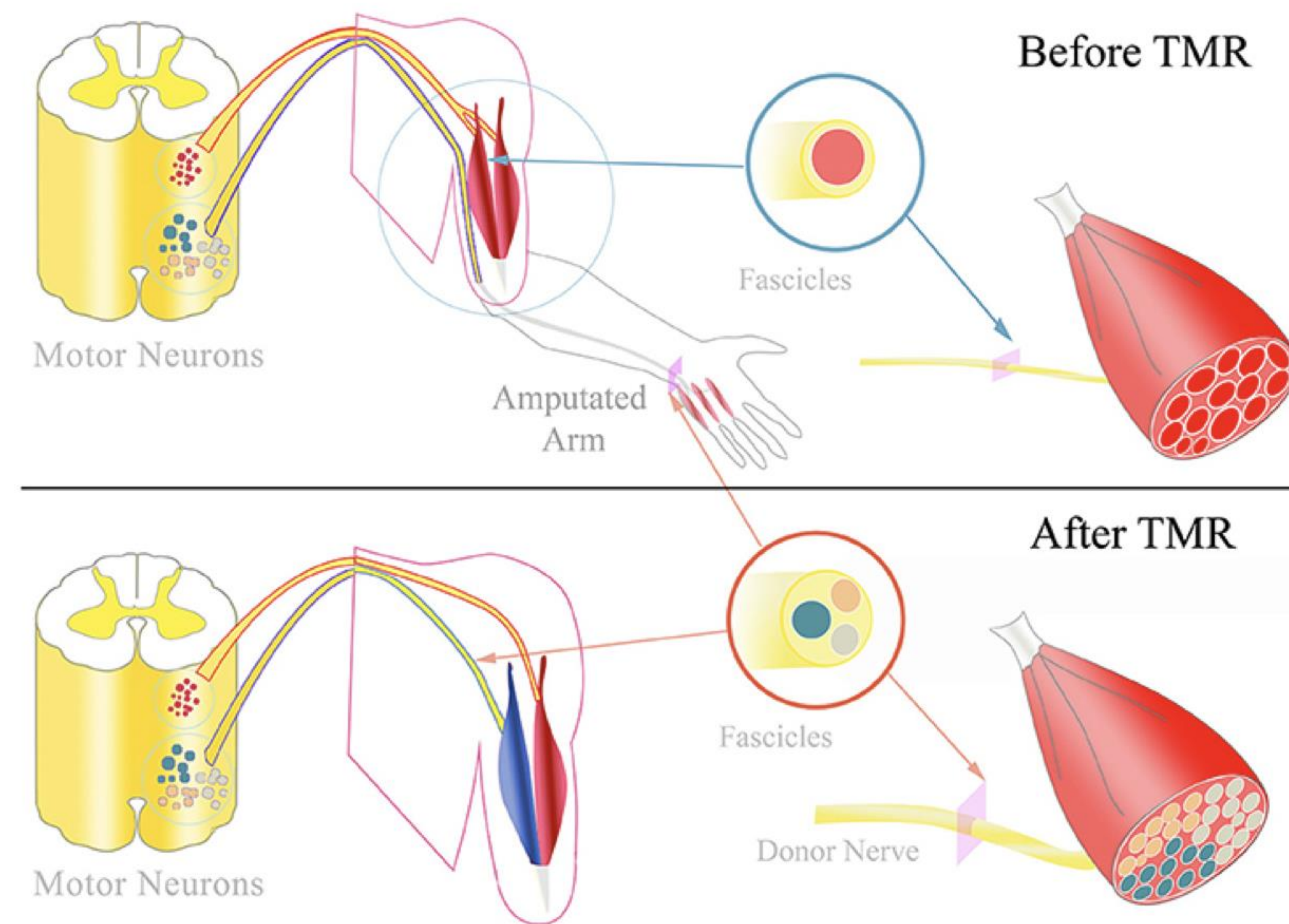
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Case Presentation

A 42-year-old female with a history of ESRD on dialysis, and Insulin-dependent Diabetes Mellitus presents to the clinic following recent left below elbow amputation and targeted muscle reinnervation. The patient sustained an injury to her left 2nd through 5th digits due to a car door-crushing injury with poor wound healing. Injury further complicated with subsequent dry gangrene and the patient underwent left hand amputation with targeted muscle reinnervation. The median nerve was anastomosed into the posterior interosseous nerve branch of the radial nerve, and further, the ulnar and radial nerve were implanted into the muscle grafts.



Discussion

Targeted Muscle Reinnervation (TMR) is a surgical procedure used to improve the control of prosthetic devices for people who have undergone amputations. The procedure involves re-routing nerves from the residual limb to a nearby muscle that is no longer functional but can be used to control a prosthetic device. TMR has been shown to provide significant benefits for amputees, including improved prosthetic control, reduced pain, and improved body image. The procedure is most commonly used for upper limb amputations, but can also be used for lower limb amputations. Overall, TMR is a promising technique that has the potential to significantly improve the lives of people who have undergone amputations, by allowing them to control their prosthetic devices and improve their overall mobility and quality of life.

Conclusion

Patient followed up in an outpatient prosthetic clinic for evaluation of left trans-radial prosthesis capable of assisting her in a variety of activities and ADLs and that will perform a variety of grip functions. Patient suffered from persistent neuropathic pain. It can be seen neurodegenerative process patient can suffer from neurogenic pain which can be controlled with Gabapentin dosing as needed. It is important to continue to monitor motor function improvements and pain control during rehab course.

References

1. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9512320/>
2. <https://www.plasticsurgery.org/for-medical-professionals/publications/psn-extra/news/targeted-muscle-reinnervation-to-end-amputation-nerve-pain>