

Manual twist drill

The manual [twist drill](#) used for [intracranial access](#) represents an [opportunity](#) for potential [improvement](#) in [efficiency](#), [safety](#), and ease of use. A new [generation](#) of portable electrical [drills](#) with smart autostop mechanisms, such as the Hubly cranial drill ([Hubly Surgical](#); Lisle, IL), aim to address these opportunities for improvement.

Two patients received EVDs using the portable electrical autostop drill (PEAD): A 54-year-old woman who suffered a postoperative hemorrhage and a 59-year-old woman who presented with early hydrocephalus secondary to hypertensive subarachnoid hemorrhage (SAH). Between both patients, a total of 9 and 2 access attempts were necessary to breach the inner table and visual dura. Access times in both cases, from skin incision to dural puncture, were less than 5 min. There were no apparent complications with the use of the PEAD in either case, and there was excellent placement of the EVD at the foramen of Monroe in both cases.

Oak et al. demonstrate the first successful use of a portable electrical drill with smart autostop in humans. The PEAD has potential to reduce procedure time and human error. Further development of the smart autostop drill may allow for more consistent and safer EVD placement ¹⁾.

¹⁾

Oak A, Dardick J, Rusheen A, Materi J, Weingart J, Gonzalez LF, Anderson WS, Mukherjee D. First-in-human experience of a portable electrical drill with smart autostop for bedside external ventricular drain placement. J Clin Neurosci. 2024 Nov 27;131:110941. doi: 10.1016/j.jocn.2024.110941. Epub ahead of print. PMID: 39608055.

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