

FP08

Long-term outcome of decompressive cranioplasty in mild metopic suture synostosis with clinical symptoms

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Objective: Recently, we have applied decompressive cranioplasty for the treatment of mild metopic suture synostosis with developmental disorders. To evaluate the long-term effectiveness of this surgery, we had evaluated these children with a retrospective chart analysis and evaluation with Peds QL (a questionnaire score sheet of the patient's quality of life (QOL)).

Materials and Methods: There were 132 cases which had past more than 10 years after surgery. A retrospective analysis was conducted with a chart analysis with sending them a questionnaire score sheet. We send a sheet for 2-4 years old to evaluate the QOL before surgery and also send a sheet for 13-18 years old to evaluate the QOL at more than 10 years after surgery.

Results: 76% of the cases were boys, the surgery was performed at the mean age of 3.9 years old. The mean follow up term was 12.9 years. Kyoto Scale of Psychological Development 2001 was used to measure the developmental quotient (DQ) the mean DQ in this cohort was 55.2. The postoperative DQ was increased to 58.2. Unfortunately there was no difference statistically significantly. The intraoperative measurement of extra-dural intracranial pressure (ICP) was 19.8mmHg which was higher than normal value.

In terms of education, 21% of these children was able to go to school without special support. (Middle school and High school 24 cases, higher education 4 case). Peds QL had shown an increase at all functions however the increase of the social functioning was lower that the other functions.

Discussion: In this cohort, the DQ of the children showed a mild increase or remained steady without statistical difference. In general the DQ of the child who has a developmental disorder, the DQ mainly shows a decrease. Also it is rare to see a rapid catch up to undergo normal education without support in DQ around 50-60. In this cohort, 21% of the children had normal education without support. Additionally, there was an increase in most factors of Peds QL in long term follow up. Although, this is a retrospective analysis and a questionnaire score sheet from the patients so that there might be a positive bias, from these point of view this surgery may play a role to support remedial teaching.