Journal of Population Therapeutics & Clinical Pharmacology

RESEARCH ARTICLE
DOI: 10.47750/jptcp.2023.30.10.013

Comparison Of Modified Suspensory Suturing and Anchoring Suturing Technique for Gingival Recession Coverage by Tunnelling and Pouch Technique

B.A.Deepika[1]*, Thamaraiselvan Murugan[2]

[1]Postgraduate Student, Department of Periodontics, Saveetha Dental College and Hospitals, Saveetha Institute of Medical and Technical Sciences, Saveetha University, Chennai,Tamil Nadu, India

[2]Professor, Department of Periodontics, Saveetha Dental College and Hospitals, Saveetha Institute of Medical And Technical Sciences, Saveetha University, Chennai, Tamil Nadu, India

***Corresponding author:** B.A.Deepika, Postgraduate Student, Department of Periodontics, Saveetha Dental College And Hospitals, Saveetha Institute of Medical And Technical Sciences, Saveetha University, Chennai, Tamil Nadu, India, No.162, Poonamallee High road , Chennai 600077,Tamil Nadu, Chennai, Email: deepikaba93@gmail.com

Submitted: 22 March 2023; Accepted: 16 April 2023; Published: 03 May 2023

ABSTRACT

Background: Over the years there is a constant evolution in surgical and suturing techniques for gingival recession coverage, aiming at greater predictability and success. With advancement new suture materials and suturing techniques are being developed to enhance the outcome of the surgery. This study discusses a modified anchored suturing technique for management of a multiple gingival recession defect with tunnel and pouch technique.

Materials and methods: Subjects with multiple gingival recession defects were treated using pouch and tunnel technique with connective tissue graft. The coronal displacement of tissue was achieved with a modified anchored suturing technique and anchored suturing technique. A total of 20 subjects selected and were divided into 2 groups Group 1: Anchored suture technique Group 2: Modified anchored suture. This facilitated more coronal displacement of tissue and drastic reduction of mechanical contact between the tissue and the modified anchored suture, which preserved the tissue integrity. Prior to Surgery, baseline evaluation of the following clinical parameters were recorded: gingival index, plaque index, probing depth, clinical attachment level. After surgery, healing index, cleft formation, tissue necrosis index, Reduction in Recession depth and Mean Recession coverage was evaluated. Mean and Standard Deviation were assessed and P Values are assessed by using SPSS software 23.0 version.

Results: At 3rd day, 7th day, 14th day, 1-month, plaque index, gingival index, healing index was assessed. After 1 month Tissue necrosis index and Cleft formation was assessed. Follow up showed complete recession coverage with excellent aesthetic outcome. The significance of statistical tests for Gingival Index, Plaque index, Healing index at Baseline, 3rd day, 7th day for both groups are not significant $p>0.05$; for the 14th day and 1 month it is significant $p<0.05$ for both the groups. The significance of statistical tests for cleft formation and Tissue necrosis score at 1 month for both groups is significant $p<0.05$. The significance of statistical tests for Mean Recession coverage at Baseline is

not significant p>0.05 ; and for 1 month both groups are significant p<0.05.

Conclusion: The modified anchored suturing technique anchored around incisal contact point facilitates adequate coronal displacement of gingival margins and drastically reduces the mechanical contact between tissue and suture thereby preserving the tissue integrity and enhancing outcome.

Keywords: *Gingival Recessions, Suture Technique, Gingiva*

INTRODUCTION

Historically, surgical periodontal therapy was focused at management of plaque induced periodontal tissues, however with increased aesthetic demands of patients, periodontal plastic procedures like gingival recession coverage, papilla reconstruction etc., have become a common practice. [1] Gingival recession is characterized by the displacement of gingival margin apical to the cemento - enamel junction (CEJ) with exposure of root surface to the oral environment resulting in an unaesthetic appearance, dentin hypersensitivity and risk of root caries. Although various procedures like free gingival graft, [2] laterally sliding flap, [3] coronally advanced flap, [4] etc have been used [5,6] till now sub epithelial connective graft (SCTG) technique is considered to be gold standard technique for recession coverage due to its highest success rate and predictability. [7]

