

Surgical treatment of migraine headaches by transpalpebral resection of the corrugator supercilii muscle

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Objective

The purpose of this prospective study was to investigate the efficacy of surgical elimination of pericranial, muscular trigger sites of migraine headaches. The transpalpebral resection of the corrugator muscles leads to a lasting decompression of the supraorbital and supratrochlear nerves

Method:

Diagnosis of migraine headaches by a neurologist

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Questionnaire

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physical exam / localization of triggerpoints

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Botox injections into the corrugator muscles
(25 U each)

n = 92

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migraine diary for 8 weeks

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significant improvement in 74 out of 92 patients

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transpalpebral resection of corrugator muscles in 70 out of 74 patients

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1 year postoperative follow up exam

Demographics:

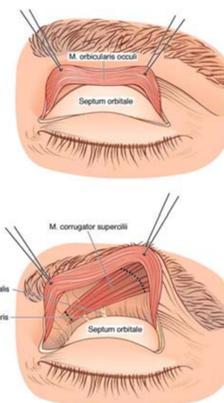
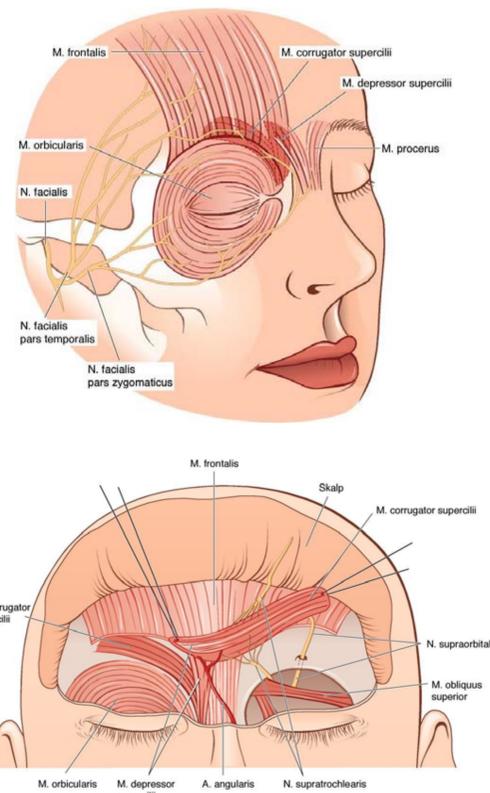
n = 70 (62 female / 8 male)

age range 24 – 62

mean age 49,3 ± 2,1

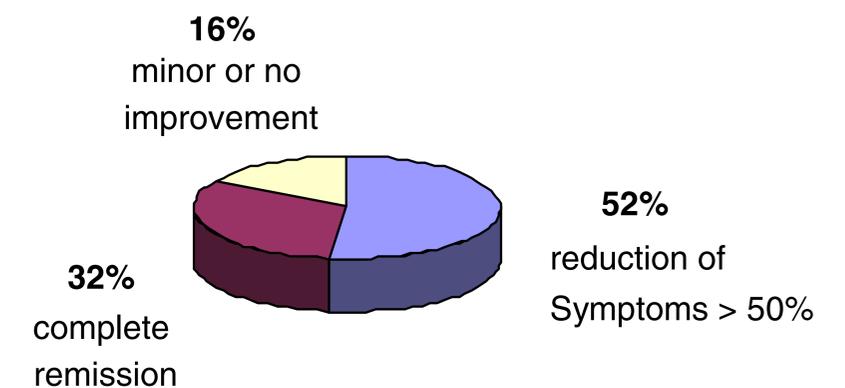
parameters/severity of migraine

- number of days of migraine headaches
- pain intensity
- amount of prescription drugs used
- number of days of sick-leave at work



Results (migraine post-op)

Significant improvement



- Negative prognostic factors for the operative outcome
 - advanced age
 - abuse of medication
 - most severe forms of migraine
- 84 % reduction of triptane intake
- 76 % reduction of the number of migraine associated days off-work

Conclusion

The chemical denervation of the corrugator muscles with botulinum toxin A served as a valid prognostic indicator of the surgical outcome. The transpalpebral resection of the corrugator supercilii muscles is a safe procedure that can be performed on an outpatient basis. 84% of the patients in this study experienced a significant improvement of their quality of life. Patients with severe, longstanding types of migraine headaches had a limited chance of symptomatic improvement and represented 92% of the group who showed only minor amelioration.