



CFAO GRADUATE STUDENT POSTERBOARD ABSTRACTS

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Longitudinal craniofacial growth in Pierre Robin Sequence (PRS) in comparison with unaffected children

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Objective: This retrospective longitudinal study aimed to analyze trends and quantitative differences in craniofacial morphology and facial growth patterns between non-syndromic Pierre Robin Sequence (PRS) and unaffected subjects.

Methods: Characteristics of the maxilla, mandible and cranial base were examined at 6 years, 12 years and 18 years, using a comprehensive cephalometric analysis that focused on regional detail by means of internal and external landmarks. Lateral cephalometric tracings of 43 Caucasian subjects with PRS treated at the Hospital for Sick Children were compared with age- and sex-matched Caucasian unaffected subjects from the Burlington Growth Centre archives. Between-group differences of craniofacial measurements were analyzed.

Results: The PRS group had smaller cranial base lengths. Their maxillas were smaller with shorter anterior maxillary height and remained retrusive throughout the period of active facial growth. Their mandibles were smaller in body length and height as well as ramal width and height and also remained retrusive throughout growth. The PRS group also displayed a vertical growth pattern as indicated by an increased gonial angle.

Conclusion: Remarkable differences were noted in the maxilla, mandible and cranial base of PRS subjects over the long period of active facial growth studied, resulting in a bimaxillary retrognathic profile.

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