

THE UTILIZATION OF PATTERN RECOGNITION CONTROL FOR THE TRANSHUMERAL AMPUTEE WITHOUT TMR SURGERY: CLINICAL EXPERIENCES

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ABSTRACT

Pattern recognition control has been commercially available since 2013 when COAPT released its Complete Control system. At the time of its launch, the clinical perception of the candidate selection for this control option was focused on those individuals who were proximal level amputees with TMR surgery. While it has been well documented that individuals with TMR surgery preferred pattern recognition control over direct control (1), the use of pattern recognition with non TMR proximal level amputees is yet to be definitively studied with commercially available prostheses. This presentation will share the author's experiences using COAPT's Complete Control system with two non TMR transhumeral amputees. Both of these individuals were previously fit with traditional direct control prostheses. In sharing these experiences, it will include the successes and challenges encountered in fitting these individuals with their prostheses as well as the perceptions of the users when comparing direct control with pattern recognition. The hope in sharing these cases is to inspire further investigation into utilizing pattern recognition for this population where an inclusion criteria can be established for pursuing this technology.

REFERENCES

1-Hargrove, Levi J., Blair A. Lock, and Ann M. Simon. "Pattern recognition control outperforms conventional myoelectric control in upper limb patients with targeted muscle reinnervation." Engineering in Medicine and Biology Society (EMBC), 2013 35th Annual International Conference of the IEEE. IEEE, 2013.