



Title: Periodontal Soft Tissue Grafting

Professional / Institutional
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DESCRIPTION

Soft tissue grafts (free gingival, connective tissue, pedicle, soft tissue allograft, or combined connective tissue and double pedicle) are surgical procedures designed to create or augment the attached gingiva, deepen the vestibule, or eliminate frenum involvement. The following describe the soft tissue graft procedures.

Pedicle Soft Tissue Graft Procedure

A pedicle flap of gingiva can be raised from an edentulous ridge, adjacent teeth, or from the existing gingiva on the tooth and moved laterally or coronally to replace alveolar mucosa as marginal tissues. The procedure can be used to cover an exposed root or to eliminate a gingival defect if the root is not too prominent in the arch.

Free Soft Tissue Graft Procedure (Including Donor Site Surgery)

Gingiva or masticatory mucosa is grafted to create or augment the gingiva at another site, with or without root coverage. This graft may also be used to eliminate the pull of frena and muscle attachments, to extend the vestibular fornix, and to correct localized gingival recession.

Subepithelial Connective Tissue Graft Procedures, Per Tooth

This procedure is performed to create or augment gingiva, to obtain root coverage to eliminate sensitivity and to prevent root caries, to eliminate frenum pull, to extend the vestibular fornix, to augment collapsed ridges, to provide an adequate gingival interface with a restoration, or to cover bone or ridge regeneration sites when adequate gingival tissues are not available for effective closure. There are two surgical sites. The recipient site utilizes a split thickness incision, retaining the overlying flap of gingiva and/or mucosa. The connective tissue is dissected from the donor site leaving an epithelialized flap for closure. After the graft is placed at the recipient site, it is covered with the retained overlying flap.

Soft Tissue Allograft

This procedure is performed to create or augment the gingiva, with or without root coverage. This may be used to eliminate the pull of the frena and muscle attachments, to extend the vestibular fornix and correct localized gingival recession. There is no donor site.

Combined Connective Tissue and Double Pedicle Graft, Per Tooth

Advanced gingival recession often cannot be corrected with a single procedure. Combined tissue grafting procedures are needed to achieve the desired outcome.

Mucogingival involvement is defined as condition in which the probing depth progresses through the gingival complex and enters into mucosal tissue.

POLICY

- A. Soft tissue grafting is considered **medically necessary** when gingival recession with mucogingival involvement is present.
- B. Soft tissue grafting, in the absence of mucogingival involvement, may be considered **medically necessary** with documented evidence of the following:
 - 1. Root abrasion, abfraction, or erosion
 - 2. Class V caries or defective restorations
 - 3. Inability to maintain the marginal tissue in periodontal health with atraumatic plaque removal techniques using a manual or mechanical toothbrush with soft bristles
 - 4. Orthodontics planned, in progress, or completed, with exception of the canine exposure
 - 5. Need for restorative care of the tooth
 - 6. Progression of recession
 - 7. Severe root sensitivity with recession
- C. Soft tissue grafting is considered **not medically necessary** when the above indications are not met.

POLICY GUIDELINES

- A. The following clinical findings should be submitted for consideration:
 - 1. Tooth #
 - 2. Probing depths (mm)
 - 3. Gingival recession (mm)
 - 4. Keratinized gingiva (mm)
 - 5. Presence of marginal inflammation
 - 6. Progression of recession
 - 7. Cervical caries or abrasion
- B. Radiographs and photographs may be submitted if they support the medical necessity.
- C. Alloderm may be used when autografting of soft tissue is not feasible.

Please refer to the member's contract benefits in effect at the time of service to determine coverage or non-coverage of these services as it applies to an individual member.

