IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)
e-ISSN: 2279-0853, p-ISSN: 2279-0861.Volume 17, Issue 3 Ver.9 March. (2018), PP 71-75
www.iosrjournals.org

Soft Tissue Aesthetic: A Review Article

[1]Dr.Aaysha Tabinda Nabi, [2]Dr.Irfanul Huda, [3]Dr.Abhishek Verma, [4]Dr.Toshi, [5]Dr.Vaibhava Raaj

[1](Senior lecturer, Department of Periodontics, Buddha dental college and Hospital Patna)
[2](Reader, Department of Prosthodontics, Patna Dental College, Patna)
[3](Reader, Department of Periodontics, Buddha dental college and Hospital, Patna)
[4](Post graduate student, Department of Periodontics, Buddha dental college and Hospital, Patna)
[5](Private practitioner, Janki Dental Super Speciality Clinic & Research Centre, Patna)
Corresponding Author: Dr. Aaysha Tabinda Nabi

Abstract: *Aesthetics is an inseparable part of today's dental treatment and has influenced the management of dental maladies in varying degrees for many years. In recent year clinicians and dentist's aesthetic demand in dentistry have increased rapidly, driven by an enhanced awareness of beuty and esthetics.The ultimate goal in modern restorative dentistry is to achive" white and pink "esthetics in esthetically important zone. White esthetic is the natural restoration of dental hard tissue with suitable materials.Were as pink esthetics refers to the surrounding soft tissue which includes gingiva and lips that can enhanced or diminish the esthetic results.*

Keyword: *Periodontal Asthetics, Depigmentation, Gingivectomy, Crown lengthening, Root coverage, Gingival veneers*

Date of Submission: 03-03-2018 Date of acceptance: 19-03-2018

I. Introduction

The word 'Aesthetics' is derived from 'Asthetisch' (German) or 'Esthetique' (French). It means "the science which treats the conditions of sensuous perception". Today cosmetic concerns as well as increased intra-oral awareness have created a demand for esthetics in periodontal practice. Esthetic improvements are the primary indication for performing periodontal plastic and soft tissue reconstruction surgery. It is the responsibility of the dental team mainly periodontists to understand optimal esthetics, the indications for treatment, and to be able to effectively communicate with the patient. Modern dentistry not only provides us with better material and technology but ensures that today's procedures are performed with minimal discomfort and maximal safety. "Mucogingival surgery" is a term that was initially introduced by Friedman; The Glossary of Periodontal terms defined Mucogingival surgery as – Periodontal surgical procedure designed to correct defects in the morphology, position and/or the amount of gingiva. This literature review focuses on Periodontal Plastic Surgery- its scope, limitations and esthetic implications in periodontal practice. This comprehensive review focuses the basic guidelines and need for the esthetic management taking into consideration the periodontal health.(1)Over all esthetic outcome for patients using various treatment modalities such as

1 gingival depigmentation
2 gingivoplasty
3 gingivectomy
4 crown lengthening
5 root coverage procedure
6 gum veneer
7 reconstruction of lost interdental papilla
8 lip repositioning

1. Gingival depigmentation: (Excision of gingival epithelium) Gingival pigmentation is a major concern for a large number of patients visiting the dentist. The patients with excessive gingival display and pigmentation are more concerned esthetically. Most pigmentation is caused by five primary pigments out of which melanin shows the maximum incidence rate. Melanin hyper pigmentation usually does not present as a medical problem, but patients may complain about their unesthetic black gums. The gingiva is the most frequently pigmented intraoral tissue, with the highest rate observed in the area of the incisors Esthetic periodontal plastic surgery is a boon in patients having "dark gums" and "gummy smile."(2)Most pigmentation is caused by five primary pigments. These include: Melanin, melanoid, oxyhemoglobin,reduced hemoglobin, carotene, bilirubin, and iron.(3-4)

Melanin pigmentation of the gingiva (not amedical problem) is a cause of embarrassment in smile‑conscious individuals. Demand for cosmetic therapy is made, especially by fair‑skinned people with moderate or severe gingival pigmentation, (5) mostly in patients with a high smile line (gummy smile).A periodontal plastic surgical procedure called the gingival depigmentation is performed whereby the gingival hyperpigmentation is removed or reduced by various techniques. There are various methods such as

