

# Letter: Bedside Percutaneous Twist Drill Craniostomy of Chronic Subdural Hematoma—A Single-Center Study

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J Neurosci Rural Pract:2020;11:506–507

We read the article “Bedside percutaneous twist drill craniostomy of chronic subdural hematoma—a single-center study” by Kidangan et al<sup>1</sup> with interest. The authors have highlighted their experiences with twist drill craniostomy in chronic subdural hematoma (CSDH) in a series of 80 patients.

The radiological selection criteria on computed tomography (CT) scan, which the authors have adopted for subjecting patients to twist drill craniostomy rather than burr hole evacuation, namely, CSDH with homogeneous hypodensity or isodensity and those with hyperdense gravity-dependent fluid levels, are unexceptionable. However, we feel that even bilateral CSDH with similar radiological features are also good candidates for this procedure, as controlled drainage may allow for uniform brain expansion bilaterally. Although we concur with the authors on other exclusion criteria, Garber et al<sup>2</sup> have contended that there are no preoperative imaging characteristics to suggest an advantage of one procedure over the other. Despite the excellent results, the authors report, in their series, that a concern with twist drill craniostomy is inadequate drainage of the subdural hematoma. A recent report by Brazdzionis et al<sup>3</sup> advocates the instillation of intracatheter tissue plasminogen activator in patients in whom the repeat CT scan shows unsatisfactory evacuation. It remains to be seen if this technique will be useful in septate CSDH as well and if so, the spectrum of patients treated by this technique might be broadened.

The advantages of a minimally invasive twist drill craniostomy and drainage have been well-described—bedside procedure without monitored anesthesia or anesthesiologist,<sup>4</sup> lesser analgesic requirements,<sup>5</sup> smaller incision,<sup>4</sup> lesser chance of worsening of previous neurodegenerative disorders,<sup>5</sup> and lesser cost.<sup>6</sup> Duration of hospital stay also appears to be reduced in patients undergoing a twist drill craniostomy.<sup>4,6</sup> The authors have inserted an infant feeding tube in the subdural space and connected it with a urobag with gravity-dependent drainage. We are unsure if such a technique would lead

to air entering the subdural space and negate the advantage of a controlled brain expansion, and with our limited experience, we would advocate placing the bag around the patients’ “head height.”

The site of placement of the twist drill craniostomy (more lateral than a conventional burr hole) and the rationale for the same has been described by the authors.<sup>1</sup> Others have described the parietal boss<sup>3</sup> or the area of maximal thickness of the hematoma<sup>7</sup> as the site of craniostomy. We feel that in addition to concerns about the position of the middle meningeal artery—which the authors have highlighted—a lateral location is safer to prevent injuries to cortical veins that may enter the dura at varying distances from the superior sagittal sinus. Other concerns with twist drill craniostomy include development of extradural hematoma and inadvertent brain penetration.<sup>7</sup> We avoid these by measuring the thickness of the skull on CT scan and keeping the twist drill bit just a little longer than the same (the base of the drill then acts as the stopper on touching the skin surface), avoiding a blunt drill tip to prevent separation of the dura from the inner table of the skull and not slowing down as the inner table is reached, so that there is a quick clean forceful penetration of the dura.

Finally, this paper is valuable in highlighting the safety and utility of twist drill craniostomy, as several surgeons have a preference for burr hole evacuation (even in radiologically favorable cases of CSDH), based on fear of insufficient anesthesia, reluctance to perform procedure outside the operating room, apprehension of complications, and unwillingness to try a new technique.<sup>8</sup>

#### Funding

None.

#### Conflict of Interest

None declared.

## References

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