REVISIONS		
06-27-2011	Policy added to the bcbsks.com web site.	
08-12-2011	In Policy Guidelines:	
	 Added the following wording "3. Alloderm may be used when autografting of soft tissue is not feasible." 	
12-01-2011	In Coding section:	
12 01 2011	• Added CDT Code: D4265	
01-01-2013	In Coding section:	
	 Added CDT Codes: D4277, D4278 (Effective 01-01-2013) 	
	■ Deleted CDT Code: D4271 (Effective 12-31-2012)	
01-01-2014	Reviewed the following components of the policy: Description section, Policy section,	
	References	
	In Coding section:	
	• Added CDT Codes: D3431, D3432 (Effective 01-01-2014)	
	■ Added ICD-10 codes	
01-01-2016	Reviewed the following components of the policy: Description, Policy, and References	
	sections.	
	In Coding section:	
	 Added CDT codes: D4283, D4285 (Effective 01-01-2016) Revised nomenclature to CDT codes: D4273, D4275, D4277, D4278 	
01-18-2017	Updated Description section.	
01-10-2017	Updated References section.	
	Remainder of policy reviewed; no other revisions made.	
10-01-2017	In Coding section:	
	 Added ICD-10 codes: K06.011, K06.012, K06.013, K06.021, K06.022, K06.023. 	
	Removed ICD-10 code: K06.0.	
01-30-2018	Reviewed the Description and Policy sections.	
	In Coding section:	
	 Removed ICD-9 codes. 	
	Updated References section.	
01-16-2019	Medical policy reviewed; no revisions made.	
05-21-2021	Medical policy reviewed; no revisions made.	
06-15-2022	Medical policy reviewed; no revisions made	
08-08-2023	Medical policy reviewed; no revisions made	
10-08-2024	Medical policy reviewed; no revisions made	

REFERENCES

- 1. American Academy of Periodontology, Soft Tissue Grafting. Accessed April 2011.
- 2. American Academy of Periodontology, Parameter on Mucogingival Conditions, J Periodontol, May 2000 (Supplement). Accessed April 2011.
- 3. Caffesse R, Alspach S, Morrison E, Burgett F. Lateral sliding flaps with and without citric acid. Int J Periodontics Restorative Dent 1987;7(6):43-57.
- 4. Coatoam G, Behrents R, Bissada N. The width of keratinized gingiva during orthodontic treatment: Its significance and impact on periodontal status. J Periodontol 1981;52:307-313.
- 5. Wennström, JL. Mucogingival therapy. Ann Periodontol 1996;1:671-701.
- 6. Consensus report on mucogingival therapy. Ann Periodontol 1996;1:702-706.
- 7. Lang NP, Löe H. The relationship between the width of keratinized gingiva and gingival health. J Periodontol 1972;43:623-627.