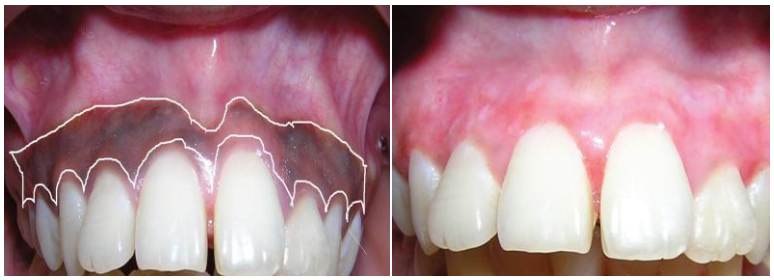
i)free gingiva autol graft

ii)acellular dermal matrix grafts

iii)electrosurgery

iv)cryosurgery

v)abrasion with diamond bur and various type of laser have been used for cosmetic therapy of gingival melanin depigmentation .out of the several techniques employed for gingival depigmentation the surgical technique using scalpel is still the first and most popular technique. The growing esthetic concern thus necessitates the removal of unsightly pigmented gingival areas to create a pleasant and confident smile which improves the personality of an individual.



2. Gingivoplasty: it is type of gum surgery used to reshape healthy gum tissue around teeth. Gingivoplasty reshape the gum to make them look more natural. It often is done alone, but can be done during or after gingivectomy. Usually are done with scalpel, but they also can be done with electro surgery or laser units.

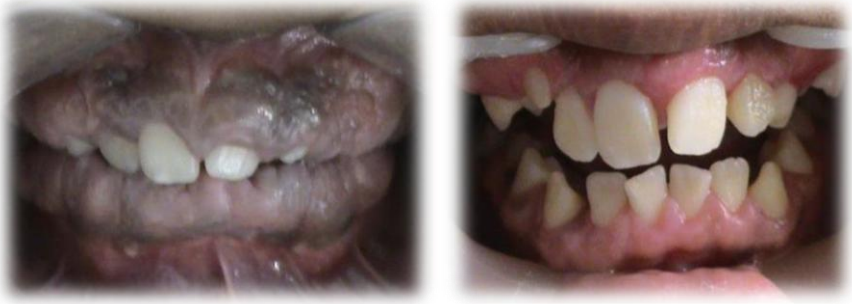
3. Gingivectomy: increase in the size of gingiva can be caused by a number of factors including

I) Inflammatory condition

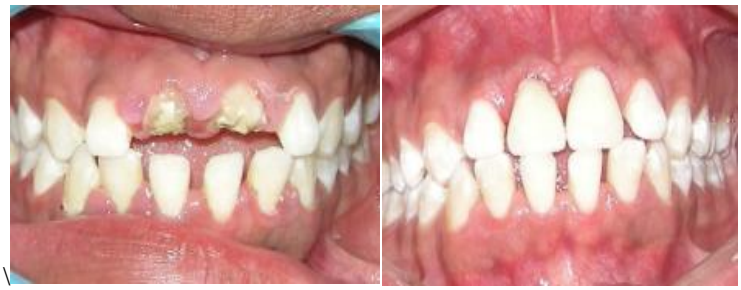
II) Hormonal changes in case of puberty and pregnancy

II) Side effect of certain drugs such as : Anti-hypertensive drugs , Anti-epileptic drugs and Immunosupressive drugs.

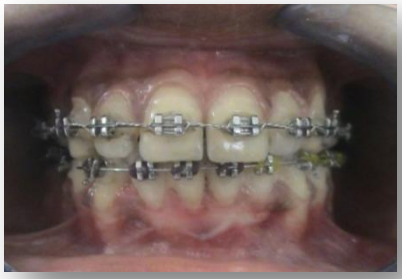
First line of management of gingival over growth is to improved oral hygiene Surgical removal of excessive tissue which is known as gingivectomy . It is also done by scalpel kurkland knife , crayon surgery , electro surgery and by the help of laser. Gingivectomy with Scalpel surgery is simple, easy to perform, cost effective . Though the healing period for the scalpel wounds is faster than other techniques, it may cause unpleasant bleeding during and after the operation thus, making it is necessary to cover the expose area with periodontal dressing for 7 to 10 .



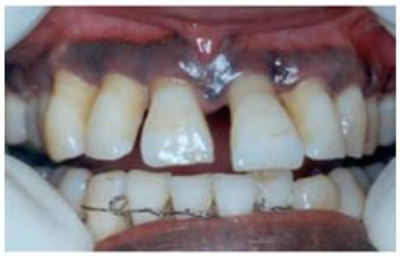
4. Crown lengthening: Crown lengthening involves the surgical removal of hard and soft periodontal tissues to gain supracrestal tooth length, allowing for clinical crowns and reestablishment of the biological width.(6)Crown lengthening has been described as a procedure similar to an apically repositioned flap with ostectomy/osteoplasty.(7)The lengthening procedure is indicated to provide tooth length for caries removal, restoration of the tooth without violating the biologic width, restoration retention and aesthetics.(8)

