

Current Surgeon Opinions Concerning the Indications for Surgery in Metopic Craniosynostosis

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Introduction

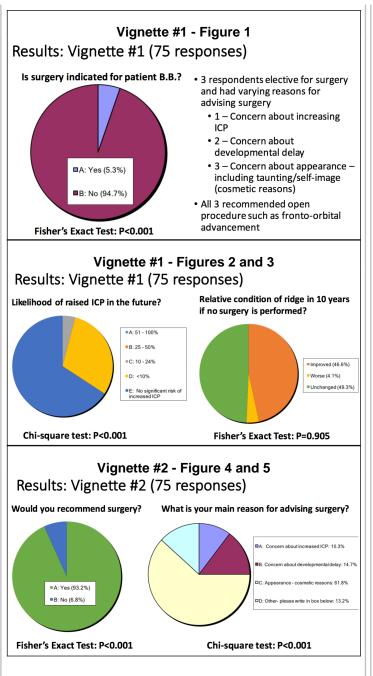
Metopic craniosynostosis lacks a defined threshold for surgery. We conducted a short online survey to determine if surgeon opinions reflected the current conflicting evidence in the literature.

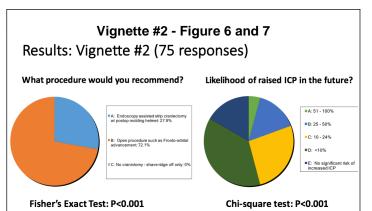
Methods

The survey was conducted using SurveyMonkey and recipients included members of the International Society for Pediatric Neurosurgery (N=212). The survey consisted of 2 clinical vignettes of children with metopic craniosynostosis with 5 questions each. The first vignette featured a 1 year old girl presenting with a persistent metopic ridge with otherwise normal development and no signs of raised ICP. The second vignette featured a 1 month old boy with metopic synostosis but otherwise normal exam with soft anterior fontanelle and no raised ICP. The respondents were asked if surgery should be advised, reason for surgery (if advised), type of procedure recommended (if advised), likelihood of increased ICP in the future, and predicted prognosis in 10 years if no surgery performed.

Results

We received 75 responses from pediatric neurosurgeons, with the majority (41.4%) having 20+ years in practice. For vignette #1, the majority (94.5%) did not suggest surgery and 67.6% of them were not concerned about increased ICP in the future. However, only 46.5% of respondents against surgery believed the ridge would improve in 10 years, whereas 49.3% thought it would remain unchanged. In vignette #2, 93.0% of surgeons advised surgery and the reasons for advising surgery varied: appearance (60.6%), developmental delay concern (15.2%), and increased ICP (10.6%). Most surgeons suggested an open procedure (71.2%) over endoscopy assisted strip craniectomy (28.8%). The majority rated the likelihood of raised ICP as < 10% (37.1%), with the minority suggesting 10-24% (25.7%), 25-50% (15.7%), and 51-100% (4.3%).





Conclusions

While the majority of surgeons agreed upon surgery versus non-surgery in each case, we observed significant variations in opinions regarding reasons for proceeding with surgery, surgical approach, and patient prognosis.

Learning Objectives

By the conclusion of this session, participants should be able to: 1) Describe current surgical opinions regarding indications for surgery in metopic craniosynostosis, 2) Discuss, in small groups, how their own opinions align with the results of this survey and whether or not this accurately reflects the current controversies in the surgical literature, 3) Identify a future plan to establish a uniform guideline that defines a threshold for surgery for patients with craniosynostosis based on high-level evidence.