



Interactions between the gingiva and the margin of Permanent restorations after Laser soft tissue Crown lengthening

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قالوا

سببنا أنك لا تعلم لنا
إلا ما علمتنا أنك أنت
العليم العظيم

صدق الله العظيم

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DEDICATION

I would love to commit this to my family, friends, colleagues, and mentors. It's far a blessing to be surrounded by way of people who want to see me develop and turn out to be a better man or woman. I have won something from anyone I met along my journey, and for this, I would love to thank each and each one in every of them. Also I would like to recommend that we haven't received any financial issues from either a person himself or an association.

List of Contents

Title	Page No.
List of Tables	i
List of Figures	iii
List of Abbreviations.....	vii
Introduction	1
Review of Literature	3
Statement of the Problem.....	44
Aim of the Study	45
Materials & Methods	46
Results	59
Discussion	95
Summary & Conclusion	113
References	115
Arabic Summary	—

List of Tables

Table No.	Title	Page No.
Table (1):	The common dental laser systems and their applications.....	17
Table (2):	Materials used.	46
Table (3):	Group Sampling.	48
Table (4):	The “Doctor Smile” diode dental laser settings manual is shown in the table below.	49
Table (5):	Repeated measures ANOVA results for the effect of different variables on vertical location.	60
Table (6):	The mean, standard deviation (SD), 95% Confidence Interval (95% CI) values and results of repeated measures ANOVA test for comparison between vertical location with the two materials regardless of other variables.....	61
Table (7):	The mean, standard deviation (SD), 95% Confidence Interval (95% CI) values and results of repeated measures ANOVA test for comparison between vertical locations with the three operating modes regardless of other variables.	63
Table (8):	The mean, standard deviation (SD), 95% Confidence Interval (95% CI) values and results of repeated measures ANOVA test for comparison between vertical location at different follow up times regardless of other variables.	66
Table (9):	The mean, standard deviation (SD), 95% Confidence Interval (95% CI) values and results of repeated measures ANOVA test for comparison between vertical location after the two surface finishes regardless of other variables.	68
Table (10):	Repeated measures ANOVA results for the effect of different variables on horizontal location.	71

List of Tables Cont...

Table No.	Title	Page No.
Table (11):	The mean, standard deviation (SD), 95% Confidence Interval (95% CI) values and results of repeated measures ANOVA test for comparison between horizontal location with the two materials regardless of other variables.....	72
Table (12):	The mean, standard deviation (SD), 95% Confidence Interval (95% CI) values and results of repeated measures ANOVA test for comparison between horizontal locations with the three operating modes regardless of other variables.	73
Table (13):	The mean, standard deviation (SD), 95% Confidence Interval (95% CI) values and results of repeated measures ANOVA test for comparison between horizontal location at different follow up times regardless of other variables.	75
Table (14):	The mean, standard deviation (SD), 95% Confidence Interval (95% CI) values and results of repeated measures ANOVA test for comparison between horizontal locations after the two surface finishes regardless of other variables.	77
Table (15):	The frequencies (n), percentages (%) and results of Fisher's exact test for comparison between epithelial evaluation after using the two materials.....	79
Table (16):	The frequencies (n), percentages (%) and results of Fisher's exact test for comparison between epithelial evaluation with the three modes.	83
Table (17):	The frequencies (n), percentages (%) and results of Fisher's exact test for comparison between epithelial evaluations at different follow up times.	88
Table (18):	The frequencies (n), percentages (%) and results of Wilcoxon signed-rank test for comparison between epithelial evaluation with the two surface finishes.	90