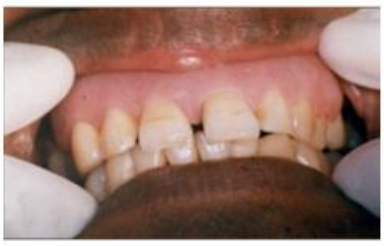


5. *Root* coverage techniques: Marginal tissues recession as a clinical entity has been documented since the last century.(9) Gingival recession is defined as the location of marginal tissue, apical to cement enamel junction (CEJ) with exposure of root surface. Localized gingival recession is unaesthetic condition that is usually observed over the labial aspect of the prominent teeth. It may be associated with root caries and hypersensitivity and cervical wear.(10) Many etiological factor and predisposing factors have been reported in the literature, it can be caused by traumatic injuries (excessive or inadequate brushing) and by destructive periodontal disease. Other disposing factor may also play a role in recession development i.e. ., tooth mal positioning , alveolar bone dehiscence, and delicate marginal tissue covering a non-vascularized root surface , high muscles attachment and frenal pull, occlusal trauma lip piercing and iatrogenic factors related to reconstructive , conservative periodontic, orthodontic or prosthetic treatment. Coverage of denuded roots has become one of the most challenging procedures in periodontal mucogingival surgery. Once the recession occurred, it needs to be covered for various reasons discussed above. Several techniques have been used including formation of free gingival graft (FGG), sub epithelial connective tissue laterally positioned flap or coronally advanced flap.With the increase in popularity of root coverage procedures, esthetics have become more important in periodontal therapy. The subepithelial connective tissue graft reported to have shown 95% of root coverage in Millers class I & II cases .(11)Subepithelial connective tissue grafts provided significant root coverage, clinical attachment and keratinized tissue gain .Overall comparisons allow us to consider it as the gold standard procedure in the treatment of recession type defects.(11)

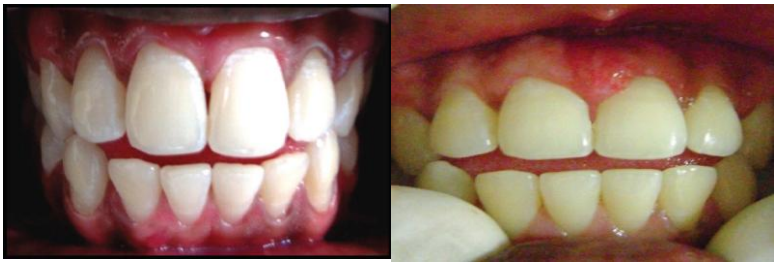


6. Gingival veneers : It can be used as an interim measures in cases where final treatment planning decisions are delayed and they can be used as root coverage after inflammation controlled. The gum veneers provide lip support, restores symmetrical gingival architecture and replaces loss interdental papillae. Most common gingival veneers that are in used are of two types – acrylic resins gingival veneers or flexible silicon gingival mask.(12)Gum veeners have been in clinical use for over 50 years, and are a predictable, inexpensive, non-invasive, effective and aesthetically pleasing way of replacing lost tissue. They are used to cover unsightly gaps between teeth that have been subject to gingival and periodontal disease. They provide a pleasing and aesthetic smile, lifting a person's confidence and makes them feel more attractive.(12)

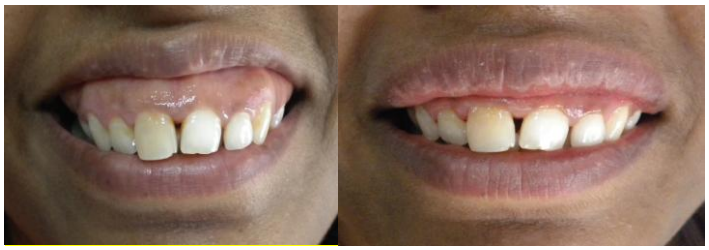




7.reconstruction of interdental Papilla: In health, the interproximal papilla fills the embrasure space to the apical extent of contact area(13). The position of the gingival tissues around the tooth is determined by the connective tissue attachment level and bone level. The most common reason for loss of interproximal soft tissue in adult individuals is loss of periodontal support due to plaque associated lesions(14). Orthodontic movement of crowded teeth that are broad and bell shaped invariably results in gingival black holes (15). Over divergence of adjacent roots during orthodontic therapy can also result in loss of interproximal tissue.(16) Reconstruction of interdental papilla can be achieved by periodontal procedure (true reconstruction) or restorative procedure (pseudo papillary reconstruction).In true reconstruction free connective grafts are used sandwiched between full thickness flap and alveolar bone or between the connective tissue of partial thickness flap. After the healing period, gingivoplasty may be required to recontour the papilla. Restorative procedure involves not exactly the manipulation of the papilla but it also involves orthodontic forces or prosthesis placement so as to move the contact point more apically to close the gingival black hole.



