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Br J Neurosurg. 2012 Aug;26(4):438-44. doi: 10.3109/02688697.2011.641613. Epub 2011 Dec 15.

## Safety and effectiveness of microvascular decompression for treatment of hemifacial spasm: a systematic review.

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### Abstract

**INTRODUCTION:** Hemifacial spasm (HFS) is caused by vascular compression of the VII cranial nerve at its root exit zone from the brainstem. Microvascular decompression (MVD) is the only treatment option that offers the prospect of a definitive cure for HFS. We conducted the first systematic review on the safety and effectiveness of MVD for the treatment of HFS.

**METHODS:** English-language studies on MVD for HFS published from 2000 to present were retrieved and summarized. The primary outcomes of interest were treatment success, recurrence rate and adverse events including mortality, stroke, cerebrospinal fluid leak, facial palsy (permanent and transient) and hearing deficit (permanent and transient).

**RESULTS:** Twenty-two papers representing 5685 patients treated with MVD for HFS were included in this review. Complete resolution of symptoms following MVD was reported in 91.1% of patients over a median 2.9-year follow-up period. HFS symptoms recurred in 2.4% of patients and 1.2% underwent repeat MVD during the follow-up period. Transient complications included facial palsy (9.5%), hearing deficit (3.2%) and cerebrospinal fluid leak (1.4%). Permanent complications included hearing deficit (2.3%), facial palsy (0.9%), stroke (< 0.1%) and death (< 0.1%).

**CONCLUSIONS:** MVD successfully relieves HFS in approximately 9 of 10 patients with low rates of symptom recurrence. Complications of this surgery are uncommon and generally transient.

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