Over the years there is a constant evolution in surgical and suturing techniques for gingival recession coverage, [8,9] aiming at greater predictability and success. Surgically, one of the most important developments is the pouch and tunnel technique which involves minimally invasive flap designs with minimal incisions and flap elevations, thereby ensuring excellent vascular supply to the underlying connective tissue. [9] Also it creates a close adaptation of the graft to the recipient site, which is covered by coronal displacement of the gingival margin and stabilised with sling or anchoring sutures around the tooth. [10]

Suturing techniques play a vital role in success of gingival recession coverage procedures. For a tunnel and pouch technique, sling sutures anchored around the cervical third of the teeth are commonly done to displace the flap margin coronally and secure it. [11] The outcome of this, largely depends on factors like, number of sutures placed, tension applied over the sling, diameter of the sling, contact area between sling and soft tissue and compression over the soft tissue. [12] Since the anchoring point in conventional techniques is the cervical third of the crown, which are close to the gingival margin, there are chances of more contact area between the suture and the soft tissue and high compression over the tissue which might negatively influence the outcome.

The success of surgical procedure also depends on the suturing material and techniques used. The suturing techniques used with a tunnel and pouch technique are Independant sling suture, double sling suture, simple Interrupted suture. Apart from this, factors such as suture diameter, contact area between suture and soft tissue, and forces exerted by the suture thread on the underlying tissues may negatively influence the outcome. [13] With advancement and refinements in suture materials and techniques the above factors are being addressed and newer suturing techniques are developed to enhance the outcome of the surgery. [14] The modified anchored suturing technique reduces the surface contact between the suture thread and the gingival tissue, which reduces the compression over the tissue. This ultimately preserves the vascularity of the gingival margin thereby enhancing the clinical outcomes. Our team has extensive knowledge and research experience that has translated into high quality publications. [15–24] The aim of this study is to compare the modified anchored suture and anchor suturing technique for gingival recession coverage by Tunnelling and Pouch technique.

MATERIALS AND METHODS

Study Design

The study design includes a parallelized controlled clinical trial for which the study

subjects were recruited from the patients reporting to the out patient department of periodontics, with the following inclusion and exclusion criteria.

Inclusion criteria

Miller's class I single tooth gingival recession or multiple tooth gingival recession involving at least 2 adjacent teeth.

Recession depth ranging between a minimum of 2 to a maximum of 5mm

Subjects with at least 18 years of age or older

Subjects willing to give consent form

Exclusion criteria

- Smokers
- Presence of cervical carious lesion
- Periodontal pocket depth greater than 4mm
- Patients who had undergone surgical periodontal therapy at sites of recession 6 months before
- Miller's class II,III,and IV
- Pregnancy
- Proclined Anteriors
- Fractured tooth (tooth with open contact)

A total of 20 subjects satisfied the inclusion and exclusion criteria, who were explained about the purpose, risks, benefits, of the procedures and the study and after obtaining the informed consent the subjects were finally included in the study. The age of the study population ranged from 20 - 45 years, in which 15 were males and 5 were females, each with a 5 single and 15 multiple classI gingival recession defect. The study subjects were then allocated to one of the 2 study groups.

Study group

GROUP I: Anchor suture (control group)

GROUP II: Modified Anchor suture (Test group) Modified suspensory suture

Subjects in both the groups were initiated with phase I periodontal therapy which included complete scaling and root planing at the gingival recession sites. A complete oral hygiene instructions and change in brushing techniques were advised if traumatic tooth brushing habits were noticed. The recession coverage surgery was planned 1 week after the phase I therapy if adequate oral hygiene was seen during reevaluation. Prior to Surgery (baseline) and during follow-up (3rd day, 7th day, 14th day, 1 month) evaluation, the following clinical parameters were recorded: Gingival index (GI), Plaque index (PI), Probing depth (PD), Clinical attachment level (CAL). In addition to this the healing and outcome post surgery was evaluated by the following parameters: Healing index (HI), Cleft formation (CF), Tissue Necrosis index (TNI) was evaluated.

