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Myths vs. Realities: Root Coverage Grafting

Drs. Edward P. Allen & W. Peter Nordland

Interdisciplinary Plan to Enhance Hard & Soft Tissue Profiles

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Net-“Working” Beyond Expectations

Dr. Hamada Makarita

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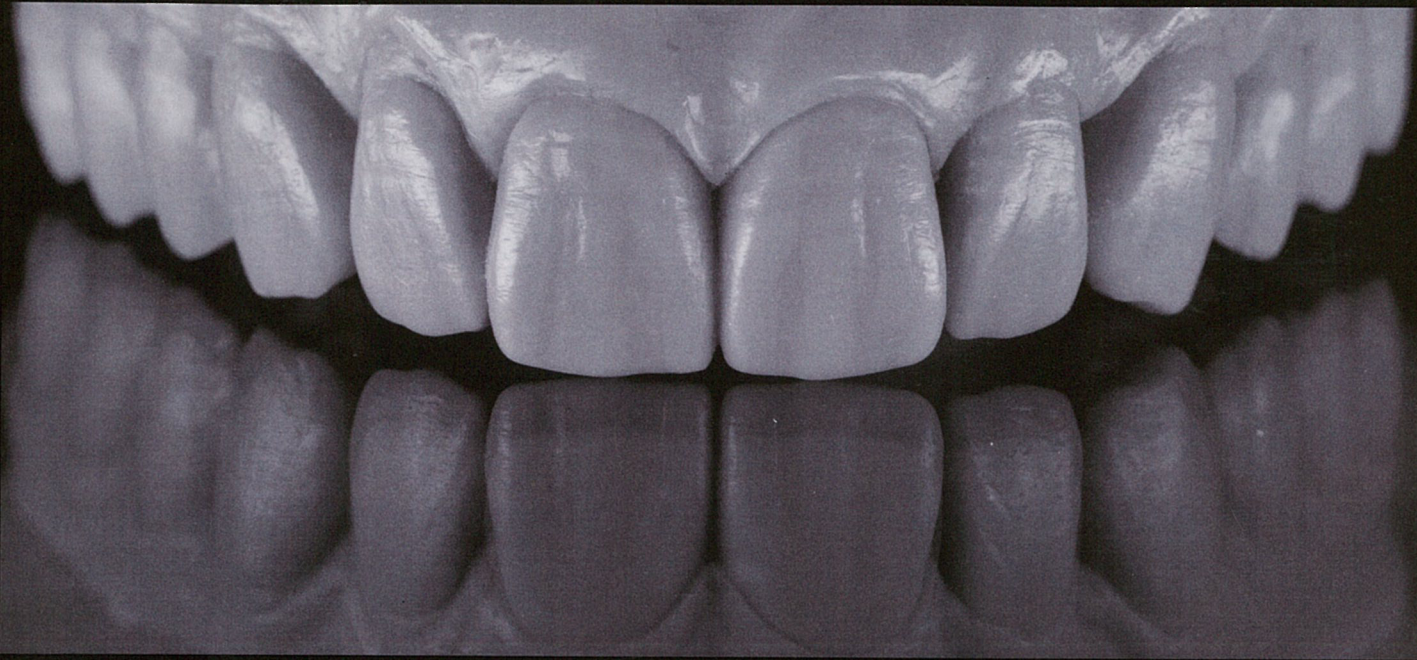
The *Harmony* of Pink & White

The Beauty and Renewal of Gingivae

You Nino, DDS

INTRODUCTION

Advances in technology have created many options in dental therapy. Implant therapy is becoming widely used to improve patients' oral function and make them satisfied. Clinicians are discovering the anatomical relationship of implant and soft tissue with the limitations of implant therapy. On the other hand, patients are demanding more beautiful smiles. Therefore, it is necessary to consider the harmony of pink and white in esthetic and functional restorative therapy.



A goal was to improve the gingival levels and harmonize with the coronal portion.

"In implant therapy for edentulous cases, it is difficult to recover esthetically when the lip line is high."

