BIOGRAPHY

Dr. María José Naranjo Cabezas,
DDS, MSc, PHD

Quad Matrix System for Predictable Outcomes in Back-to-back Class II Restorations


Dr. María José naranjo Cabezas

Dr. María José Naranjo Cabezas is an Ecuadorian dentist specializing in restorative and aesthetic dentistry. She earned her Doctor of Dental Surgery (DDS) from the Universidad de las Américas in Quito in 2016, followed by advanced postgraduate training in esthetic and restorative dentistry. She later pursued graduate studies at the prestigious Universidad Complutense de Madrid, completing a Master's in Dental Sciences in 2018 and advancing to a PhD in Dental Sciences, which she completed in 2024. Her education has been complemented by certifications in biomimetic dentistry, ceramic veneers, complex direct restorations, and the management of temporomandibular disorders (TMD) and bruxism.

Professionally, Dr. Naranjo Cabezas has built a strong career in both clinical practice and academia. She currently serves as a restorative dentist at ODONTOCENTER in Quito, where she specializes in smile design, veneers, inlays, bleaching, and other advanced restorative procedures. Alongside her clinical work, she is dedicated to teaching the next generation of dentists as an adjunct professor at Universidad San Francisco de Quito, Universidad de los Hemisferios, and previously at Universidad SEK. Her teaching covers operative dentistry, cariology, oral rehabilitation, and dental materials, while her reputation as a national speaker has led her to deliver specialized courses in restorative techniques and rubber dam isolation. Combining clinical excellence, academic leadership, and a commitment to innovation, Dr. Naranjo Cabezas is recognized as a rising voice in modern restorative dentistry in Ecuador and beyond.

CASE STUDY

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Background

A 56 year-old female patient presented to the practice with discomfort in tooth #4 and food retention in the interproximal area in #3MO and #4DO. Radiographic and clinical evaluation revealed secondary carious lesions that required treatment.

Clinical Procedure

Radiographic evaluation confirmed secondary caries lesions in both teeth. Marginal failure of old composite restorations was observed. Absolute isolation was achieved with a medium-thickness Nic Tone rubber dam. Old restorations and carious tissue were completely removed, followed by sandblasting to clean the cavity surface. Total -etching was performed with 35% Ultra-Etch phosphoric acid for optimal conditioning of enamel and dentin. Two layers of the adhesive agent All-bond Universal were applied to enamel and dentin, each gently air-blown and light-cured. A 0.5 mm layer of fluid resin was placed after adhesive polymerization to improve the thickness of the adhesive layer and marginal sealing. Matrices, wedges, and rings from the QUAD system were selected and applied to restore interproximal walls with precision. Snowplow technique was used to build the proximal walls, a layer of uncured flowable composite was placed on the cavity floor and walls, and then immediately covered with a higher- viscosity packable composite, both layers were then light-cured simultaneously. Subsequently, the proximal walls were reconstructed, transforming the class II into a class I. The ring and matrix bands were then removed. The horizontal incremental technique was used to complete the occlusal morphology of both teeth. The restoration was completed and inspected without occlusal adjustment or polishing. Occlusal contacts were carefully verified and adjusted. Fine-tuning was performed to ensure harmonious contact distribution and proper function. The restoration was polished, showing excellent anatomical contour, contact points, and esthetics. Postoperative radiographic evaluation confirmed adequate sealing and marginal adaptation of the restorations.

Outcome

The treatment successfully addressed the patient's discomfort and food retention issues. The QUAD Matrix System allowed predictable reconstruction of interproximal walls, excellent marginal integrity, and strong contact point formation. Radiographic follow-up confirmed the sealing and integration of the restorations.

Key Takeaways

- Absolute isolation ensures a controlled environment for adhesive procedures.
- Sandblasting and total etching enhance adhesion and improve long-term restoration durability.
- The QUAD Matrix System provides predictable outcomes in complex interproximal restorations.
- Stepwise occlusal adjustments are crucial for achieving functional harmony and long-term success.

Image 1: Radiographic analysis. Secondary caries lesions are observed in both teeth.

Image 2: Initial state. Marginal failure on old composite restorations. Absolute isolation with a medium-thickness Nic Tone rubber dam.

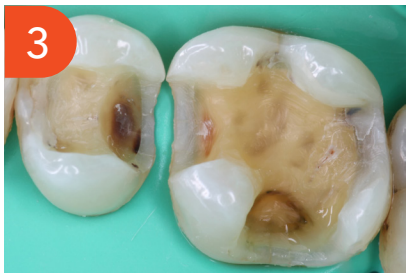

Image 3: Complete removal of old restoration and caries excavated, followed by sandblasting.

Image 4: Total etching with 35% Ultra-Etch phosphoric acid.

Images 5 and 6: After removing the acid, two layers of the adhesive agent, All-bond Universal, are applied to enamel and dentin, each gently air-blown and, after polymerization, a 0.5 mm layer of fluid resin is placed.

Image 7: Selection of matrices, wedges and rings of the QUAD system and preparation of interproximal walls.

Image 8: Final restoration without occlusal adjustment or polishing.

Image 9: Occlusal adjustment

Image 10: Occlusal adjustment

Image 11: final restoration. Finished and polished.

Image 12: X-ray, sealing evaluation.