

## **Correction of Trigenocephaly with Bioabsorbable Tacks and Plates**

Willy Serlo<sup>1</sup>, Pertti Törmälä<sup>2</sup>, Timo Waris<sup>3</sup>, Nureddin Ashammakhi<sup>2,3</sup>

1. Department of Pediatrics, Oulu University Hospital, Oulu, Finland.
2. Institute of Biomaterials, Tampere University of Technology, Tampere, Finland.
3. Department of Surgery, Oulu University Hospital, Oulu, Finland.

We report on the feasibility of applying bioabsorbable tacks using a new tack-shooter to fix bioabsorbable plates applied endocranially for the correction of three cases of trigonocephaly. Tacks do not require tapping or tightening because they are applied using a tack-shooter directly into drill holes in the bone. Hence, the technique saves valuable operative time. A 1.5- to 2.0-cm broad supraorbital bar (bandeau) was raised and reshaped. The corrected shape was maintained using a Biosorb plate (Bionx Implants Ltd, Tampere, Finland), and tacks were applied on the endocranial side of the bar. The plate extended a few centimeters laterally beyond the edge of the supraorbital bar, and it was fixed with Biosorb miniscrews and/or tacks affixed to the temporal bones. Other molded bone pieces were fixed using Biosorb plates, screws, and/or tacks. The technique of using tacks was easy, and it provided secure osteofixation. Cosmetic results were excellent, and no complications were encountered except for palpability of plate edges on the right side of the skull in one case.

### **Acknowledgements**

Research funds from the Technology Development Center in Finland (TEKES, Biowaffle Project 40274/03 and MFM Project 424/31/04), the European Commission (EU Spare Parts Project QLK6-CT-2000-00487), the Academy of Finland (Project 73948) and the Ministry of Education (Graduate School of Biomaterials and Tissue Engineering) are greatly appreciated.