

GEORGIAN MEDICAL NEWS

ISSN 1512-0112

NO 1 (358) Январь 2025

ТБИЛИСИ - NEW YORK



ЕЖЕМЕСЯЧНЫЙ НАУЧНЫЙ ЖУРНАЛ

Медицинские новости Грузии
საქართველოს სამედიცინო სიახლენი

GEORGIAN MEDICAL NEWS

Monthly Georgia-US joint scientific journal published both in electronic and paper formats of the Agency of Medical Information of the Georgian Association of Business Press.
Published since 1994. Distributed in NIS, EU and USA.

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.

GMN is indexed in MEDLINE, SCOPUS, PubMed and VINITI Russian Academy of Sciences. The full text content is available through EBSCO databases.

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.

ჟურნალი ინდექსირებულია MEDLINE-ის საერთაშორისო სისტემაში, ასახულია SCOPUS-ის, PubMed-ის და ВИНТИ РАН-ის მონაცემთა ბაზებში. სტატიების სრული ტექსტი ხელმისაწვდომია EBSCO-ს მონაცემთა ბაზებიდან.

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. რენტგენოგრაფიების 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.

Larisa Melia, Revaz Sulukhia, Natia Jojua, Tinatin Gognadze, Nino Davidova.

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VARIATION OF ASTIGMATISM BETWEEN TEMPORAL AND SUPERIOR APPROACH IN PHACO SURGERY

Alyaa Abdulameer*, Marwa Abdulzahra, Zainb Adel hashim.

College of medicine, Al-Qadisiyah University, Al-Qadisiyah, Iraq.

Abstract.

Background: Advances of phacoemulsification techniques and surgical equipment, patients satisfaction becomes more difficult to gain because they are expecting perfect results and ideal visual outcome, thus perfection of surgical procedures settled mandatory.

Aim: This research deals with comparison between two incision sites in phacoemulsification surgery and check which of them has more visual outcomes which are temporal and superior entrance sites of the phaco probe.

Methods: Total of 68 eyes from 59 patients were studied, they grouped into 2 groups; group A (36 eyes temporal style) and group B (32 eyes superior style). **Results:** After group B has undergone surgical procedure, the percentage against the rule (ATR) has increased 91% compared to 44% preoperatively compared to reduction to 33% of ATR in group A postoperatively compared to 45%. **Conclusion:** Phacoemulsion surgery has provided good approach for healing eyes in astigmatism patients. Temporal clear corneal incision has more feasibility and produces less surgically induced astigmatism in comparison to superior corneal scratch.

Key words. Astigmatism, temporal, superior, phacoemulsification, against the rule, incision.

Introduction.

In new year's, improvements in phacoemulsification method and surgical strategies have elevated prospects for realizing greater optical excellence subsequent cataract surgery [1,2]. In spite of best preoperative estimate and the use of non-toric intraocular lenses (IOLs), patients might quiet involvement undesirable surgically prompted astigmatism owing to numerous influences for instance pre-existing astigmatism, the kind of intraocular lens used, and the size and situation of the surgical incision [3,4].

The phacoemulsification method, which includes the elimination of the cataract by means of ultrasound energy, has become the typical of care for cataract surgery owing to its accuracy and slight invasiveness [5]. Nevertheless, flat with meticulous surgical ability, astigmatism prompted by the surgical process itself can happen [6,7]. This surgically prompted astigmatism can product from features for instance corneal incisions made through surgery, wound healing comeback, and alterations in corneal form postoperatively [8,9]. Moreover, the choice of intraocular lens productions a vital part in decisive the postoperative refractive consequence [10].

Non-toric IOLs are generally used in cataract surgery, but they do not precise pre-existing astigmatism [11]. Thus, patients with important corneal astigmatism might static experience remaining astigmatism after surgery, disturbing their optical acuity and superiority of vision [3]. The size and position of the surgical incision can likewise impact the degree of surgically prompted astigmatism [12]. Smaller, more precise incisions tend to induce less astigmatism compared to larger, more peripheral incisions

[13]. Additionally, the location of the incision relative to the steep axis of corneal astigmatism can impact the postoperative refractive outcome [14-16].

Overall, while advancements in phacoemulsification technology have improved the outcomes of cataract surgery, the management of astigmatism remains a significant challenge [17,18]. Surgeons must carefully consider preoperative astigmatism correction, intraocular lens selection, and surgical incision techniques to minimize surgically induced astigmatism and optimize visual outcomes for their patients [19-21].