List of Figures

Fig. No.	Title	Page No.
Figure (1):	Setup of diode lasers.....	19
Figure (2):	Operation modes of a diode laser.	21
Figure (3):	Exposure Time.....	23
Figure (4):	IPS Empress CAD blocks.....	47
Figure (5):	Adjusting power settings on device before laser application.	50
Figure (6):	Removal of tooth depositions after teeth preparation and polishing of external tooth surfaces before laser application.	50
Figure (7):	Image depicting location of crown lengthening on molar region of dog mandible.	50
Figure (8):	Ivoclar Vivadent programat p500.....	53
Figure (9):	IPS Empress Universal Glaze Paste Ivoclar Vivadent.	53
Figure (10):	Impression cast model demonstrating prepared teeth	54
Figure (11):	Prepared model, inter-sectioning, and die spacing.....	54
Figure (12):	Image demonstrating final polishing of metallic restorations on final cast	54
Figure (13):	Final cementation of micro-roughened crowns on prepared teeth	54
Figure (14):	Showing vertical and horizontal location.	56
Figure (15):	Imbedding a cut block in transparent acrylic resin	57
Figure (16):	Block sectioning of mandible containing cemented restorations using precision cutting machine and a diamond disc.....	57
Figure (17):	Bar chart representing mean and standard deviation values for vertical location with the two materials regardless of other variables.	61
Figure (18):	Stereo-micrograph showing healing of gingival soft tissue on polished ceramic surface (Notice vertical height).....	62

List of Figures Cont...

Fig. No.	Title	Page No.
Figure (19):	Stereo-micrograph demonstrating healing of gingival soft tissue on micro-roughened ceramic surface, and adaptation of soft tissue on margins of the restoration.....	62
Figure (20):	Stereo-micrograph demonstrating sever inflammation of attached epithelium on polished surface after continuous laser application	62
Figure (21):	Stereo-micrograph showing minor tissue response after pulsed laser application micro rough-surface.....	62
Figure (22):	Bar chart representing mean and standard deviation values for vertical location compared to the horizontal location with the three operating modes regardless of other variables.	64
Figure (23):	High magnification Stereo-micrograph demonstrating formation of attached epithelium on micro-rough ceramic surface Chopped laser).....	64
Figure (24):	High magnification Stereo-micrograph demonstrating micro gap formation of attached epithelium on polished ceramic surface (pulsed laser)	64
Figure (25):	Stereo-micrograph demonstrating recession of attached epithelium on polished metallic surface (Chopped laser).....	65
Figure (26):	Stereo-micrograph demonstrating formation of attached epithelium on roughened metallic surface (pulsed laser).....	65
Figure (27):	Bar chart representing mean and standard deviation values for both vertical and horizontal locations at different follow up times regardless of other variables.	66
Figure (28):	Time interval 1 – operation day.....	67
Figure (29):	Time interval 2-24 hrs	67

List of Figures Cont...

Fig. No.	Title	Page No.
Figure (30):	Time interval 3- 10 days	67
Figure (31):	Time interval 4- 6 weeks	67
Figure (32):	Bar chart representing mean and standard deviation values for both vertical and horizontal locations after the two surface finishes regardless of other variables.	68
Figure (33):	Stereo-micrograph demonstrating gingival architecture on micro-rough ceramic surface	69
Figure (34):	Stereo-micrograph demonstrating gingival architecture on smooth ceramic surface	69
Figure (35):	Stereo-micrograph demonstrating gingival architecture on micro-rough metallic surface	69
Figure (36):	Stereo-micrograph demonstrating gingival architecture on polished metallic surface	69
Figure (37):	Bar chart representing mean and standard deviation values for horizontal location compared to the vertical locations with the two materials regardless of other variables.	72
Figure (38):	Bar chart representing mean and standard deviation values for horizontal location in comparison to the vertical ones with all three operating modes regardless of other variables.	74
Figure (39):	Bar chart representing mean and standard deviation values for horizontal location at different follow up times regardless of other variables.....	76
Figure (40):	Bar chart representing mean and standard deviation values for horizontal location compared to the vertical location after the two surface finishes regardless of other variables	77
Figure (41):	Bar chart representing epithelial evaluation of the two materials with continuous mode.	80
Figure (42):	Bar chart representing epithelial evaluation of the two materials with chopped mode.	81

List of Figures Cont...

