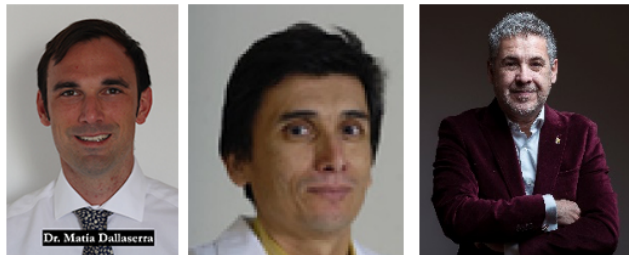




## Effectiveness of pre-surgical orthopedics on patients with cleft lip and palate: A systematic review and meta-analysis

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### Abstract :

**Objective:** Evaluate the effectiveness of pre-surgical orthopaedics (PSO) in patients with cleft lip palate (CLP) in maxillary morphology (MM), facial growth and development (FGD), occlusal alterations (OA), parental satisfaction (PS), and side effects. **Design:** Systematic review and meta-analysis of randomized and controlled clinical trials. Searches was performed in CENTRAL, MEDLINE, and EMBASE. **Results:** From the eight studies included, three are randomized clinical trials, and five clinical trials are

controlled. MM was evaluated by the intercanine width (Mean difference (MD) =1.44; CI95%= -0.30, 3.19; very low certainty), anteroposterior length (MD=1.32; CI95%= -0.59, 3.24; very low certainty) and intertuberosity width (MD=0.09; CI95%= -0.68, 0.49; certainty: very low). FGD was evaluated by SNA angle (MD: 1.29; P = 0.306; moderate certainty), SNB angle (MD: -0.79; P = 0.550; moderate certainty) and ANB angle (MD: 1; P = 0.362; moderate certainty). OA was evaluated by 5-years-old-index (MD= -0.09; P = 0.49; moderate certainty) and by Huddart score (MD=0.51; P = 0.736; moderate certainty). A valid questionnaire assessed PS only in one study (MD= -0.1; P = 0.199; moderate certainty). No studies reported side effects. Conclusion: Due to the uncertainty of the effect of PSO on MM and the lack of clinically relevant effect on FGD, OA, or PS, it is not reasonable to include this intervention as a treatment until future studies clarify its effect