This study performed to assess the effect of site of entrance comparing both Temporal and Superior approach to minimise surgical induced astigmatism maximally. Definitely There are a lot of manoeuvres to decrease astigmatism for instance matching opposite clear corneal incision (OCCI), limbal comforting scratches, toric lens, laser surgery [22]. Temporal clear corneal scratches have stayed stated to create nominal surgically induced astigmatism (SIA) [23,24]. It's well known that most surgical couches have a design to position the surgeon Superiorly not temporarily especially right-handed surgeons and insert the entrance wound temporally in right-eyes and nasally in left eyes (opposite to left-handed surgeons). While in temporal approach the surgeon sits to the side of patient which may be more comfortable to the surgeon to get rid of prominent brows and easy manipulation.

Materials and Methods.

This prospective study done in Al-Diwanya teaching hospital in the period from January 2022 to January 2024. Written informed consent recorded from all cases with commitment to the declaration of Helsinki tenets, standard surgical protocols were applied [20,21].

Exclusion criteria include medical ocular problems and surgical ocular issues together with ocular trauma, astigmatism more than 1 diopter in with the rule (WTR) astigmatism (steep meridian on 90 degrees and around 30 degrees).

All the surgeries done by the same right-handed surgeon under retrobulbar anaesthesia. The same phacoemulsification technique and machine used, and same acrylic hydrophilic foldable intraocular lens inserted.

Total of 68 eyes from 59 patients were studied, they grouped into 2 groups

Group A: Include 36 eyes temporal style.

Group B: Contains 32 eyes superior style.

In the temporal incision group, the surgeon positioned themselves at the nine o'clock location for eye in the right and at the three o'clock location for eye in the left. A primary incision was performed using a clear corneal horizontal approach with a 3.2mm blade, around 1mm frontal to the Limbus. The blade stayed inserted similar to the corneal superficial until reaching one-third width of the corneal, at that time altered direction to enter the anterior chamber. This technique, known as dipping

of the keratome, results in a bi-planar scratch. The incision site was located at nine o'clock for the right eye and three o'clock for the left eye. Additionally, a lateral port stayed created perpendicular to the central incision, positioned at twelve o'clock for eye in the right then six o'clock for the eye in left then degradation of cataract and injection of viscoelastic with the implantation of the intraocular lens, finally anterior chamber irrigated and checked for any leakage ending with sealed sutureless wound.

In the group of superior style, the central incision stayed prepared at twelve o'clock situation and the side incision stayed prepared at three o'clock situation for right and left eyes. The rest phacoemulsification method, and the whole operating stages for mutually methods were the same.

Postoperatively all patients given steroids and antibiotics drops, and they followed for 1 day, 1 week, (1 and 3 months). In the follow up visits they were examined with slit lamp biomicroscopy Autokerato-refractometer and visual acuity. Main parameter is keratometric astigmatism and SIA which is evaluated by direct Subtraction without considering the axis [25].

The data were analysed using chi square to compare between nonparametric results, p value less than 0.05 were considered significant.

Results.

The 68 eyes from 59 patients divided into 2 groups, temporal incision group consists of 36 eyes and superior incision group contains 32 eyes, out of which 36 were male (53%) and 32 female (47%). Age of sick extent from 30 to 90 with a mean of (62.45±12.11) years. In our training, we paralleled the SIA via temporal style, with superior style. Associations among SIA of the two scratches were prepared by means of keratometric analysis of pre-operative and post-operative refractive alterations.

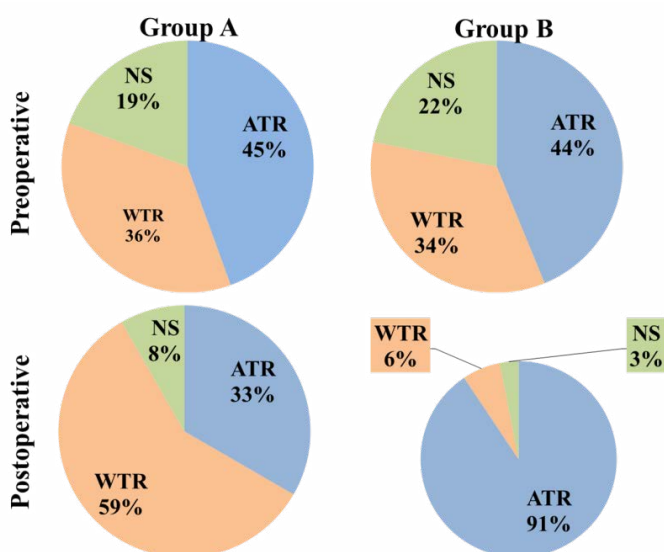


Figure 1. Pie-chart of pre and postoperative type of astigmatism according to training groups. ATR=against the rule, WTR=with the rule, NS= No astigmatism.

