

# Botulinum Neurotoxin type A is effective to treat peripheral myoclonus post-amputation

## A MOVING RESIDUAL LIMB: BOTULINUM TOXIN TO THE RESCUE A CASE REPORT

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### INTRO

- Peripheral myoclonus is a rare post-amputation complication characterized by sudden, brief and sometimes repetitive muscle contractions.
- BoNT-A prevents the release of the neurotransmitter acetylcholine at the axon ending of the neuromuscular junction and blocks contraction.
- No standard treatment exists.

### METHODS

- A 57-year-old man with below-knee amputation due to infected post-traumatic aneurysm of the popliteal artery developed myoclonus in his stump.
- Reported injection protocols, lasting treatment time, donning time-period, and satisfaction of the patient.

Injections	Time	Total units (U)	Eff (w)	Prost - Time (h)	Satisf 0-10
BoNT-A injection 1	Feb 2016	Medial gastrocnemius - 25 Lateral gastrocnemius - 50	2	8	3
	Total U 100	Peroneus longus - 15 Peroneus brevis - 10			
BoNT-A injection 2	May 2016	Medial gastrocnemius - 50 Lateral gastrocnemius - 75	2	8	3
	Total U 200	Peroneus longus - 25 Peroneus brevis - 25 Tibialis anterior - 25			
BoNT-A injection 3*	Nov 2016	Medial gastrocnemius - 75 Lateral gastrocnemius - 75	8	8	3
	Total U 300	Peroneus longus - 50 Tibialis anterior - 100			
Total year injection: 600 U					
BoNT-A injection 4	Feb 2017	Medial gastrocnemius - 75 Lateral gastrocnemius - 75	8	16	4
	Total U 300	Peroneus longus - 50 Tibialis anterior - 100			
BoNT-A injection 5	April 2017	Medial gastrocnemius - 75 Lateral gastrocnemius - 100	6	16	4
	Total U 300	Peroneus longus - 25 Peroneus brevis - 25 Tibialis anterior - 75			
BoNT-A injection 6	July 2017	Medial gastrocnemius - 100 Lateral gastrocnemius - 125	10	16	7
	Total U 400	Peroneus longus - 100 Peroneus brevis - 75			
Total year injection: 1000 U					
Eval p-i	Sept. 2017		8	16	9

### RESULTS

- Discomfort improved after injections and led to a longer donning period.
- Multiple attempts were necessary before finding the best muscle injection combination.

Pre-inj video:



Post-inj video:



### DISCUSSION

- BoNT-A is not officially indicated for peripheral myoclonus treatment, but was effective in this case.
- After failure of conservative treatments, BoNT-A should be considered as a therapeutic approach.



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