

ISICEM: Decompressive Craniectomy May Be Harmful



The use of decompressive craniectomy in patients with severe diffuse traumatic brain injury and refractory intracranial hypertension appears to lower intracranial pressure and shorten intensive care unit (ICU) stays but is associated with more unfavorable outcomes, according to a study published online March 25 in the New England Journal of Medicine to coincide with research presented at the 31st International Symposium on Intensive Care and Emergency Medicine, held from March 22 to 25 in Brussels, Belgium.

In the Decompressive Craniectomy (DECRA) trial, D. James Cooper, M.D., of Alfred Hospital and Monash University in Melbourne, Australia, and colleagues randomised 155 adults with severe diffuse traumatic brain injury and refractory intracranial hypertension to first-tier therapies to undergo either bifrontotemporoparietal decompressive craniectomy or standard care between December 2002 and April 2010.

Compared to adults in the standard-care group, the investigators found that patients in the craniectomy group experienced less time with intracranial pressures above the treatment threshold, fewer interventions for increased intracranial pressure, and fewer days in the ICU. However, patients in the craniectomy group had worse scores on the Extended Glasgow Outcome Scale compared to those in the standard-care group (odds ratio [OR] for a worse score in the craniectomy group, 1.84) and a higher risk of an unfavorable outcome (a composite of death, vegetative state, or severe disability; OR, 2.21).

"The main lesson from the DECRA study is that surgical reduction of intracranial pressure by the technique that was used by the investigators does not necessarily result in better outcomes for patients and indeed appears to worsen them in at least some circumstances. However, it is important that the procedure not be simply abandoned on the basis of these data," writes the author of an accompanying editorial.

Several authors disclosed financial relationships with pharmaceutical and medical technology companies.

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