The Things We Know

class	Restorative environment	Proximal limitation	Vertical soft tissue limitation
1	Tooth-tooth	1mm	5mm
2	Tooth-pontic	N/A	6.5mm
3	Pontic-pontic	N/A	6.0mm
4	Tooth-implant	1.5mm	4.5mm
5	Implant-pontic	N/A	5.5mm
6	Implant-implant	3mm	3.5mm

Classification of predicted height of interdental papillae.
(Table adapted with permission.¹)

Key Points of Diagnosis and Planning in Smile Design

- The position of central incisors is a point of reference that depends on front face assessment, vertical proportions, and lip-tooth relationship.²
- decide the position of central incisors' edge for lip
 - change the position of upper molars for one of central incisors
 - set position of lower dentition to fit with upper one
 - improve the gingival levels and harmonize with the coronal portion.

The Things We Pay Attention To



The percentages of different smile types (low smile 20%, average smile 69%, high smile 11%).³

In implant therapy for edentulous cases, it is difficult to recover esthetically when the lip line is high.

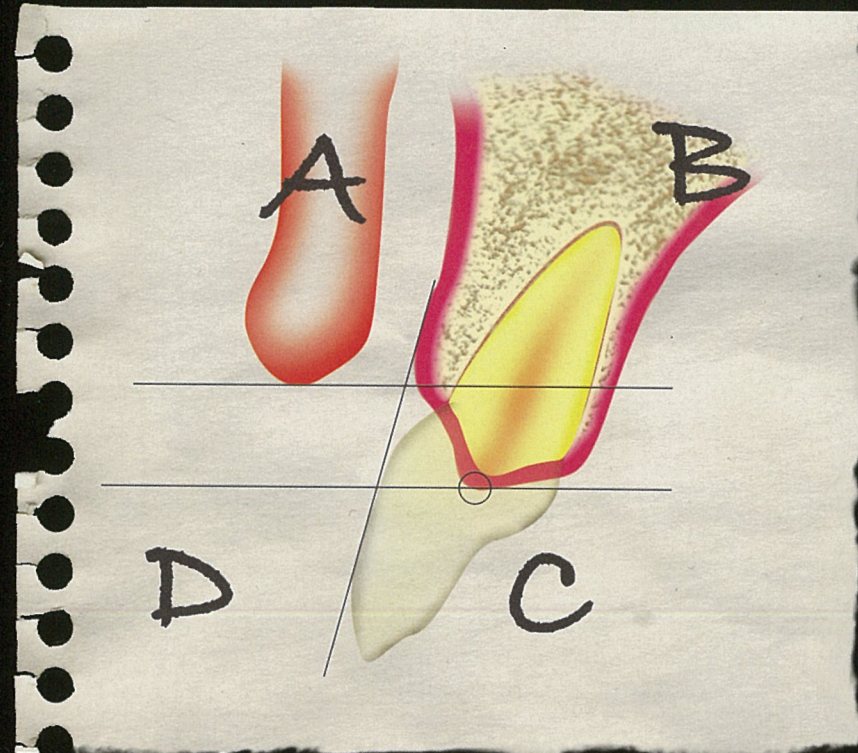
Esthetic problems for prostheses in implant therapy include the following:

- incorrect dental proportion
- inverted smile line
- rectangular teeth and long contacts
- incorrect tooth axis and zenith position.

The Esthetic Quadrant Concept

In view of the four points shown in the Esthetic Quadrant Concept, it is important to make artificial gingivae to improve esthetics in the following areas:

- lip
- hard, soft, and implant-surgical zone
- restorative zone
- visible zone.⁴



Esthetic Quadrant Concept.

