Do Pierre Robin Sequence Patients Have Worse Outcomes In Cleft Palate Surgery?

Carrie Stransky, MD; Don Larossa, MD; Marten Basta, BS; Oksana Jackson, MD

Abstract

Background: Pierre Robin Sequence (PRS) is a congenital condition characterized by a small mandible, and often combined with a wide cleft of the soft and hard palate. Previous studies report mixed results on rates of post-operative VPI after cleft palate repair in this population, in both syndromic and nonsyndromic patients.[1-5] The aim of our study is to evaluate surgical outcomes after cleft palate repair in nonsyndromic patients with PRS.

Methods: A retrospective review was performed of all patients with Veau class I or II clefts of the palate that underwent primary repair by the modified Furlow technique between 1981 and 2006. Patients with identified syndromes, hearing loss, and age less than 5 at most recent speech evaluation were excluded. PRS was defined as micrognathia, glossoptosis, and documented airway obstruction. Patient outcomes were evaluated by speech scores using the Pittsburgh Weighted Values for Speech Symptoms Associated with Velopharyngeal Incompetence (VPI), the need for secondary pharyngeal surgery to correct VPI, and the rate of postoperative oronasal fistula.

Results: 184 patients met the inclusion criteria, with 55 patients in the PRS group and 129 forming the non-PRS group. Average length of follow up was 7.83 and 7.52 years for PRS and n-PR S groups. 52.7% of PRS patients had a competent velopharyngeal mechanism, 30.9% had a borderline velopharyngeal mechanism, and 16.4% had an incompetent VP mechanism. Comparatively, 72.1% of non-PRS patients had a competent velopharyngeal mechanism, 19.4% had a borderline velopharyngeal mechanism, and 8.5% had an incompetent VP mechanism.(p=.04) (Figure 1) 76.3% of PR patients had no or mild hypernasality, 74.5% had no or inaudible nasal emission, and 92.7% had no compensatory articulation errors associated with VPI, compared to 91.5%, 76.7%, and 96.1% in the non-PRS group, respectively. Secondary pharyngeal surgery was performed or recommended to correct VPI in 20% of PRS patients and 12.4% of non-PR patients (p=.27). There were no post-operative oronasal fistulas in the PRS group and seven in the non-PR group (p=.10).

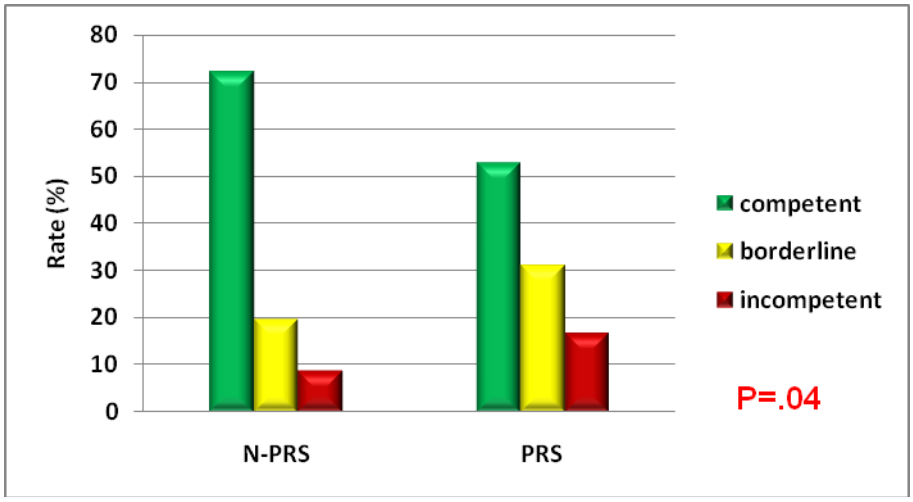

Figure 1. Velopharyngeal competence by group.

Conclusions: Our findings indicate that non-syndromic patients with Pierre Robin Sequence have worse speech outcomes after cleft palate repair, but no significant difference in the rates of secondary pharyngeal surgery for VPI. Despite often wide clefts of the soft and hard palate, the PR patients in this series did not have an increased risk of post-operative oronasal fistula.

References

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