Surgical Procedure

Under total asepsis and adequate local anaesthesia at the gingival recession sites the gingival recession coverage was done using tunnel and pouch technique as described in A.L.Allen 1994 in both the study groups. Briefly, the surgical technique involves sulcular incision at the gingival recession site with a number 15C blade and a supraperiosteal pouch was created apically and laterally to the recession extending 3 to 5 mm in all directions. This pouch around each adjacent recession defect was connected by the tunnel, and the split thickness was carried beyond the mucogingival junction to allow displacement of the flap and then placement of the graft. Graft of adequate dimensions as measured with a template was procured from the palate by the "trap door" approach and the palatal donor site was sutured using a 3-0 nonresorbable, silk suture. The harvested connective tissue graft was positioned in the prepared pouch with the help of a tunneling instrument and the graft was further slid through the tunnel to cover the recession defect and secured to the adjacent flap using 5-0 Vicryl resorbable suture

(™ Vicryl) .All the steps involved in the surgical procedure are the same in both the treatment groups, except for the suturing technique. Suturing was done are as follows

Group 1: Anchored suture : First the suture needle is passed through the flap 1-2 mm . Needle penetration from buccal side. The Thread is circulated at the lingual side of the tooth. The Thread is again passed through the buccal side, the adjacent papillae side of the flap. A Knot is secured on the buccal side to ensure the strength of the thread, with forces holding the flap.

Group 2(Anchored suture): the suturing is started from the buccal side at the base of the mesial surgical papilla (figure 1), passing through the anatomical papilla and exiting on the opposing (lingual) side. The suture then encircles the tooth, going to the distal side, passes below the contact points and returns to the buccal side. Next, the needle engages the outer surface on the buccal side of the distal surgical papilla, through the anatomical papilla, advancing towards the opposite side. After encircling the tooth back to the mesio-lingual side, the suture, once again, passes underneath the contact points without engaging any tissues, returning to the buccal side.

Lastly, a knot is made on the mesial papilla.

After adequate haemostasis, post operative instructions are given. Analgesic and Antibiotics were prescribed for the relief from any postsurgical pain. Subjects were advised to refrain from mechanical cleaning of the surgical site, which could disturb initial healing and instructed to rinse with 0.2% chlorhexidine gluconate solution, twice a day for 1 minute and asked to report after a week for suture removal and reevaluation.

During the follow-up re-evaluation all the sites showed uneventful healing. The sutures were removed after 1 week. On the 3rd day, 7th day, 14th day, 1-month, Plaque index (PI), Gingival index(GI), After 1 month , the Healing index(HI), Tissue Necrosis index (TNI) and Cleft formation (CF) was assessed.

Statistical Analysis

Differences between the groups were statistically analysed by SPSS Software 23.0 version; One Way Anova Test , Mann Whitney U test was done. Mean and Standard Deviation were assessed. P Values are assessed.

RESULTS

TABLE 1: The table depicts the Gingival index(GI), Plaque index(PI), Healing index(HI) for both the groups . Group 1: Anchor suture, Group 2: Modified anchor suture mean and standard deviation and p Values are mentioned.

PARAMETERS	GROUP 1 Mean and SD	GROUP 2 Mean and Standard deviation	p VALUE
GI Baseline	3.33+_0.49	3.00+_0.81	0.281
3rd day	2.00+_0.42	1.75+_0.50	0.134
7th day	1.83+_0.38	1.50+_0.57	0.250
14th day	1.75+_0.45	1.35+_0.50	0.013
1 month	1.25+_0.45	1.25+_0.50	0.001
PI Baseline	3.78+_0.54	3.32+_0.54	0.510
3rd day	3.33+_0.49	3.00+_0.81	0.128
7th day	3.08+_0.51	2.75+_0.50	0.107
14th day	2.75+_0.45	2.50+_0.57	0.005
1 month	2.67+_0.49	2.50+_0.50	0.002
HI Baseline	3.20+_0.44	2.60+_0.54	0.007
1st day	2.00+_0.01	2.40+_0.54	0.401

3rd day	2.60+_0.54	2.60+_0.54	0.134
7th day	4.40+_0.54	4.60+_0.54	0.072
14th day	4.64+_0.48	4.67+_0.50	0.005
1 month	4.20+_0.48	4.62+_0.50	0.040

The significance of statistical tests for Gingival Index at Baseline , 3rd day, 7th day for both groups are not significant p>0.05. For the 14th day and 1 month Gingival index is significant p<0.05 for both the groups. The significance of statistical tests for Plaque Index at Baseline , 3rd day, 7th day for both groups are not significant p>0.05. For the 14th day and 1 month Plaque index is significant p<0.05 for both the groups.

The significance of statistical tests for Gingival Index at Baseline , 3rd day, 7th day for both groups are not significant p>0.05. For 14th day and 1 month gingival index is significant p<0.05 for both the groups. The significance of statistical tests for Gingival Index at Baseline , 3rd day, 7th day for both groups are not significant p>0.05. For the 14th day and 1 month Healing index is significant p<0.05 for both the groups.