Case 1: Veneers' Natural Beauty

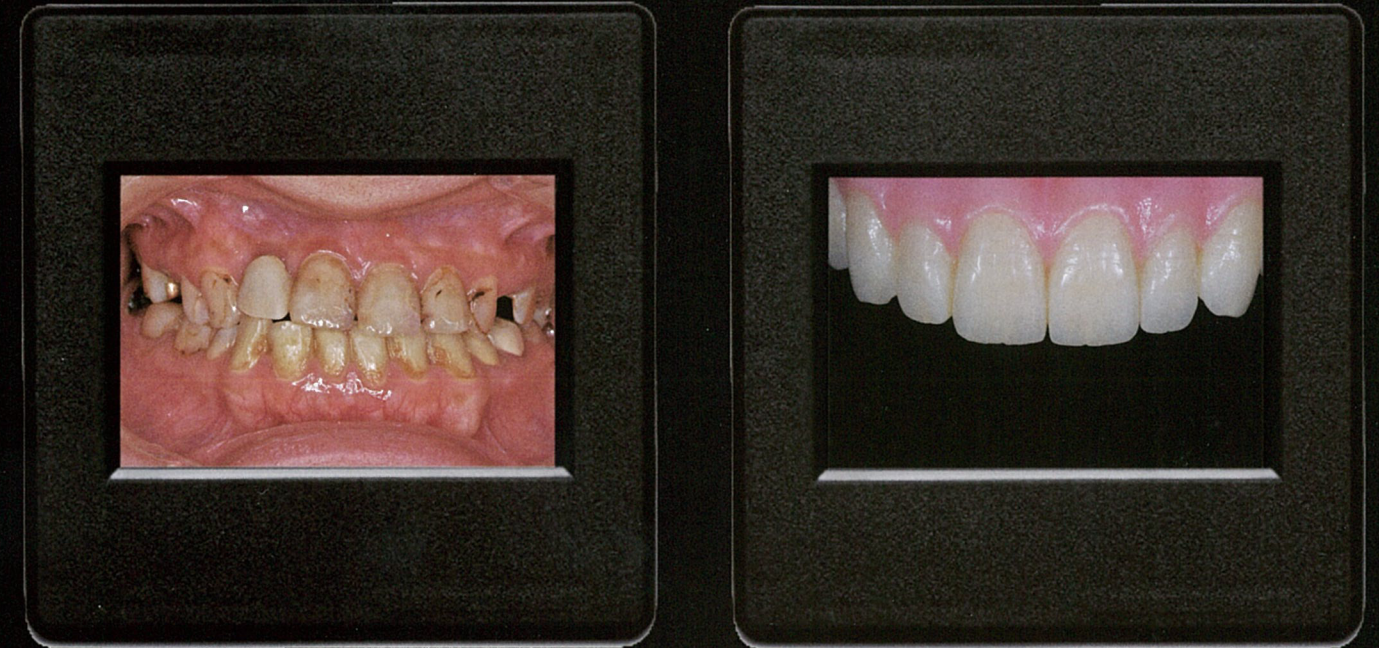
Veneers provide natural-looking beauty. Pink in normal soft tissue enhances beauty. The shape of the teeth depends on the level of dental papillae.



Veneers provide natural-looking beauty (teeth restored: #6, #7, #8, #10, #11).

Case 2

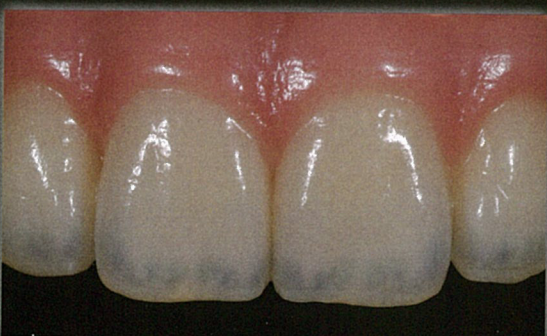
The patient, a 22-year-old female, was very self-conscious about her appearance. She had many cavities and had had orthodontic treatment, which failed. New treatment included extraction of all upper teeth except #16. The oral surgeon placed seven implants in her upper jaw because she rejected a self-removable denture. The author elevated the lower occlusal plane and set a denture with gingivae for the upper. The shape in the bottom of the pontic is flat or convex, making it easier to keep clean. She now has an attractive smile.



New treatment included extraction of all upper teeth except #16.



The shape in the bottom of the pontic is flat or convex, making it easier to keep clean.