8. The gummy smile: A gummy smile(17) or high lip line case can result from two basic problems – altered passive eruption and vertical maxillary excess.(18) One of the clinical criteria in determining which of these factors is responsible for a gummy smile relates to the basic shape of the teeth.(19) If teeth appear to be somewhat short and squat – vertical dimension appears too short as compared to the horizontal dimensions, the gummy smile is probably due to altered passive eruption.(19) If however the silhouette form of the tooth appears to be normal and an expanse of tissue is exposed below the inferior border of the upper lip, it is probably due to the overgrowth of the maxilla in a vertical dimension or vertical maxillary excess. In many cases a gummy smile is due to combination of these two factors.(17,18)



II. Conclusion

Today, we live in a beauty-centric society. Restoring naturally beautiful, confident smiles doesn't implies to just restoring teeth; it means restoring and improving the quality of life. Taking steps to enhance one's physical appearance is now seen as an investment in one's health and well being. Optional periodontal health is the foundation upon which aesthetic reconstruction of an individual is based.

References

[1] Shankar Babu, KhushbuAdhikari. Periodontal approach to esthetic dentistryPakistan Oral & Dental Journal Vol 35, No. 1 (March 2015)

[2] Surgical esthetic correction for gingival pigmentation: Case seriesJournal of Interdisciplinary Dentistry / Sep-Dec 2012 / Vol-2 / Issue-3

[3] Cicek Y, Ertas U. The normal and pathological pigmentation of oral mucous membrane: A review. J Contemp Dent Pract 2003;4:76-86.

[4] Carranza AC, Saglie FR. Clinical features of gingivitis In: Carranza FA. Glickman's clinical periodontology. Philadelphia: WB Saunders Company; 1990. p. 109-25.

[5] Dummett CO. Oral tissue color changes (I). Quintessence Int1979;10:39-45.

[6] Minsk L. "Clinical techniques in Periodontics: Esthetic crownlengthening". CompendcontinEduc Dent 2001; 22: 562.

[7] Oh SL. "Biologic width and crown lengthening: case reports and review". Gen Dent. 2010 Sep-Oct; 58(5): 200-05.

[8] Lee EA. "Aesthetic crown lengthening: classification, biologic rationale, and treatment planning considerations". PractProcedAesthet Dent. 2004 Nov-Dec; 16(10): 769-78.

[9] Kumar A .Subepithelial connective tissue graft for root coverage- report of two cases,Annal and Essences Dent 2010;2(4): 129-31

[10] Dilsiz A, Aydin T. Gingival recession associated with orthodontic treatment and root coverage. J ClinExpDentt 2010;2 (1)

[11] Carvalho W, Barboza EP, GouraveaCV.The use of porcelain laminate veneers and a removable gingival prosthesis for a periodontally compromised patient: A Clinical report. J Prosthet Dent 2005;93:315-17
[12] VidyaDodwad ,NandniNayyarHinaBedi, Perio Aesthetic Rejvenation. Indian J Stomatol 2012;3(2) :125-28
[13] Cohen B. "Morphological factors in the pathogenesis of periodontal disease". Br Dent J 1959; 107: 31
[14] Sharma AA, Park JH. "Esthetic considerations in interdentalpapilla: remediation and regeneration". J EsthetRestor Dent.2010 Feb; 22(1): 18-28.
[15] LaVacca MI, Tarnow DP, Cisneros GJ. "Interdental papilla length and the perception of aesthetics".Pract ProcedAesthetDent. 2005 Jul; 17(6): 405-12.
[16] Inocencio F, Sandhu HS "Interdental papilla reconstruction combining periodontal and orthodontic therapy in adult periodontal patients: a case report". Can Dent Assoc. 2008 Jul-Aug;74(6): 531-35.
[17] Marangos D. "Treating the gummy smile". Dent Today 2011May; 30(5): 132, 134-36.
[18] Costa MR, Costa MG, De Pinho CB, Quintão CC. "Correction of severe overbite and gummy smile in patients with bimaxillaryprotrusion". J ClinOrthod. 2010 Apr; 44(4): 237-44.
[19] Ioi H, Nakata S, Counts AL. "Influence of gingival display on smile aesthetics in Japanese".Eur J Orthod. 2010 Dec; 32(6):633-37.

Dr.Aaysha Tabinda Nabi "Soft Tissue Aesthetic: A Review Article."IOSR Journal of Dental and Medical Sciences (IOSR-JDMS), vol. 17, no. 3, 2018, pp 71-75.