A 39-year-old female patient came to our dental office for routine dental care. After a comprehensive examination, we identified gingivitis, poor dental hygiene, defective restorations in teeth 14, 16, 25, 26, 35, 36, 45 and 46, and partially erupted teeth 18 and 28.

The patient was referred to a dental hygienist and after dental hygiene therapy, teeth 18 and 28 were extracted and the defective restorations were gradually addressed. In this case, the restorations in teeth 45 and 46 were recommended for replacement due to defective marginal seal and secondary caries lesions (Fig. 1).

After applying mandibular anesthesia and proper isolation of the operating field by a dental dam, the defective restorations were removed (Fig. 2) and the caries affected by dentine was thoroughly excavated, verified by a caries indicator, and the cavity margins were refined with a fine diamond bur and enamel chisels (Fig. 3).

The next step was to apply sectional Matrix band and a ring. The bands were subsequently adapted to the missing margins by a combination of a Teflon coated matrix band along with a ring. The prepared cavities were etched with 37% phosphoric acid gel and after a thorough rinse and removal of excess water, Retensin® Plus (SpofaDental) adhesive system was applied, dispersed with air into a thin layer and polymerized for 20 seconds (Fig. 4).

The cavities were then converted into Class I cavities (Fig. 5) using a nanohybrid composite material called Artiste™ A3 (Pentron). After removal of the bands, the same composite material was used to stratify the restoration into proper anatomical shape using standard techniques (Fig. 6). The final polymerization was made under a glycerol layer for 40 seconds. Using a scaler, excess composite material was removed and the restoration was finished with a fine diamond bur (Fig. 7). The dental dam was removed and the occlusion was adjusted with articulating paper, and then the restoration was polished.

The patient reported no post-operative sensitivity on teeth 45 and 46, and was very satisfied with the results.