

# Cosmetic periodontal surgery is a stride toward a pleasant smile: Review and case presentation report



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## Abstract

**Background:** A pleasant smile is the outcome of a harmonious integration between the teeth, lips and the gum. Orofacial esthetics refers to dynamic facial expressions, such as smiling and speaking. The movements of the lips are the controlling factor for tooth and gingival display.

A gummy smile is a condition in which a person shows a larger than average amount of gum tissue when smiling, with several factors participating alone or simultaneously in its etiology: plaque- or drug induced gingival enlargement, altered or delayed passive eruption, anterior dentoalveolar extrusion, vertical maxillary excess and short upper lip or hyperactive upper lip. Gummy smile can be treated according to etiology and severity, in severe cases – orthognathic surgery/orthodontic treatment; whereas, in mild and moderate cases lip repositioning surgery/gingivectomy is the treatment of choice.

**Materials and Methods:** This in vitro study was established to evaluate the effect of adding calcium carbonate nanoparticles at different concentrations on the bonding strength of maxillofacial silicone elastomer to the acrylic resin, before and after accelerated aging.

**Method:** Seventy samples were prepared, ten samples per each group. Each silicone sample was sandwiched between two strips of acrylic resin via A-330-G adhesive primer. From each group five samples were undergoing accelerated aging. All samples were tested for shear bond strength by using Instron testing machine.

**Aim:** The aim of this case presentation was to investigate the clinical effectiveness of two periodontal plastic surgeries:

- 1- Lip repositioning technique
- 2- Gingivectomy by external bevel incision plus osteoplasty.

**Case Presentation:** Two females attended with short upper lip, exposing large amount of the gingiva while smiling. After thorough examination, case 1 was treated with lip repositioning surgery, while case 11 showed very deep sulcular depth and irregular gingival topography over labial alveolar bone showing hard projected patches. CBCT revealed thickening of the alveolar bone. This was treated with gingivectomy plus full thickness flap to perform ostectomy and osteoplasty.

**Results:** Satisfactory results were achieved and the smile of both patients was improved, which was confirmed by patients' satisfaction.