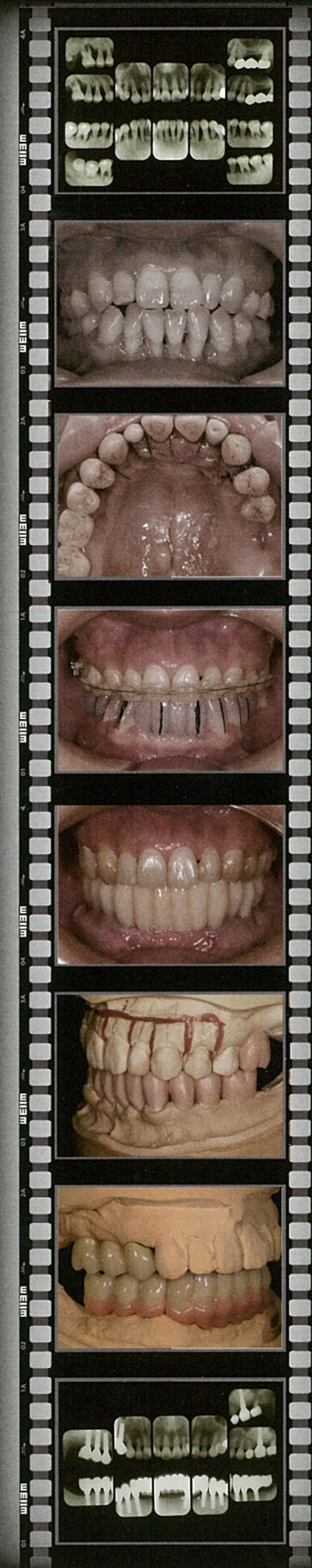


Case 3

The patient, a 50-year-old female, had been unhappy with the appearance of her smile for several years. She presented with periodontitis and cavities. Treatment included extraction of all teeth. An oral surgeon performed a sinus lift and placed nine implants in the upper jaw. The author looked for stable position because the mandibular position was imbalanced. Then the oral surgeon placed eight implants in the lower jaw. Thanks to the full-mouth implant restoration, the patient now has a brilliant smile.

Setting provisional restorations with gingivae can harmonize the shade of pink with the lips.

Note the artistic gingivae.



Case 4

The author diagnosed whether the 31-year-old patient's teeth were good or failing after the patient had a primary treatment for aggressive periodontitis. The author extracted all failing teeth and an oral surgeon placed four implants in the upper jaw. An orthodontist moved teeth to decide the incisal position. After that was completed, the oral surgeon placed eight implants in the patient's lower jaw. Making artificial gingivae was necessary to improve the overall outcome and esthetics.



Making artificial gingivae was necessary to improve the overall outcome and esthetics.

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References

1. Salama H, Salama MA, Garber D, Adar P. The interproximal height of bone: a guidepost to predictable aesthetic strategies and soft tissue contours in anterior tooth replacement. *Pract Perio Aesthet Dent*. 1998;10:1131-41.
2. Spear FM, Kokich VG, Mathews DP. Interdisciplinary management of anterior dental esthetics. *J Am Dent Assoc*. 2006 Feb;137(2):160-9.
3. Tjan AHL, Miller GD, The JG. Some esthetic factors in a smile. *J Prosthet Dent*. 1984;51:24-8.
4. Coachman C, Salama M, Garber D, Calamita MA, Salama H, Cabral G. Prosthetic gingival reconstruction in the fixed partial restoration. part 3. *Int J Periodontics Restorative Dent*. 2010;30:19-29.

Other Sources

Barzilay I, Tamblyn L. Gingival prostheses—a review. *J Can Den Assoc*. 2003;69:74-8.

Edelhoff D, Yildirim M. A review of esthetic pontic design options. *Quintessence Int*. 2002;33:736-46.

Goodacre CJ. Gingival esthetics. *J Prosthet Dent*. 1990;64:1-12.

Lynn BD. The significance of anatomic landmarks in complete denture service. *J Prosthet Dent*. 1964;14:456.

Rosa DM, Zardo CM, Souza Neto J. *Protese fixa metalo-ceramica dento-gingival: uma alternativa entre as solucoes esteticas*. Sao Paulo: Artes Medicas; 2003.

Salama M, Coachman C, Garber D, Calamita MA, Salama H, Cabral G. Prosthetic gingival reconstruction in the fixed partial restoration. part 2: diagnosis and treatment planning. *Int J Periodontics Restorative Dent*. 2009;29:S73-S81.

Salama H, Salama M, Garber D, Adar P. The interproximal height of bone: a guidepost to predictable aesthetic strategies and soft tissue contours in anterior tooth replacement. *Pract Perio Aesthet Dent*. 1998;10(9):1131-41; quiz 1142.

Spear FM, Kokich VG, Mathews DP. Interdisciplinary management of anterior dental esthetics. *J AM Dent Assoc*. 2006 Feb;137(2):160-9. **jcd**



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