High speed drill

see MIDAS REX LEGEND.

Laminectomy utilizing a high-speed drill with an unprotected cutting drill bit can be rapid and effective, but it has been associated with known complications. Another technique utilizes a pediatric craniotome drill with the footplate attachment. Currently, there are no studies comparing clinical outcomes between these two stated decompressive techniques.

METHODS: A retrospective review was conducted at a single institution. Two cohorts of patients were considered based on the technical method of laminectomy for decompression. One group had decompression with utilization of a high-speed drill while the other group had decompression with a pediatric craniotome drill with a footplate attachment. The outcomes from each group were compared based on the length of operation, estimated blood loss, and associated complications.

RESULTS: A total of 91 patients were included in the final analysis. Forty-five of the patients underwent laminectomy utilizing a footplate and forty-six utilizing a high-speed drill. The footplate group was associated with significantly shorter time of operation (159 minutes vs 205 minutes p=0.008). In addition, the footplate technique demonstrated less EBL (254 ml vs 349 ml), and less incidence of durotomies (2.2% vs 10.9%), however, neither of these two outcomes achieved statistical significance.

CONCLUSION: Despite being an older technique, the aforementioned cohort demonstrates shorter operative time in the footplate group without increased blood loss or incidence of durotomy. Although comparable results are operator dependent, this technique is a safe alternative for performing cervical and thoracic laminectomies¹⁾.

1)

Elia C, Hariri OR, Duong J, Dong F, Sweiss R, Miulli D. Use of a pediatric craniotome drill for cervical and thoracic spine decompression: Safety and efficacy. World Neurosurg. 2018 Feb 17. pii: S1878-8750(18)30332-2. doi: 10.1016/j.wneu.2018.02.061. [Epub ahead of print] PubMed PMID: 29462736.

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