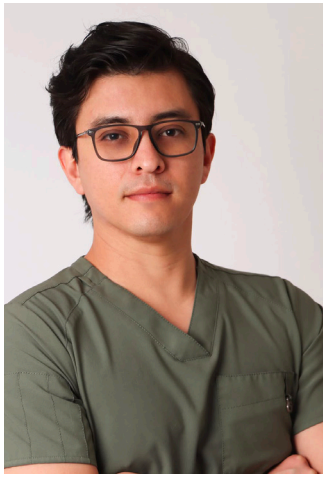
Management of Proximal Carious Lesions in Primary Dentition Using the Garrison Strata-G™ System



Dr. Luis Alberto Nunez Mata

Dr. Luis Alberto Núñez Mata is a pediatric dentist, clinician, and educator based in Saltillo, Coahuila, Mexico where he has lived and practiced for several years. Alongside his private practice at Be Smart Dental, he is actively involved in dental education, teaching operative and restorative dentistry at undergraduate and postgraduate levels, including specialty and master's programs. He also shares his clinical experience as a speaker at national dental conferences.

His clinical practice is not limited to pediatric care; he also treats adult patients, allowing him to provide continuity of care across different stages of life and to monitor the restorations performed over extended periods. This long-term follow-up enables him to maintain longitudinal clinical records and evaluate patterns related to restoration performance, maintenance, and longevity.

His clinical and academic work focuses on adhesive and minimally invasive restorative dentistry. His principal areas of interest include direct anterior and posterior composite restorations, management of proximal lesions, young permanent dentition, enamel defects, resin infiltration, biomimetic restorative principles, and dental photography.

Dr. Núñez Mata completed a Mastership in Biomimetic Restorative Dentistry and regularly shares clinical protocols with dental professionals, postgraduate students, and specialists. His approach emphasizes preservation of sound tooth structure, strict isolation, careful matrix selection, anatomical reconstruction, and long-term clinical follow-up. He is also a published author on Style Italiano.

CLINICAL FOCUS

Pediatric restorative dentistry • Adhesion and direct composites • Conservative caries management • Dental photography

CASE STUDY

Dr. Luis Alberto Núñez Mata | Pediatric Dentist

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Summary

Following clinical and radiographic evaluation, a conservative direct composite approach was selected to restore proximal anatomy and function while preserving healthy tooth structure.

Background

A 7-year-old patient presented with proximal carious lesions involving the primary mandibular right first and second molars (teeth 84 and 85). Clinical and radiographic examination confirmed the need for restorative treatment. In response to the parents' preference for a conservative and esthetic option, direct composite restorations were selected. The treatment plan emphasized preservation of sound tooth structure, strict moisture control, and controlled reconstruction of the proximal walls and contact area.

Procedure

Radiographic assessment localized the proximal lesions involving teeth 84 and 85. The operative field was isolated with a Nic Tone rubber dam. Conservative access was created to reach the lesions while preserving unaffected tooth structure. Carious tissue was selectively removed, and the cavity geometry was refined for the direct restorative procedure.

A sectional matrix and wedge were adapted at the proximal area, and a Garrison Strata-G ring was positioned to provide controlled separation and stabilize the matrix. The proximal walls were reconstructed with Gradia Posterior composite resin (GC), followed by completion of the occlusal anatomy. After removal of the ring, wedge, and matrix, the marginal ridges, proximal contours, and contact area were checked. Finishing and polishing were completed, and an immediate postoperative radiograph was obtained.

Outcome

The immediate clinical result showed restored proximal form, continuous marginal contours, and an esthetic appearance consistent with the family's treatment preference. The postoperative radiograph supported adequate adaptation in the interproximal region.

Key Takeaways

- Treatment selection in primary molars should integrate lesion extent, restorability, caries risk, remaining time to exfoliation, patient cooperation, and family preferences.
- Rubber dam isolation and conservative access support adhesive procedures while preserving sound tooth structure.
- Sectional matrix adaptation, wedge selection, and controlled separation are central to recreating proximal contour and contact area.
- The Strata-G ring facilitated a controlled restorative workflow in adjacent primary molars.
- Immediate results should be interpreted alongside preventive care and periodic clinical and radiographic follow-up.

Figure 1. Initial radiograph. Diagnosis of proximal carious lesions involving primary teeth 84 and 85.

Figure 2. Rubber dam isolation using Nic Tone dental dam.

Figure 3. Conservative cavity access through a minimally invasive preparation.

Figure 4. Selective carious tissue removal and cavity preparation.

Figure 5. Placement of the sectional matrix, wedge and Garrison Strata-G ring for proximal wall reconstruction.

Figure 6. Reconstruction of the proximal walls using Gradia posterior (GC).

Figure 7. Restoration after removal of the Strata-G ring.

Figure 8. Restoration after polishing.

Figure 9. Postoperative radiographic evaluation.