Fig. No.	Title	Page No.
Figure (43):	Bar chart representing epithelial evaluation of the two materials with peak pulsed mode.....	81
Figure (44):	Bar chart representing epithelial evaluation of the three operating modes with metal crown.....	84
Figure (45):	Bar chart representing epithelial evaluation of the three operating modes with Ceramic crown.	84
Figure (46):	Bar chart representing epithelial evaluation at different follow up times with metal crown	89
Figure (47):	Bar chart representing epithelial evaluation at different follow up times with ceramic crown.	89
Figure (48):	Bar chart representing epithelial evaluation with the two surface finishes with metal crown	93
Figure (49):	Bar chart representing epithelial evaluation with the two surface finishes with ceramic crown	93
Figure (50):	Stereo-micrograph demonstrating early blood clot formation.	94
Figure (51):	Stereo-micrograph demonstrating early remodeling of wound defect	94
Figure (52):	Stereo-micrograph demonstrating soft tissue growth on restoration surface	94
Figure (53):	Stereo-micrograph demonstrating final The keratinization in relation.....	94

List of Abbreviations

Abb.	Full term
µm	Micro Meter
ANOVA	Analysis of Variance
APE	Altered passive eruption
BW	Biologic width
CI	Confidence Interval
CL	Crown lengthening
Co.....	Collagen
CO ₂	Carbon dioxide lasers
DLs	Dye lasers
DS	Doctor Smile
ECL.....	Esthetic crown lengthening
FCL	Functional crown lengthening
Fi	Fibroblasts
H	Height
HL	Horizontal Location
HS	Highly Significant
Kg	Kilo Gram
L	Length
Ly	Lymphocytes
MGI.....	Modified gingival index
MGI.....	Modified Gingival Index
Mø.....	Macrophages
Mø.....	Mononuclear leukocytes
nm	Nano Meter
NS	Non-Significant
P	Peak
PBS	Phosphate buffered saline
Pc	Plasma cells
PD	Probing depth

List of Abbreviations Cont...

Abb.	Full term
PMN.....	Polymorph nuclear leukocytes
PPs	Pulses per second
PRL	Pulsed ruby laser
RBCs.....	Red blood cells
S	Significant
SD	Standard deviation
SEM	Scanning electron microscope
SGH	Supracrestal gingival height
SGT.....	Supracrestal gingival tissues
SOG	Supraosseous gingiva
TEM.....	Transmission electron microscope
TGGPI.....	Turesky-Gilmore-Glickman plaque index
V	Vascular structures
VL	Vertical Location
W.....	WATT
YLLs	Yellow light lasers

Introduction

Improvements in technology and materials have given the general, as well as cosmetic, dentist many more options for treatment. This has improved the efficiency and predictability of aesthetic restorative dentistry for clinicians. One technology that has become increasingly utilized in clinical dentistry is the use of lasers. The laser offers many advantages over other modalities of treatment; procedures can now be completed in a more comfortable manner and in a more timely fashion. However, we believe the greatest impact the laser has made is its ability to be used for both hard and soft tissue, often without the need for anesthesia, offering a reduced healing time for the patient.

A good laser technique is easy to learn, although there are some tips on settings and technique that need to be mastered. The application of the laser in gingival recontouring has become the treatment of choice for the aesthetic clinician as a means to optimize the smile design process since the mid-1990s. Prior to the use of the laser, tissue reencountering often resulted in times of discomfort for the patient and lack of predictability for the clinician. The use of the laser – more specifically the diode laser (Sirolase, Sirona or DioDent II [Hoya ConBio]) – has provided a means to predictably reshape and recontour the gingival tissue to optimize symmetry and maximize aesthetics (if tissue changes of up to 1mm are required).

The hemostatic nature of the laser eliminates the need for a retraction cord during restorative procedures, and the minimal necrosis zone of the actual laser ‘cut’ provides a very stable final contour that will