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ЕЖЕМЕСЯЧНЫЙ НАУЧНЫЙ ЖУРНАЛ

Медицинские новости Грузии
საქართველოს სამედიცინო სიახლენი

GEORGIAN MEDICAL NEWS

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GMN: Georgian Medical News is peer-reviewed, published monthly journal committed to promoting the science and art of medicine and the betterment of public health, published by the GMN Editorial Board since 1994. GMN carries original scientific articles on medicine, biology and pharmacy, which are of experimental, theoretical and practical character; publishes original research, reviews, commentaries, editorials, essays, medical news, and correspondence in English and Russian.

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GMN: Медицинские новости Грузии - ежемесячный рецензируемый научный журнал, издаётся Редакционной коллегией с 1994 года на русском и английском языках в целях поддержки медицинской науки и улучшения здравоохранения. В журнале публикуются оригинальные научные статьи в области медицины, биологии и фармации, статьи обзорного характера, научные сообщения, новости медицины и здравоохранения. Журнал индексируется в MEDLINE, отражён в базе данных SCOPUS, PubMed и ВИНТИ РАН. Полнотекстовые статьи журнала доступны через БД EBSCO.

GMN: Georgian Medical News – საქართველოს სამედიცინო სიახლენი – არის ყოველთვიური სამეცნიერო სამედიცინო რეცენზირებადი ჟურნალი, გამოიცემა 1994 წლიდან, წარმოადგენს სარედაქციო კოლეგიისა და აშშ-ის მეცნიერების, განათლების, ინდუსტრიის, ხელოვნებისა და ბუნებისმეტყველების საერთაშორისო აკადემიის ერთობლივ გამოცემას. GMN-ში რუსულ და ინგლისურ ენებზე ქვეყნდება ექსპერიმენტული, თეორიული და პრაქტიკული ხასიათის ორიგინალური სამეცნიერო სტატიები მედიცინის, ბიოლოგიისა და ფარმაციის სფეროში, მიმოხილვითი ხასიათის სტატიები.

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WEBSITE

www.geomednews.com

К СВЕДЕНИЮ АВТОРОВ!

При направлении статьи в редакцию необходимо соблюдать следующие правила:

1. Статья должна быть представлена в двух экземплярах, на русском или английском языках, напечатанная через **полтора интервала на одной стороне стандартного листа с шириной левого поля в три сантиметра**. Используемый компьютерный шрифт для текста на русском и английском языках - **Times New Roman (Кириллица)**, для текста на грузинском языке следует использовать **AcadNusx**. Размер шрифта - **12**. К рукописи, напечатанной на компьютере, должен быть приложен CD со статьей.

2. Размер статьи должен быть не менее десяти и не более двадцати страниц машинописи, включая указатель литературы и резюме на английском, русском и грузинском языках.

3. В статье должны быть освещены актуальность данного материала, методы и результаты исследования и их обсуждение.

При представлении в печать научных экспериментальных работ авторы должны указывать вид и количество экспериментальных животных, применявшиеся методы обезболивания и усыпления (в ходе острых опытов).

4. К статье должны быть приложены краткое (на полстраницы) резюме на английском, русском и грузинском языках (включающее следующие разделы: цель исследования, материал и методы, результаты и заключение) и список ключевых слов (key words).

5. Таблицы необходимо представлять в печатной форме. Фотокопии не принимаются. **Все цифровые, итоговые и процентные данные в таблицах должны соответствовать таковым в тексте статьи**. Таблицы и графики должны быть озаглавлены.

6. Фотографии должны быть контрастными, фотокопии с рентгенограмм - в позитивном изображении. Рисунки, чертежи и диаграммы следует озаглавить, пронумеровать и вставить в соответствующее место текста **в tiff формате**.

В подписях к микрофотографиям следует указывать степень увеличения через окуляр или объектив и метод окраски или импрегнации срезов.

7. Фамилии отечественных авторов приводятся в оригинальной транскрипции.

