

A Retrospective Case Series of Minimally Invasive Ponto Surgery In Two Pediatric Centres

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Abstract

Objective: Minimally Invasive Ponto Surgery (MIPS) is a type of bone anchored hearing system performed through a puncture hole that has been reported to minimize soft tissue trauma, decrease operative time, and have favorable outcomes. Due to it being a relatively new procedure there remains a paucity of pediatric outcomes data. Our objective was to study MIPS outcomes in the pediatric population. **Design:** Retrospective review. **Setting:** The study was performed at two tertiary pediatric otolaryngology centres between 2016-2019. **Participants:** Pediatric patients from two tertiary pediatric otolaryngology clinics who underwent MIPS between 2016-2019. **Main Outcome Measures:** Outcomes included indication for surgery, implant and abutment type, overlying skin thickness, skin-to-skin time, Holgers score at three, six and twelve months, revision surgery and time to abutment fitting. **Results and Conclusions:** Fourteen patients, two with bilateral procedures met inclusion criteria (mean age= 8.07 ± 2.87 years). The main etiology for the hearing loss was microtia (64%). The mean overlying skin thickness was 5.13 ± 3.18 mm. Across all visits, 9.44% had Holger's scores >2 , which is classified as an adverse skin reaction. One of these patients required surgery to address skin overgrowth. One implant loss (6.3%) was reported, but found to be in the setting of trauma. Mean MIPS Skin to skin times were found to be 12.4 ± 2.6 minutes, markedly different than the Baha® Attract and Connect found to be 56 and 53 minutes respectively. This study represents the largest pediatric MIPS cohort to date, and our results are similar to published adult studies.

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