TABLE 2: The Table depicts the Incidence and p Value for Cleft formation, Tissue necrosis score for Group 1: Anchor suture, Group 2: Modified anchor suture

Incidence Of Parameters	**Group I**	**Group II**
Cleft formation	20%	0%
Tissue Necrosis score	20%	0%

PARAMETERS	P value (Group I and Group II)
Cleft formation	P= 0.002
Tissue Necrosis	P= 0.001

The significance of statistical tests for cleft formation and Tissue necrosis score at 1 month for both groups is significant p<0.05.

TABLE 3: The Table depicts the mean, standard deviation and p value for Recession depth for Group 1: Anchor suture, Group 2: Modified anchor suture

Recession Depth	Group 1 Mean And Standard Deviation	Group 2 Mean And Standard Deviation	P Value
Baseline	3.60+_0.54	5.40+_1.94	P=0.002
1 month	4.60+_3.33	7.16+_4.60	P=0.003

The significance of statistical tests for Recession depth at Baseline and 1 month for both groups are significant p<0.05.

TABLE 4: The table depicts the Reduction in Recession depth for Anchor suture and Modified Anchor suture for all 20 subjects included in the study

Anchor Suture	**Modified Anchor Suture**
66.6%	75%
66.6%	75%

0%	66.6%
30%	75%
0%	66.6%
66.6%	75%
66.6%	75%
0%	66.6%
30%	75%
0%	66.6%
66.6%	75%
66.6%	75%
0%	66.6%
30%	75%
0%	66.6%
66.6%	75%
66.6%	75%
0%	66.6%
30%	75%
0%	66.6%

TABLE 5: The Table depicts the Mean Recession coverage mean and standard deviation for Anchor suture and Modified Anchor suture.

Mean Recession Coverage	Anchor Suture	Modified Anchor Suture	P Value
Baseline	32.64	41.64	0.621
1 month	33.33	71.60	0.050

The significance of statistical tests for Mean Recession coverage at Baseline is not significant $p>0.05$; and for 1 month both groups are significant $p<0.05$.

DISCUSSION

The recession of gingiva, either localized or generalized, may be associated with one or more surfaces, resulting in attachment loss and root exposure. Marginal gingival recession, therefore should not be viewed as merely a soft tissue defect, but as the destruction of both the soft and hard tissue. [25]

Our study showed for both Gingival Index(GI) and Plaque Index (PI) when compared at baseline there was no statistically significant difference between the groups((P>0.05) Table 1). When compared within groups GI and PI reduced from baseline to 1 month follow up. This shows that all the participants involved in the study maintained good oral hygiene .When compared between the groups there was no statistically significant difference either at baseline or at 1 month follow up.

Also the Mean Recession coverage (MRC)in our study inAnchor suture group was 32.4% which is in disagreement with previous studies which had reported amount of Recession coverage with Tunnel and pouch technique exhibiting an overall mRC of 82.8% for single and 87.9% for multiple GRs, Lorenzo Tavelli et,al. 2018). In Modified Anchor suture group Mean Recession Coverage was 71.64 % of MRC ; since there was no previous studies evaluating the Tunnel and Pouch technique with Modified Anchor Suture . we are not able to compare our results with any existing data.

When compared between groups there was a statistically significant higher MRC is seen in Group 2: Modified Anchor suture can result in better Recession coverage

(Table 3,4,5). This might be due the modified anchoring suturing technique claims to provide

many advantages over the conventional techniques [9,26] such as.,. Firstly the incisal contacts between the teeth (Splinted) are the anchoring point, which are placed more coronally to the flap margin that provides adequate flap displacement coronally. Secondly, since the flaps are suspended from the anchoring point it drastically reduces the mechanical contact between the tissues and the sling sutures, thereby minimising the compression on the tissues.[27] The suspension provides only a gentle compression that is sufficient to make close contact between the flap/graft to the recipient site thereby improving wound stability, reduction of thickness of blood clot and subsequent faster vascular anastomosis . All these tend to preserve the tissue integrity and avoid vascular collapse and scar formation related to iatrogenic suturing.