8. При оформлении и направлении статей в журнал МНГ просим авторов соблюдать правила, изложенные в «Единых требованиях к рукописям, представляемым в биомедицинские журналы», принятых Международным комитетом редакторов медицинских журналов - <http://www.spinesurgery.ru/files/publish.pdf> и http://www.nlm.nih.gov/bsd/uniform_requirements.html В конце каждой оригинальной статьи приводится библиографический список. В список литературы включаются все материалы, на которые имеются ссылки в тексте. Список составляется в алфавитном порядке и нумеруется. Литературный источник приводится на языке оригинала. В списке литературы сначала приводятся работы, написанные знаками грузинского алфавита, затем кириллицей и латиницей. Ссылки на цитируемые работы в тексте статьи даются в квадратных скобках в виде номера, соответствующего номеру данной работы в списке литературы. Большинство цитированных источников должны быть за последние 5-7 лет.

9. Для получения права на публикацию статья должна иметь от руководителя работы или учреждения визу и сопроводительное отношение, написанные или напечатанные на бланке и заверенные подписью и печатью.

10. В конце статьи должны быть подписи всех авторов, полностью приведены их фамилии, имена и отчества, указаны служебный и домашний номера телефонов и адреса или иные координаты. Количество авторов (соавторов) не должно превышать пяти человек.

11. Редакция оставляет за собой право сокращать и исправлять статьи. Корректур авторам не высылаются, вся работа и сверка проводится по авторскому оригиналу.

12. Недопустимо направление в редакцию работ, представленных к печати в иных издательствах или опубликованных в других изданиях.

При нарушении указанных правил статьи не рассматриваются.

REQUIREMENTS

Please note, materials submitted to the Editorial Office Staff are supposed to meet the following requirements:

1. Articles must be provided with a double copy, in English or Russian languages and typed or computer-printed on a single side of standard typing paper, with the left margin of 3 centimeters width, and 1.5 spacing between the lines, typeface - **Times New Roman (Cyrillic)**, print size - 12 (referring to Georgian and Russian materials). With computer-printed texts please enclose a CD carrying the same file titled with Latin symbols.

2. Size of the article, including index and resume in English, Russian and Georgian languages must be at least 10 pages and not exceed the limit of 20 pages of typed or computer-printed text.

3. Submitted material must include a coverage of a topical subject, research methods, results, and review.

Authors of the scientific-research works must indicate the number of experimental biological species drawn in, list the employed methods of anesthetization and soporific means used during acute tests.

4. Articles must have a short (half page) abstract in English, Russian and Georgian (including the following sections: aim of study, material and methods, results and conclusions) and a list of key words.

5. Tables must be presented in an original typed or computer-printed form, instead of a photocopied version. **Numbers, totals, percentile data on the tables must coincide with those in the texts of the articles.** Tables and graphs must be headed.

6. Photographs are required to be contrasted and must be submitted with doubles. Please number each photograph with a pencil on its back, indicate author's name, title of the article (short version), and mark out its top and bottom parts. Drawings must be accurate, drafts and diagrams drawn in Indian ink (or black ink). Photocopies of the X-ray photographs must be presented in a positive image in **tiff format**.

Accurately numbered subtitles for each illustration must be listed on a separate sheet of paper. In the subtitles for the microphotographs please indicate the ocular and objective lens magnification power, method of coloring or impregnation of the microscopic sections (preparations).

7. Please indicate last names, first and middle initials of the native authors, present names and initials of the foreign authors in the transcription of the original language, enclose in parenthesis corresponding number under which the author is listed in the reference materials.

8. Please follow guidance offered to authors by The International Committee of Medical Journal Editors guidance in its Uniform Requirements for Manuscripts Submitted to Biomedical Journals publication available online at: http://www.nlm.nih.gov/bsd/uniform_requirements.html
http://www.icmje.org/urm_full.pdf

In GMN style for each work cited in the text, a bibliographic reference is given, and this is located at the end of the article under the title "References". All references cited in the text must be listed. The list of references should be arranged alphabetically and then numbered. References are numbered in the text [numbers in square brackets] and in the reference list and numbers are repeated throughout the text as needed. The bibliographic description is given in the language of publication (citations in Georgian script are followed by Cyrillic and Latin).

