

DYNAMIC PRESURGICAL NASAL REMODELING IN PATIENTS WITH UNILATERAL AND BILATERAL CLEFT LIP AND PALATE: MODIFICATION TO THE ORIGINAL TECHNIQUE

Ricardo D. Bennun, M.D., M.S., Ph.D.
Alvaro A. Figueroa, D.D.S., M.S.

Objective: To present technical modifications to the original presurgical nasal remodeling appliance introduced in 1991. The purpose of the modifications is to improve the cleft nasal deformity before unilateral and bilateral cleft lip repair.

Method: The principle behind this technique, known as dynamic presurgical nasal remodeling (DPNR), is the use of the force generated during suction and swallowing. A conventional intraoral plate is built with a nasal extension added to the labial vestibular flange. The nasal extension was modified and consists of three components. The palatal plate is left loose in the mouth to generate a discontinuous but controlled impact directed to the affected nasal structures during suction and swallowing. The principle aim of the DPNR technique in unilateral cases is to improve the deformation of nasal structures by straightening the columella, elevating the nasal tip, and remodeling the depressed cleft side alar cartilages. In bilateral cases, the aims are to elongate the columella and to obtain nasal tip projection.

Conclusions: The modifications introduced in the appliance enhance the original DPNR technique and are effective in ameliorating the initial cleft nasal deformity. This facilitates primary surgical cleft lip and nose correction and improves surgical outcomes in patients with complete unilateral and bilateral cleft lip and palate.