Healing Index (HI), was introduced by Landry et al. [9] in 1988 and evaluated the parameters of tissue colour, bleeding response to palpation, presence of granulation tissue, characteristics of the incision margins, and the presence of suppuration. Our observations on Healing during the initial phase to 1 month follow up when compared between the groups are statistically significant (Table 1).

Our study also evaluated the Tissue Necrosis and Cleft formation.Tissue Necrosis is a form of cell injury which results in the premature death of cells in living tissue by autolysis. Tissue Necrosis may occur after Periodontal Surgical procedures as a result of improper suturing, excessive tissue contact between suture threads and tissue , excessive tension which In turn might compromise the Vascularity of the tissue lying with in the suture thread thus contributing to Tissue Necrosis. In our study in Group I : One of the sample resulted in Tissue Necrosis, whereas there was no evidence of Tissue Necrosis in Group II. Thus it can be understood that Modified Anchor Suture reduces tissue contact and thereby avoids any incidence of necrosis during soft tissue healing .

Cleft formation is a common feature in Soft tissue after gingival coverage procedures if the graft revascularization was not achieved . In Our study in Group I : one of the samples resulted in Cleft formation, whereas there was no evidence of Cleft formation in Group II . Thus it can be understood that Modified Anchor suture shows better results than Anchor suture. Our observation on Tissue Necrosis and Cleft formation from the initial phase to 1 month follow up when compared between the groups are statistically significant (Table2).

Limitations of our study : Our sample size is limited, follow up of our study is also limited, that is one month. Hence further studies are needed with long term follow up for Recession coverage procedures with Tunnel and pouch with Modified suspensory suture .

CONCLUSION

The suturing technique described here tends to offer great displacement and stabilisation of gingival margin in tunnel and pouch techniques while preserving the soft tissue integrity and vascularity.

REFERENCES

1. Thamaraiselvan M, Elavarasu S, Thangakumaran S, Gadagi JS, Arthie T. Comparative clinical evaluation of coronally advanced flap with or without platelet rich fibrin membrane in the treatment of isolated gingival recession. J Indian Soc Periodontol 2015;19:66-71.
2. Miller PD Jr. Root coverage using a free soft tissue autograft following citric acid application Part 1: Technique. Int J Periodontics Restorative Dent 1982;2:65-70.
3. Fischer KR, Alaa K, Schlagenhauf U, Fickl S. Root coverage with a modified lateral sliding flap - a case series. Eur J Esthet Dent 2012;7:120-8.
4. Kanmaz B, Kanmaz MG, Kaval B, Buduneli N. Root coverage with coronally advanced flap: 6-year follow-up. Aust Dent J 2019;64:346-52.
5. Milano F. A combined flap for root coverage. Int J Periodontics Restorative Dent 1998;18:544-51.
6. Pini Prato G, Tinti C, Vincenzi G, Magnani C, Cortellini P, Clauser C. Guided tissue regeneration versus mucogingival surgery in the treatment of human buccal gingival recession. J Periodontol 1992;63:919-28.
7. Zangrando MS, Valle LA, Stuani VD, Costa MR, Shibuy SK, Damante CA. Clinical outcomes of root coverage with subepithelial connective tissue graft according to site specific factors -