9. To obtain the rights of publication articles must be accompanied by a visa from the project instructor or the establishment, where the work has been performed, and a reference letter, both written or typed on a special signed form, certified by a stamp or a seal.

10. Articles must be signed by all of the authors at the end, and they must be provided with a list of full names, office and home phone numbers and addresses or other non-office locations where the authors could be reached. The number of the authors (co-authors) must not exceed the limit of 5 people.

11. Editorial Staff reserves the rights to cut down in size and correct the articles. Proof-sheets are not sent out to the authors. The entire editorial and collation work is performed according to the author's original text.

12. Sending in the works that have already been assigned to the press by other Editorial Staffs or have been printed by other publishers is not permissible.

**Articles that Fail to Meet the Aforementioned
Requirements are not Assigned to be Reviewed.**

ავტორთა საქურაღებოლ!

რედაქციაში სტატიის წარმოდგენისას საჭიროა დაიცვათ შემდეგი წესები:

1. სტატია უნდა წარმოადგინოთ 2 ცალად, რუსულ ან ინგლისურ ენებზე დაბეჭდილი სტანდარტული ფურცლის 1 გვერდზე, 3 სმ სიგანის მარცხენა ველისა და სტრიქონებს შორის 1,5 ინტერვალის დაცვით. გამოყენებული კომპიუტერული შრიფტი რუსულ და ინგლისურენოვან ტექსტებში - **Times New Roman (Кириллица)**, ხოლო ქართულენოვან ტექსტში საჭიროა გამოვიყენოთ **AcadNusx**. შრიფტის ზომა – 12. სტატიას თან უნდა ახლდეს CD სტატიით.

2. სტატიის მოცულობა არ უნდა შეადგენდეს 10 გვერდზე ნაკლებს და 20 გვერდზე მეტს ლიტერატურის სიის და რეზიუმეების (ინგლისურ, რუსულ და ქართულ ენებზე) ჩათვლით.

3. სტატიაში საჭიროა გაშუქდეს: საკითხის აქტუალობა; კვლევის მიზანი; საკვლევი მასალა და გამოყენებული მეთოდები; მიღებული შედეგები და მათი განსჯა. ექსპერიმენტული ხასიათის სტატიების წარმოდგენისას ავტორებმა უნდა მიუთითონ საექსპერიმენტო ცხოველების სახეობა და რაოდენობა; გაუტკივარებისა და დაძინების მეთოდები (მწვავე ცდების პირობებში).

4. სტატიას თან უნდა ახლდეს რეზიუმე ინგლისურ, რუსულ და ქართულ ენებზე არანაკლებ ნახევარი გვერდის მოცულობისა (სათაურის, ავტორების, დაწესებულების მითითებით და უნდა შეიცავდეს შემდეგ განყოფილებებს: მიზანი, მასალა და მეთოდები, შედეგები და დასკვნები; ტექსტუალური ნაწილი არ უნდა იყოს 15 სტრიქონზე ნაკლები) და საკვანძო სიტყვების ჩამონათვალი (key words).

5. ცხრილები საჭიროა წარმოადგინოთ ნაბეჭდი სახით. ყველა ციფრული, შემაჯამებელი და პროცენტული მონაცემები უნდა შეესაბამებოდეს ტექსტში მოყვანილს.

6. ფოტოსურათები უნდა იყოს კონტრასტული; სურათები, ნახაზები, დიაგრამები - დასათაურებული, დანომრილი და სათანადო ადგილას ჩასმული. რენტგენოგრამების ფოტოასლები წარმოადგინეთ პოზიტიური გამოსახულებით **tiff** ფორმატში. მიკროფოტოსურათების წარწერებში საჭიროა მიუთითოთ ოკულარის ან ობიექტივის საშუალებით გადიდების ხარისხი, ანათალების შედეგის ან იმპრეგნაციის მეთოდი და აღნიშნოთ სურათის ზედა და ქვედა ნაწილები.

7. სამამულო ავტორების გვარები სტატიაში აღინიშნება ინიციალების თანდართვით, უცხოურისა – უცხოური ტრანსკრიპციით.

