

FP20**Reconstructive surgery for craniosynostosis**Alexey Krivoschapkin, Vyacheslav Kobozev, Gleb Sergeev, Anton Gorbatykh*Novosibirsk Research Institute of Circulation Pathology, Russia*

Introduction: The incidence of craniosynostosis is 1:2500 newborns. It is a cause of characteristic skull deformation, developmental delay, disorders of muscle tone and sleep apnea. There is no standardized treatment strategy and generally accepted surgical techniques for craniosynostosis management yet.

Materials and Methods: Sixteen children with isolated craniosynostosis underwent surgery. Ten patients (62.5%) had scaphocephaly, four (25%) had plagiocephaly and two (12.5%) suffered from trigonocephaly. All the patients were examined by head CT with 3D-reconstructions before surgery, next day and 6 months after surgery. In all cases reconstructive craniotomy was performed to get the normal skull anatomy. At the base and in the areas of the highest linear tension bone flaps were fixed with titanium plates. All the other flaps were fixed using biodegradable materials. Mean follow-up time was 2.7 years.

Results: Good cosmetic outcome was achieved in all the patients. One patient (6.25%) required intra-operative blood transfusion. Two patients (12.5%) had hyperthermia during early post-operative period. Three patients (18.75%) had subcutaneous hematomas which were successfully resolved. According to follow-up CT scan there were no cases of the disease recurrence and ossification islets began to form between the bone flaps. The form of skull, head circumference, behavioral and motor development in all the operated children were within the age normal limits.

Conclusion: The early reconstructive surgery with biodegradable materials for craniosynostosis is safe and brings to good cosmetic outcomes.