- 8. Langer L, Langer B. The subepithelial connective tissue graft for treatment of gingival recession. Dent Clin North Am 1993;37:243-264.
- 9. Maynard JG Jr. The rationale for mucogingival therapy in the child and adolescent. Int J Periodontics Restorative Dent 1987;7(1):37-51.
- 10. Miller PD Jr. A classification of marginal tissue recession. Int J Periodontics Restorative Dent 1985;5:8-13.
- 11. Smukler H. Laterally positioned mucoperiosteal pedicle grafts in the treatment of denuded roots. A clinical and statistical study. J Periodontol 1976;47:590-595.
- 12. Wennström JL. Lack of association between width of attached gingiva and development of soft tissue recession. A 5-year longitudinal study. J Clin Periodontol 1987;14:181-184.
- 13. Hirsch A, Goldstein M, et.al. A 2-year follow-up of root coverage using subpedicle acellular dermal matrix allografts and subepithelial connective tissue autografts. J Periodontol, August 2005, Vol. 76, No. 8, Pages 1323-1328.
- 14. Mahajan A, Dixit J, and Verma U P. A patient-centered clinical evaluation of acellular dermal matrix graft in the treatment of gingival recession defects. j periodontol. december 2007, vol. 78, no. 12, pages 2348-2355.
- 15. Edel, A. Clinical evaluation of free connective tissue grafts to increase the width of keratinized gingiva. J Clin Periodontol. 1974;1:185-196.
- 16. Langer, B., Calagna, L. Subepithelial connective tissue graft to correct ridge concavities. J Prosthet Dent. 1980;44:363-367.
- 17. Langer, B., Langer, L. Subepithelial connective tissue graft technique for root coverage. J Periodontol. 1983;56:715-720.
- 18. Stetler, K.J., Bissada, J.F. Significance of the width of keratinized gingiva on the periodontal status of teeth with submarginal restorations. J Periodontol. 1987;58:696-700.
- 19. Sullivan, H.C., Atkins, J.H. Free autogenous gingival grafts. III. Utilization of grafts in the treatment of gingival recession. Periodontology. 1968;6:152-160.
- 20. Caffesse, R., Guinard, E. Treatment of localized recessions. Part IV. Results after Three years. J Periodontol. 1980;51:1967-170.
- 21. Miller, P.D. Jr. Root coverage using the free soft tissue autograft following citric acid application. III. A successful and predictable procedure in areas of deep wide recession. Int J Periodont Rest Dent. 1985;5:14-37.
- 22. Jahnke, P.V., Sandler, J.B., Gher, M.E. et al. Thick free gingival and connective tissue autografts for root coverage. J Periodontol. 1993;64:315-322.
- 23. Paolantonio, M., di Murro, C., Cattabriga, A. et al. Subpedicle connective tissue graft versus free gingival graft in the coverage of exposed root surfaces. A 5-year clinical study. J Clin Periodontol. 1997;24:51-56.
- 24. Nelson, S. The subpedicle connective tissue graft. A bilaminar reconstructive procedure for the coverage of denuded root surfaces. J Periodontol. 1987;58:95-102.
- 25. Müller, H.P., Stahl, M., Eger T. Root coverage employing an envelope technique or guided gissue regeneration with bioabsorbable membrane. J Periodontol. 1999;70:743-751.
- 26. Borghtetti, A., Glise, J.M., Monnet-Corti, V. et al. Comparative clinical study of a bioabsorbable membrane and subepithelial connective tissue graft in the treatment of human gingival recession. J Periodontol 1999;70:123-130.
- 27. Harris, J.J. A comparison of two root coverage techniques: guided tissue regeneration with a bioabsorbable matrix style membrane versus a connective tissue graft combined with a coronally positioned pedicle graft without vertical incisions. Results of a series of consecutive cases. J Periodontol. 1998;69:1426-1434.

- 28. Reiser, G.M., Bruno, J.F., Mahan, P.E. et al. The subepithelial connective tissue graft palatal donor site: anatomic considerations for surgeons. Int J Periodont Rest Dent. 1996;16:130-137.
- 29. Sullivan, H.C., Atkins, J.H. Free autogenous gingival grafts. I. Principles of successful grafting. Periodontics. 1968;6:121-129.
- 30. Sugarman, E.F. A clinical and histological study of the attachment of grafted tissue to bone and teeth. J Periodontol. 1969;40:381-387.
- 31. Cortellini, P., Clauser, C., Pini Prato, G. Histological assessment of new attachment following the treatment of a human buccal recession by means of a guided tissue regeneration procedure. J Periodontol. 1993;64:387-391.
- 32. Harris, R.J. Human histologic evaluation of root coverage obtained with a connective tissue with partial thickness double pedicle graft. A case report. J Periodontol. 1999;70:813-821.
- 33. Harris, R.J. A comparison of two techniques for obtaining a connective tissue graft from the palate. Int J Periodont Rest Dent. 1997;17:261-271.
- 34. Karring, T., Lang, N.P., Löe, H. The role of gingival connective tissue in determining epithelial differentiation. J Periodontol Res. 1975;10:1-11.
- 35. Borghetti, A., Louise, F. Controlled clinical evaluation of the subpedicle connective tissue graft for the coverage of gingival recession. J Periodontol. 1994;65:1107-1112.
- 36. Ouhayoun, J.P., Sawal, H.M., Goffaux, J.C. et al. Reepithelialization of a palatal connective tissue graft transplanted in a nonkeratinized alveolar mucosa; a histological and biochemical study in humans. J Periodontol Res. 1988;23:127-133.
- 37. World Workshop in Clinical Periodontics VII. Proceedings of the Seventh World Workshop in Clinical Periodontics. Chicago: American Academy of Periodontology; 1989. p. 1-25.

OTHER REFERENCES

1. Blue Cross and Blue Shield of Kansas Dental Advisory Committee, April 2012, April 2021