8. სტატიას თან უნდა ახლდეს ავტორის მიერ გამოყენებული სამამულო და უცხოური შრომების ბიბლიოგრაფიული სია (ბოლო 5-8 წლის სიღრმით). ანბანური წყობით წარმოდგენილ ბიბლიოგრაფიულ სიაში მიუთითეთ ჯერ სამამულო, შემდეგ უცხოელი ავტორები (გვარი, ინიციალები, სტატიის სათაური, ჟურნალის დასახელება, გამოცემის ადგილი, წელი, ჟურნალის №, პირველი და ბოლო გვერდები). მონოგრაფიის შემთხვევაში მიუთითეთ გამოცემის წელი, ადგილი და გვერდების საერთო რაოდენობა. ტექსტში კვადრატულ ფხიხლებში უნდა მიუთითოთ ავტორის შესაბამისი N ლიტერატურის სიის მიხედვით. მიზანშეწონილია, რომ ციტირებული წყაროების უმეტესი ნაწილი იყოს 5-6 წლის სიღრმის.

9. სტატიას თან უნდა ახლდეს: ა) დაწესებულების ან სამეცნიერო ხელმძღვანელის წარდგინება, დამოწმებული ხელმოწერითა და ბეჭდით; ბ) დარგის სპეციალისტის დამოწმებული რეცენზია, რომელშიც მითითებული იქნება საკითხის აქტუალობა, მასალის საკმაობა, მეთოდის სანდოობა, შედეგების სამეცნიერო-პრაქტიკული მნიშვნელობა.

10. სტატიის ბოლოს საჭიროა ყველა ავტორის ხელმოწერა, რომელთა რაოდენობა არ უნდა აღემატებოდეს 5-ს.

11. რედაქცია იტოვებს უფლებას შეასწოროს სტატია. ტექსტზე მუშაობა და შეჯერება ხდება საავტორო ორიგინალის მიხედვით.

12. დაუშვებელია რედაქციაში ისეთი სტატიის წარდგენა, რომელიც დასაბეჭდად წარდგენილი იყო სხვა რედაქციაში ან გამოქვეყნებული იყო სხვა გამოცემებში.

აღნიშნული წესების დარღვევის შემთხვევაში სტატიები არ განიხილება.

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SUTURED VERSUS SUTURELESS CONJUNCTIVAL AUTOGRAFT FOR PRIMARY PTERYGIUM

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Abstract.

Background: Pterygium is a chronic degenerative disease, which is treatable by surgical operation. To eliminate the rate of recurrence, various methods and techniques have been employed, including beta-irradiation, mitomycin C, human amniotic membrane transplantation, and autologous conjunctival grafting. Among these, autologous conjunctival grafting, particularly limbal-conjunctival autografting, has shown promising results. We aimed to compare using sutured versus sutureless technique on the complications of operation and the advantage of one over others.

Methods: A total of 122 eyes (61 sutured and 61 sutureless) were enrolled in this study. The time of operation, recurrence rate, and complications were recorded and compared.

Results: sutureless show a lower rate of discomfort, more acceptability by patients, and nearly comparable recurrence rates.

Conclusion: sutureless preferred over sutured methods.

Key words. Primary pterygium, conjunctiva, autograft, suture.

Introduction.

The overgrowth of the flesh of conjunctiva over the white area of the cornea [1], is stated as a degenerative chronic disease associated with several vitiated factors, including exposure to ultraviolet light [2], ageing [3], males more susceptible than females [4], and dryness of eye [5]. The only available option for complete treatment is surgical removal and follow-up after surgery, with few available surgical options.

Pterygium is an overgrowth of the flesh over the white area of the conjunctiva which extends to the cornea [1]. Medically diagnosis as a chronic degenerative disease coincides with several risk factors, such as ultraviolet light exposure [2], the ageing process [3], male sex [3,4], and dry eyes [5]. The treatment of choice includes operational removal, but the postoperative recurrence rate is usual, and to tackle this recurrence, a few methods could be used. These include exposure of the affected area to beta-irradiation, use of mitomycin C, and conjunctiva grafting [1,6,7]

Nonetheless, the conventional method of attachment of conjunctiva autograft to the sclera by suturing is characterized by prolonged operation time, postoperative complications, operation associated discomfort [8]. To reduce these complications, a sutureless method was developed to encourage postoperative comfort, decrease operation time, and moderate the suture-associated issues.

