

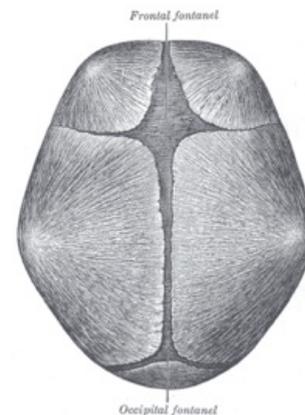
Craniostenosis

Craniostenosis is caused by premature adhesion of sutures. The earlier it occurs, the more severe its effects. The shape of the head depends on the order in which the sutures close - as a suture grows, the skull stops growing perpendicular to the suture.

Normal development of the skull and sutures

 For more information see *Skeletal/skull development and axial skeleton*.

- at birth, the skull has one lamina, and the diploe is formed at 4 years of age
- large fontanelle is 4x2.5 cm at birth, closes at 1.5-2.5 years
- the small one closes at 2-3 months
- the growth of the sutures is prevented by the proliferation of fibroblasts along the suture line
- CI - **cephalic index** - percentage ratio of head width to length - 60-70% in children, 70-90% in adults
 - lengthening of the head decreases CI



Gray197

Dividing

- primary - due to a developmental disorder of unclear etiology;
- secondary - in microcephaly and after drainage hydrocephalus.

Diagnosis

- clinically - palpation of fontanelles, X-ray, CT
- at high pressure, gyral impressions are seen on the skull bones - the so-called *skull of wrought silver*
- scintigraphy - open suture receives Tc, closed not

Types

- **scaphocephaly** - sagittal suture fusion, the head is narrow, resembles a ship's keel
- **brachycephaly** - affects the coronal suture - flat forehead, greater distance between orbits, etc.

Therapy

- many surgical methods, indications are intracranial hypertension or cosmetic
- early surgery can ensure normal psychomotor development

Links

Related articles

- Newborn skull

Source

- BENEŠ, Jiří. *Studijní materiály* [online]. ©2007. [cit. 2009]. <<http://www.jirben.wz.cz/>>.

Used literature

- ZEMAN, Miroslav, et al. *Speciální chirurgie*. 2. edition. Praha : Galén, 2004. 575 pp. ISBN 80-7262-260-9.