



"Nuestros niños, nuestros pacientes, nuestra razón de ser"

C043

TÍTULO: POSTERIOR CALVARIAL DISTRACTION FOR SYNDROMIC CRANIOSYNOSTOSIS: SINGLE CENTRE EXPERIENCE AND OUTCOMES

INTRODUCCIÓN/OBJETIVOS: Posterior calvarial distraction (PCD) is a technique used to increase cranial vault volume and to decrease intracranial pressure. We aimed to evaluate the indications and outcomes of this technique in a single centre pediatric population with syndromic craniosynostosis.

MATERIAL Y MÉTODOS: We retrospectively reviewed a cohort of pediatric patients who were submitted to PCD between May 2024 and November 2025 at a single institution, by our craniofacial team (neurosurgery and plastic surgery). Data on demographics and clinical outcomes were obtained from electronic records. The pre- and postoperative brain Computed Tomography (CT) scans were analysed to measure the supra- and infratentorial volumes and the distraction distance.

RESULTADOS: Seven patients with Crouzon syndrome and multisuture craniosynostosis were included in the study. The mean age at the time of PCD was 4.9 years (1 y – 8 y). Patients presented with papilledema (4/7; 57%), severe obstructive sleep apnea (3/7; 71%) and syringomyelia (1/7; 14%). Tonsillar herniation and hydrocephalus were observed in 71% of the patients. The PCD was supratentorial in all cases. The average supratentorial intracranial volume increase was 108 cm³ (64.3 – 171 cm³) and the average distraction distance was 19 mm (14 – 23 mm). The patients follow up ranged from 4 to 18 months. We observed resolution of the papilledema in 75% of the cases, significant improvement of the obstructive sleep apnea and the syringomyelia in all cases, and reduction of the tonsillar herniation in 40% of the cases. Minor complications were observed in 3/7 patients including a local infection, exposure of the distractor and the need to replace one of the distractor activators.

CONCLUSIONES: PCD is safe and effective for vault expansion and treatment of raised intracranial pressure in complex craniosynostosis. A multidisciplinary craniofacial team approach is crucial for appropriate case selection and to improve outcomes.