Materials and Methods.

Patients enrolled in the present study are those who were referred from the private clinic or ophthalmologists for surgery

for pterygia, from October 2019 and November 2020. Informed consent was signed and collected from the patients before further processing.

Inclusion criteria:

Patients with big fleshy pterygium extending over the limbus towards the vision region or obstructing the vision region.

Patients reporting discomfort symptoms (redness and irritation) that are present over 2 months or longer.

Patients with blurred vision and/or stigmatism lead to abnormal visual acuity.

Women patients due to cosmetic purposes

Exclusion criteria:

Patients who are unable to complete the follow-up period (1 year)

Patients who have pseudopterygium or atrophic pterygium

Patients who have an infection or other surface pathological diseases

Patients who have previous limbal operation

A total of 122 patients (122 eyes) were enrolled in the present study, randomly assigned into two groups (61 each). Group 1 (61 eyes) underwent sutured conjunctival autograft and group 2 (61 eyes) underwent sutureless conjunctival autograft.

Preoperative precautions: A photo has been taken for all patients to ascertain the growth over time. Followed by thorough examinations and medical tests, these include visual acuity, refraction, slit lamp biomicroscopy, intraocular pressure measurement, gonioscopy, and assessment of superior conjunctiva and optic nerve.

Surgical procedure: The skin in the preorbital area was disinfected by povidone-iodine and draping. A combination of topical and subconjunctival anaesthesia was utilized. Followed by an eyelid speculum is then implanted, Vicryl on a spatulated needle (traction suture) is placed in the clear cornea at the "6 o'clock" limbus. A surgical marking pen is used to outline the edges of pterygium to be excised.

Following that local anesthesia (lidocaine 2%) in a 27-gauge needle is used to ballon and separate the pterygium from the sclera. Following pen marks, Wescott scissors are used to incise the conjunctival portion of the pterygium, down to the bare sclera. This portion of the pterygium is then dissected off the bare sclera to the limbus, where it is still attached to the globe. The corneal portion is then excised, aiming to find a smooth plane between the pterygium and the cornea. A crescent knife is used to push (not cut) the most central aspect of pterygium toward the limbus in an attempt to find this plane. This forward-to-backward pushing motion is continuous until the entire corneal aspect of pterygium reaches the limbus and connects

to the conjunctival pterygium dissection. A large diamond burr (5- mm diameter) on a handheld drill is applied in a circular motion to smooth the corneal surface. Cautery may be used to stop any active and disturbing bleeders. The rolled edges of the remaining conjunctiva are unravelled with forceps. The dimension of the bare sclera bed was measured with a calliper. The globe is rotated downward with limbal traction suture and the superior bulbar conjunctiva away from pterygium excision is exposed. A surgical marking pen is used to mark four corners of the conjunctival graft to be created with an additional 1.0 mm of both length and width larger than the conjunctival defect to be filled. Local anaesthesia (lidocaine 2%) is injected to balloon the conjunctiva, separating it from the Tenon's capsule. One plane is created in the area from which the graft will be harvested. Wescott scissors are used to enter the plane created by local anaesthetic at one of the superior corners, just outside the pen mark. A small (2- to 3-mm) opening is created, and careful blunt dissection is performed with Wescott scissors in the same plane. The dissection should continue until the entire graft is undermined and free from Tenon's. Then, the edges of the conjunctival graft can be cut. Once the graft is free, the area to be grafted is re-examined to make sure it is clear of significant clots or active bleeding. A pair of fine conjunctival forceps are then used to gently slide the conjunctival graft to its new location, making certain to keep the epithelium side up. Once in place, the conjunctival transplant is stretched into position. The pen marks at the corners of the graft should be visible if it is right side up.

In group 1: The graft was carefully placed in the right position and sutured (8/0 vincryl, 8-15 sutures are required). The suturing was conducted as previously described by Elwan SA (201) [9].