Table 1. Pre and postoperative type of astigmatism according to training groups.

Type of astigmatism	Group A, n(%)		Group B, n(%)	
	Preoperative	Postoperative	Preoperative	Postoperative
ATR	16 (44.4)	12 (33.3)	14 (43.7)	29 (90.6)
WTR	13 (36.11)	21 (58.3)	11 (34.3)	2 (6.3)
No astigmatism	7 (19.4)	3 (8.3)	7 (21.8)	1 (3.1)
P value	0.131745		0.000342	
Chi-square	4.0538		15.9633	

Data expressed as frequency, p value of less than 0.05 is considered significant using Chi-square to compare preoperative versus postoperative, ATR=against the rule, WTR=with the rule

Table illustrate prevalence of the types of astigmatism according to the groups of our study pre and postoperatively. Rendering to SIA and training groups. In the temporal approach grouping the mean astigmatism at 1 month was 1.25 and at 3 months it decreased to 1.00 which is considered statistically important with a p-value <0.0001 depending on matching t-test. While the superior approach group, the mean astigmatism at 1 month was 1.75 declined at 3 months to 1.25 which was also significant statistically. This means that the surgically induced astigmatism decreased after 3 months and there is a significant variation between 1 month and 3 months in SIA (Table 1 and Figure 1).

Discussion.

Recent advancements in cataract surgery aimed for optimal optical outcomes, aiming to decrease or remove the need for glasses postoperatively. Achieving this goal relies heavily on thorough preoperative evaluations and meticulous surgical planning. Numerous studies have investigated the prevalence of preoperative astigmatism in cataract patients, recognizing its significance in postoperative visual outcomes. However, despite advancements in surgical techniques and technology, surgically induced astigmatism remains a concern. Factors such as corneal incisions, intraocular lens selection, and incision size and location can influence the degree of astigmatism induced during surgery. As such, continued research and refinement of surgical approaches are essential to minimize surgically induced astigmatism and optimize visual outcomes for cataract patients seeking freedom from glasses postoperatively [26].

Against the rule (ATR) was shown to be more spread than WTR may be this what gives preference to temporal incision over superior one as this study revealed better visual outcomes and less astigmatic parameter in the temporal approach group [27]. In further investigations, some studies have compared temporal and nasal approaches in cataract surgery, with findings consistently favouring the temporal approach. Temporal incisions have shown superior outcomes in terms of inducing less astigmatism and achieving better visual acuity postoperatively compared to nasal incisions. This preference for the temporal approach underscores its effectiveness in minimizing surgically induced astigmatism and optimizing visual outcomes in cataract surgery [28].

In another prospective randomized training, Borasio et al. (2006), compared SIA in eyes with (slight to modest astigmatism in corneal) via temporal alongside on-axis corneal scratches. The SIA at 60 days stayed 0.34 D in the temporal incision, while in the on-axis it stayed 0.63 D incision group. The conclusion is that pure corneal temporal scratch produces fewer SIA than on-axis scratch [29].

Rękas et al. (2006), searched SIA of temporal and 2.8 mm in superior pure corneal scratches. The average of SIA in the temporal grouping stayed (0.63±0.28 D) plus it stayed (1.00±0.54 D) in the grouping of superior, besides the difference again important statistically (p<0.05). This likewise produce that corneal pure in temporal incision of (2.8) mm stayed preferable to superior one of the similar scopes [30].

Wei et al. (2012) have investigated the impact of incision bulk on surgical prompted astigmatism (SIA) following surgery utilizing sutureless temporal clear corneal incisions. Their research involved examining scratch sizes of 2.5 mm and 3.5 mm, with SIA deliberate through vector investigation by means of Alpin's process. Their findings revealed that the SIA average in the 2.5 mm scratch grouping stayed 0.84±0.53 D, while in the grouping of (3.5) mm, it stayed 1.19±0.81 D. They determined that the average of SIA was higher in the grouping of (3.5) mm compared to the 2.5 mm group [31].

Despite its advantages, the temporal incision approach in cataract surgery is not without its drawbacks. Studies have indicated potential disadvantages such as delayed wound healing and a decrease in endothelial cell count associated with temporal incisions compared to other approaches. While the temporal approach may offer better outcomes in terms of astigmatism induction and visual acuity, these concerns highlight the need for careful consideration of various factors when selecting the surgical approach in cataract procedures as it described by Al Mahmood et al. (2014) [32].

Conclusion.

we can conclude that temporal clear corneal incision has more feasibility and produces less SIA in comparison to superior corneal scratch. Ultimately better optical outcomes are the aim of all the surgeons, and we noticed improved results with temporal incision than superior in phaco-emulsification method.

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