Sagittal synostosis diagnosis

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- Syndromic Craniosynostosis: The Hidden Burden of Comorbidities on Surgical Outcomes
- Laryngeal and pleural ultrasound and acoustic radiation force impulse elastography in dogs with brachycephalic obstructive airway syndrome
- Translation and evaluation of the Infant Characteristics Questionnaire in a sample of Swedish patients with craniosynostosis
- Objective Evaluation of 3D Morphology by Statistical Shape Modeling or Geometric Morphometrics Enabling Patient-Specific Treatment in Craniosynostosis-A Systematic Review
- Non-Surgical Management of Trigonocephalic Patients: An OCT and 3D-CT Based Follow-up Study
- Continuous automated analysis of facial dynamics of brachycephalic and normocephalic dogs in different contexts

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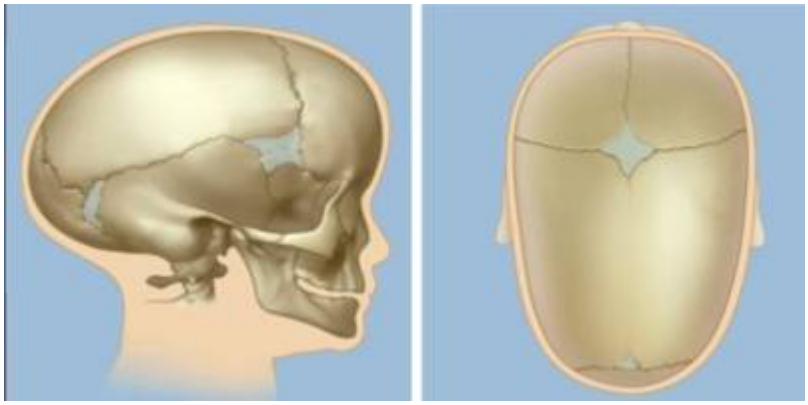
see also Craniosynostosis diagnosis.



Produces a palpable keellike sagittal ridge and dolichocephaly (elongated skull with high forehead/frontal bossing) or scaphocephaly (“boat shaped skull” with prominent occiput).

OFC remains close to normal, but the biparietal diameter is markedly reduced. As many as 44% of patients with Nonsyndromic sagittal synostosis have elevated ICP [1].

Accurate diagnosis of isolated sagittal synostosis can be made clinically, and operative correction can proceed without a need for radiological investigations, unless the clinical features are not completely typical [2]

The diagnosis of scaphocephaly may precede the diagnosis of the underlying Sensenbrenner syndrome, thus highlighting the importance of a systematic multidisciplinary assessment and follow-up for craniosynostosis, in order to identify syndromic forms requiring specific management. In Sensenbrenner syndrome, patients' management should be coordinated by multidisciplinary teams of reference centers for rare diseases, with expertise in the management of craniofacial malformations

as well as rare skeletal and renal disorders. Indeed, a prompt etiological diagnosis will result in an early diagnosis of multisystemic complications, notably renal involvement, thus improving global prognosis [3].

Cephalic index (CI).

3-dimensional CT (3DCT) scan

Ratios of CI between the vault and base, and the vault and posterior fossa were significantly reduced in sagittal synostosis ($p < 0.0001$ and $p = 0.0031$) demonstrating a milder deformity at the base and posterior fossa. However there was strong positive correlation between CI at the vault and base ($r = 0.77$, $p < 0.0001$). The deformity at the base is less severe, but is still closely correlated with the vault in unoperated sagittal synostosis [4].

Preoperative severity and postoperative success in cranial remodeling for patients with sagittal synostosis is measured by cephalic index (CI), but this metric does not describe the appropriateness of euryon location, a crucial consideration for aesthetic outcome.

Anterocaudal displacement of euryon over the temporal bone in patients with sagittal synostosis influences cephalic index. Normative CI, assessed at ideal euryon location, is a more accurate measure of preoperative severity and postoperative outcome [5].

The point of maximum width (PMW) is not a surrogate for CI but is a novel, valid measure of skull shape, which aids in quantifying the widest region of the skull. It is significantly more anterior in children with sagittal synostosis and exhibits a consistent posterior shift along the cranium after surgery, showing no difference compared with healthy children [6].

References

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