In group 2: Natural hemostasis and healing steps were allowed to proceed without interfering with cautery allowing an autologous fibrin to plug to form and the plug to be fixed by physical suturing as previously described by Elwan SA (201) [9].

Follow-up: Timeline for follow-up postoperatively as per mentioned table with entitled symptoms and grading below (Table 1 and Figure 1).

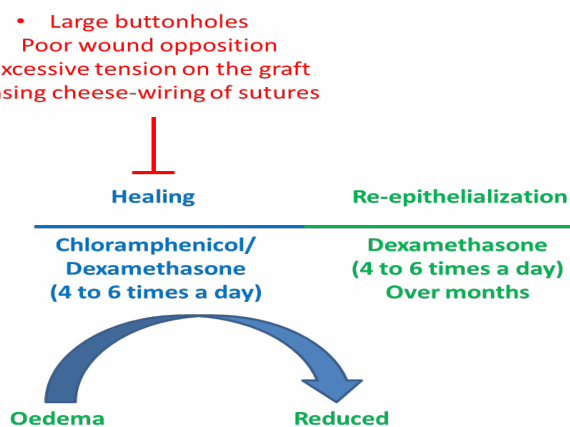


Figure 1. Postoperative care.

Table 1. Postoperative Patient's follow-up chart.

Postoperative timeline follow-up chart						
Timeline checking	Symptoms checking	None	Mild	Moderate	Sever	Intensity scores
		0	1	2	3	
2 days	Pain					
7 days	Foreign bodies sensation					
30 days	photophobia					
3 months	hyperemia					
6 months						
9 months						
12 months	ecchymosis					
3 weeks of postsurgical satisfaction		Unsatisfied	Low satisfaction	Moderate satisfaction	Highly satisfied	Satisfaction rate
		0	1	2	3	Grade

Table 2. Complications and outcomes for surgical treatment of pterygium.

Pterygium	Group 1	Group 2
operative time (min)	29 ±7	24 ±6
Conjunctival edema(%)	16	6
Pyogenic granuloma(%)	0	3
Graft dehiscence(%)	8	52
graft retraction(%)	12	6
recurrence rate (%)	6	8
patients satisfaction score after 3 weeks	Group 1*	Group 2
*p<0.002		

Results.

Operation time was longer in sutured than in sutureless surgery. The results showed that the pterygium recurrence rate was 6% for group 1 and 8% for group 2, indicating that both techniques were effective in preventing recurrence. However, graft dehiscence occurred in 8% of the eyes in group 1, while graft retraction occurred in 12% of the eyes in group 1 and 6% of the eyes in group 2. Pyogenic granuloma occurred in only 3% of the eyes in group 2, suggesting that the sutureless approach may have a lower risk of complications associated with graft dehiscence and retraction (Table 2).

Discussion.

The present study verified reduced common postsurgical symptoms, such as pain, foreign body sensation, photophobia, hyperemia and chemosis at all initial weeks of postsurgical visits with better patient satisfaction in group 2 compared to group 1.

The mean operation time in patients with sutured operation was 24 (±6) min and 29 (±7) min in sutureless operation. The sutured techniques take longer time than their counterpart. Yet, these

operation times are protracted compared to published studies [10,11] which applied fibrin glue and recorded 16 minutes (range 14–16), 20 min (range 20–29) in suture operation and recorded 14 (\pm 1.4) min in suture-less and glue-free conjunctival autograft.

Presumably, the length of the operation related to the dexterity of surgeon's hands as well as the complexity of surgery itself.

In this study the Conjunctival oedema rate was 8 eyes (16%) in the suture group and (6%) in the sutureless group, the use of simple interrupted (8/0 Vicryl) suturing in group 1, providing protection against any fluid collection to drip via the overruling area relatively than accumulating and inducing no further issue or pressure on the trauma site. Oedema is most often spontaneously reversed after several days with the application of topical corticosteroids and lubricant eye drops.

In this study, pyogenic granuloma ensued in 8 eyes out of the total of 61 (3%) eyes in sutured operation and did not occur in sutureless operation. Inclusion cysts occurred in three eyes (1%) in group 1 and corneal dellen also occurred in two eyes (1%) in the sutured group. These findings confirm that these are complications associated with the use of 8/0 Vicryl in suturing with some distress and foreign body sensation post-operatively and never happened in the sutureless group.

