

**Title: Prevalence of Dental Implants: A Cross-Sectional Study In A
Multi-clinic Center In Benghazi**

Authors

Presenting Author: Dr. Rabie M El huni. BDS, MS, Advanced Education in implant Dentistry.^A
Dr. ReqayaAlzway. BDS, MS.^B
Dr. Adel Elsharef.BDS. ^C

^A Assisting lecturer, Coordinatorat Department of Prosthodontics, University of Benghazi Faculty of Dentistry.

^B Former resident, Advanced education in Prosthodontics, Cairo Dental University.

^C General Dental Practitioner at Sama Dental Center, Former President of Al-Basma Dental Clinic.

Introduction.

Should offending teeth be saved and restored, extracted without a replacement, extracted and then replaced by implants, fixed bridges, or removable appliances?

The answer to this question, among our patients, varied considerably based on multiple factors including patient desire, prognosis of the natural teeth, service cost, dentist experience, availability and quality of the laboratory product, applicability of the offered option, and duration needed to finish the chosen job.

Aim of the study.

Is to determine the prevalence of selecting dental implants, among given teeth replacement options, by partially edentulous Libyan patients in a multi-clinic private center in Benghazi during the year of 2015.

Materials and Methods.

This study was conducted at SamaDental Center. Three dentists participated in this study, two of which are prosthodontists and one is a general dental practitioner. All implant placement and restoration procedures were done by the same prosthodontist. Subjects were eligible for inclusion if they were partially edentulous and seeking definitive teeth replacement options . The study consisted of 170 patients (33 men and 137 women) ranging in age from 15 to 78 years.

Results.

A total number of 85 patients opted for dental implants (50%) for whom 147 fixtures were integratedto replace 161 missing teeth.101 implants were placed in the maxillary arch (68.7%) and 26 in the mandible(31.3%). 56 of the patients chose removable partial dentures (32.9%), while fixed partial dentures were used to replace 31 missing teeth in 29 patients (17.1%) utilizing 47 natural abutments.

Conclusion.

Within the limitation of this study, our findings could help to recognize the increasing interest in implant treatment option among partially edentulous Libyan Patients. The study results highlight the importance of establishing structured academic programs to teach implant dentistry at undergraduate and postgraduate levels.

Keywords.

Dental Implants, Prevalence, teeth replacement.

Influence of Surface Hydrophobicity on Microtensile Bond Strength of a One-Step Self-Etch Adhesive

Naeima M Betamar ^{1*} and Richard Van Noort ²

^{1*} Dr Naeima M Betamar, Department of Conservative Dentistry and Endodontics, Dental Faculty, Benghazi University

² Professor Van Noort, School of Clinical Dentistry, Academic Unit of Restorative Dentistry, University of Sheffield, United Kingdom

Objectives: To study the influence of surface hydrophobicity on microtensile bond strength (μ TBS) of a one-step self-etch adhesive.

Materials and Methods: I) μ TBS test was performed when Adper Prompt L-Pop™ (APLP) adhesive bonded to dentine surfaces in four different application procedures; **Gp 1)** as per manufacturer's instructions, **Gp 2)** as a multiple coats with light-curing in between coats, **Gp 3)** as a multiple coats without light-curing in between coats and **Gp 4)** with the application of a layer of Adper Scotchbond Multi Purpose Plus™ (SBMP) bond resin sealer (n=30). The fractured surfaces were examined under SEM to determine the modes of failure. Slabs of specimens corresponding to each of the four application techniques underwent SEM analysis to examine an intact bonded interface. **II)** Contact angle measurements determined to flat dentine surface in three conditions; untreated dentine, dentine bonded with APLP and dentine bonded with APLP plus a layer of SBMP bond resin sealer.

Results: I) A significant improvement in the bond integrity of the intact adhesive interface and the μ TBS was achieved with application of a layer of SBMP bond resin sealer on top of the APLP. **II)** Untreated dentine showed the lowest contact angle indicating a hydrophilic surface. Whereas adding the bonding resin to the APLP resulted in an increased hydrophobicity.

Conclusions: By converted the APLP one-step bonding system into a two-step bonding system, the μ TBS to dentine improved significantly. This improvement was due to improve the surface hydrophobicity, which facilitated bonding with the hydrophobic resin composite.

Key words: Contact angle measurements, Microtensile bond strength, one-step self-etch adhesive, SEM, Adhesion.