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Non- or Minimal-Invasive Fixed Prosthesis Replacing Canines: 23-Year Clinical Follow-up

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Objectives Three patients, two females and one male, required fixed prostheses to replace the lost canines for esthetics, function, and comfort. All patients refused dental implants and severe tooth reduction such as full coverage fixed partial dentures.

Methods Three designs of fixed prostheses, an adhesive acrylic pontic, two indirect resin-composite proximal veneers, and a porcelain fused to metal partial coverage bridge (PFMPCB) were assigned for each patient according to the patient's desire, esthetics, and bite force. After the patient approval, all the prostheses were fabricated and bonded to tooth abutments using 4-META/MMA-TBB and PMMA powder resin (Super-Bond C&B).

Results Proximal veneers, an adhesive pontic, and PFMPCB have successfully functioned and remained esthetics for 23-, 20-, and 19-year after placement, respectively. No debonding, caries, or periodontal pocketing occurred. The outer layer of the acrylic pontic was detached after placement for 20 years and 5 months and was replaced with an indirect resin composite veneer. The PFMPCB was detached due to a fracture at the mesial connector in year 20. All patients were satisfied with the outcomes.

Conclusions This clinical evaluation suggests that non- and minimal-tooth reduction fixed prostheses using 4-META/MMA-TBB resin bonded to enamel to provide a hybridized layer and tags can resist long-term multi-directional loading of both the upper and lower canines.