longitudinal retrospective clinical study. J Int Acad Periodontol 2019;21:159-67.
8. Zuhr O, Fickle S, Wachtel H, Bolz W, Hürzeler MB. Covering of gingival recessions with a microsurgical tunnel technique: case report. Int J Periodontics Restorative Dent 2007;27:457–63.
9. Ronco V, Dard M. A novel suturing approach for tissue displacement within minimally invasive periodontal plastic surgery. Clinical Case Reports 2016;4:831–7.
10. Zabalegui I, Sicilia A, Cambra J, Gil J, Sanz M. Treatment of multiple adjacent gingival recessions with the tunnel subepithelial connective tissue graft: a clinical report. Int J Periodontics Restorative Dent 1999;19:199-206.
11. Tavelli L, Barootchi S, Namazi SS, Chan HL, Brzezinski D, Danciu T et al. The influence of palatal harvesting technique on the donor site vascular injury: A split-mouth comparative cadaver study. J Periodontol 2020;91:83-92.
12. American Academy of Periodontology: Proceedings of the world workshop in periodontics. Ann Periodontol. 1996;1:37–215.
13. Wennstrom JL, Zucchelli G, Pini Prato GP. Mucogingival surgery. In: Lang NP, Karring T, editors. Clinical Periodontology and Implant Dentistry. 5th ed. Oxford, UK: Blackwell Munksgaard; 2008. pp. 955–1011.
14. Serino G, Wennström JL, Lindhe J, Eneroth L. The prevalence and distribution of gingival recession in subjects with a high standard of oral hygiene. J Clin Periodontol. 1994;21:57–63
15. Vadivel JK, Govindarajan M, Somasundaram E, Muthukrishnan A. Mast cell expression in oral lichen planus: A systematic review. J Investig Clin Dent. 2019 Nov;10(4):e12457.
16. Panda S, Jayakumar ND, Sankari M, Varghese SS, Kumar DS. Platelet rich fibrin and xenograft in treatment of intrabony defect. Contemp Clin Dent. 2014 Oct;5(4):550–4.
17. Mehta M, Dhanjal DS, Paudel KR, Singh B, Gupta G, Rajeshkumar S, et al. Cellular signalling pathways mediating the pathogenesis of chronic inflammatory respiratory diseases: an update. Inflammopharmacology. 2020 Aug;28(4):795–817.
18. Venkatesan J, Singh SK, Anil S, Kim SK, Shim MS. Preparation, Characterization and Biological Applications of Biosynthesized Silver Nanoparticles with Chitosan-Fucoidan Coating. Molecules [Internet]. 2018 Jun 12;23(6). Available from: http://dx.doi.org/10.3390/molecules23061429
19. Bhansali KJ, Balinge KR, Raut SU, Deshmukh SA, Senthil Kumar M, Ramesh Kumar C, et al. Visible light assisted sulfonic acid-functionalized porphyrin comprising benzimidazolium moiety for photocatalytic transesterification of castor oil. Fuel. 2021 Nov 15;304:121490.
20. Deepanraj B, Senthilkumar N, Mala D, Sathiamourthy A. Cashew nut shell liquid as alternate fuel for CI engine—optimization approach for performance improvement. Biomass Conversion and Biorefinery. 2022 May 1;12(5):1715–28.
21. Kamath M, Rao SK, Jaison, Sridhar, Kasthuri, Gopinath, et al. Melatonin delivery from PCL scaffold enhances glycosaminoglycans deposition in human chondrocytes – Bioactive scaffold model for cartilage regeneration. Process Biochem. 2020 Dec;99:36–47.
22. Paramasivam A, Priyadharsini JV. Novel insights into m6A modification in circular RNA and implications for immunity [Internet]. Vol. 17, Cellular & MolecularImmunology.2020.p.668–9.Availablefrom:http://dx.doi.org/10.1038/s41423-020-0387-x
23. Li Z, Veeraraghavan VP, Mohan SK, Bolla SR, Lakshmanan H, Kumaran S, et al. Apoptotic induction and anti-metastatic activity of eugenol encapsulated chitosan nanopolymer on rat glioma C6 cells via alleviating the MMP signaling pathway [Internet]. Vol. 203, Journal of Photochemistry and Photobiology B: Biology.2020.p.111773.Availablefrom:http://dx.doi.org/10.1016/j.jphotobiol.2019.111773
24. Nambi G, Kamal W, Es S, Joshi S, Trivedi P. Spinal manipulation plus laser therapy versus laser therapy alone in the treatment of chronic non-specific low back pain: a randomized controlled study. Eur J Phys Rehabil Med. 2018 Dec;54(6):880–9.
25. Ahathya RS, Deepalakshmi D, Ramakrishnan T, Ambalavanan N, Emmadi P. Subepithelial connective tissue grafts for the coverage of denuded root surfaces: A clinical report. Indian J Dent Res. 2008;19:134–40.
26. Silverstein LH, Kurtzman GM, Shatz PC. Suturing for optimal soft-tissue management. J Oral Implantol 2009;35:82–90.
27. Burkhardt R, Lang NP. Coverage of localized gingival recessions: comparison of micro- and macrosurgical techniques. J Clin Periodontol 2005;32:287–93

Pre op

Immediate Post op

Post op

FIGURE 1: The figure depicts the pre op, immediate post op and after 1 month picture for Anchor suture

Pre op

Immediate post op

Post op

FIGURE 2: The figure depicts the pre op, immediate post op and after 1 month picture for Modified Anchor suture

J Popul Ther Clin Pharmacol Vol 30(10):e83–e91; 03 May 2023.