Moreover, graft dehiscence ensued in 5 eyes (8%) in the sutured group and occurred in 32 cases in the sutureless group. The 5 patients with sutured operation, results from the patient stroking their eyes forcefully. The incorporation of Tenon's capsule with the graft is another possible contributing factor. For that, a direction has been given to patients not to irritate their eyes in the fourteen days after the surgical operation. Moreover, thorough and careful dissections of thin donor limbal conjunctival autograft free off Tenon's capsule is crucial for satisfactory graft attachment. Premature loosening of the fixating suture is another possible aetiology.

Graft retraction: The graft retraction in the present study is testified in 12% in the sutured operation group versus 6% in the sutureless group, these conditions happen after conjunctival chemosis but are most often reversed with conservative therapy.

Similar complications were documented by earlier research, for instance, Tan D [12], even higher graft retraction rates (20%) were also reported [13], nonetheless, conservative therapy resolves graft retraction in most cases with only a few non-responsive to conservative therapy. In addition, the sutureless operation has shown a better overall graft retraction rate, de Wit et al., investigated that sutureless and no fibrin glue grafts provide uniform pressure over the whole region and edges of the site of surgery providing minimum pressure thereby reducing the chance for scare generation and de Wit et al. reported that the biological dressing or firmness or smooth brushing provided by normal eyelid apposition toward each other during movement [14].

Suture suture-free group showed better tolerability due to being symptom-free and comfortable, but the suture group showed betterment of graft stability, these findings were reported in earlier studies [9,15,16]. However, this is not always the rule, sutured operation revealed one side displacement (3 patients), corners dehiscence (2 patients), and no reported lost graft patient. Hence, suture operation is still effective, Boucher

et al. reported that sutureless autograft based on blood coagulum resulted in reduced graft stability with a total of 15% of cases of complete graft loss [17]. Similarly, graft loss was reported by Choudhury et al. [15]. Moreover, few studies reported that autograft displacement and retraction of conjunctive is quite common in sutureless operation [9,15,17].

The most important problem associated with pterygium surgery is postoperative recurrence disappointing both the patients and healthcare providers, in the present study suture technique has provided a slightly better recurrence rate than sutureless, however, still non-significant differences between both methods. In agreement with these findings, many studies have been conducted with no ideal method providing successful treatment options with negative recurrence rates. Nearly similar recurrence rate was reported in the present study for sutured and sutureless operations 6% and 8%, respectively. This recurrence rate is relatively acceptable according to criteria stated by Massaoutis et al., which suggest that a recurrence rate of less than 10% is reasonable [18]. Despite that Malik et al. [19] reported a lower recurrence rate (2.5%) who have used sutureless autograft, this finding disagrees with our findings of a higher rate of recurrence which might be due to eye exposure to sunlight and patient unwearing sun resistant glasses or misusing eye lubricant after surgical procedure. A high rate of recurrence is not rare, in randomized prospective trials conducted by Frucht-Pery et al. [20] and Manning et al. [21] reported a recurrence of (26.6-33.3%) and (16-39%) respectively. In contrast, a recurrence rate of (2.5-10%) was reported by Malik et al. [19] and Guler et al. [22].

Similar to our finding, few studies have reported no significant differences between the sutured versus sutureless group [23-26].

There are beneficial impacts of using autologous for this operation, leading to lower postsurgical deficits, diminished operation time, easy application, and better cost-effectiveness, nonetheless, the results of the present study confirmed that the outcomes were unreliable in ascertaining the binding of the graft under operation. No clear-cut confirmation is available for the surgeon to ascertain that the graft evenly binds to the sclera tissue part initially of after pad removals, conversely, sutures or fibrin methods provide unremovable tight binding unless otherwise the trauma region is exposed to energetic removal.

Conclusion.

Sutureless provides a better method for autograft surgery compared to sutured in terms of tolerability by the patient and lower postsurgical symptoms, however, better fixation is achieved by sutured surgery.

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