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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.

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 ВИНИТИ 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 ВИНИТИ 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. Корректура авторам не высылается, 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 compu-ter-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 საყურადღებოდ!

რედაქციაში სტატიის წარმოდგენისას საჭიროა დავიცვათ 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 შეღებვის 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 ფჩხილებში 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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BENNETT'S FRACTURE: A NARRATIVE REVIEW OF CURRENT LITERATURE

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Abstract.

Background: Bennett's fracture, a fracture-dislocation of the base of the first metacarpal, poses significant challenges due to the unique biomechanics of the thumb's carpometacarpal (CMC) joint. Effective management is critical to restoring thumb function and preventing long-term complications such as arthritis and instability.

Objective: This article provides a comprehensive overview of Bennett's fracture, including its mechanism of injury, diagnostic considerations, and management strategies, with a focus on conservative and surgical options.

Methods: A detailed review of the current literature was conducted to outline the principles and techniques of closed reduction with percutaneous pinning (CRPP), open reduction and internal fixation (ORIF), and emerging methods such as arthroscopic-assisted fixation.

Results: Conservative management is appropriate for minimally displaced fractures but is often inadequate for displaced injuries due to persistent muscle forces acting on the metacarpal. CRPP offers a minimally invasive option for fractures with moderate displacement, while ORIF provides superior stability for complex fractures. Emerging techniques, including arthroscopy and bioabsorbable implants, show promise in minimizing complications and improving outcomes.

Conclusion: The management of Bennett's fractures requires a tailored approach based on fracture displacement, patient needs, and surgeon expertise. Timely diagnosis, appropriate treatment selection, and structured rehabilitation are essential for optimal recovery. Advances in imaging, surgical methods, and materials hold the potential to further refine treatment strategies and improve long-term outcomes.

Key words. Bennett's fracture, carpometacarpal joint, thumb fracture, closed reduction, open reduction, surgical fixation, post-traumatic arthritis.

Introduction.

Bennett's fracture is an intra-articular fracture dislocation located at the base of the first metacarpal, impacting the carpometacarpal (CMC) joint of the thumb. This injury is named after Dr. Edward Hallaran Bennett, who first described the fracture in 1882. The hallmark of a Bennett's fracture is a large, triangular fragment at the metacarpal base that remains stable due to its attachment to the volar beak ligament, while the remainder of the metacarpal displaces due to muscle forces, primarily from the abductor pollicis longus (APL) [1].

The functional significance of Bennett's fractures lies in the thumb's role in opposition, grip, and fine motor tasks. Injuries to the CMC joint can impair these movements, causing substantial difficulties in daily activities, particularly those requiring grip strength and dexterity. When managed improperly, Bennett's fractures can lead to long-term complications, such as chronic pain, joint instability, and post-traumatic arthritis, severely impacting hand function [1].

As a high-demand area for orthopedic intervention, the management of Bennett's fractures requires an understanding of the anatomy, biomechanics, and options for both nonoperative and operative treatment. Optimal treatment is essential to restore thumb function, maintain alignment, and prevent complications [1].

Mechanism of Injury.

Bennett's fractures are typically the result of an axial load transmitted through a flexed thumb. This type of injury occurs commonly in high-contact sports (e.g., rugby, football, and wrestling) and during falls where the individual lands on an outstretched hand with the thumb in a vulnerable position. The force applied along the thumb's axis causes the metacarpal to dislocate, tearing it partially from the trapezium while leaving a fragment attached [1,2].

Biomechanically, this fracture results from the interplay between the strong APL muscle and the forces directed at the CMC joint. The APL's pull on the shaft causes the metacarpal to displace dorsally and radially, while the volar beak ligament stabilizes the triangular fragment against the trapezium. This displacement, combined with rotational forces, makes it difficult for the metacarpal to remain in its proper alignment once fractured, which complicates both nonoperative and operative management options [3].

In addition, specific positions and movements can exacerbate these forces. For example, a forced abduction or hyperextension movement of the thumb increases the likelihood of fracture. Knowledge of this mechanism is crucial when planning treatment, as the powerful muscle forces that displace the fracture fragments also complicate reduction efforts [1,3].

Diagnosis and Primary Management.

Diagnosis: Clinically, patients with Bennett's fractures present with pain, swelling, and deformity localized to the base of the thumb. They may report difficulty in grasping or pinching, and movements involving the thumb, especially gripping or pushing, intensify the pain. Physical examination often reveals tenderness at the CMC joint and a reduced range of motion. Passive axial loading of the thumb (compressing along its axis) typically reproduces pain, indicating joint involvement [1-3].

Imaging: Radiographic imaging is crucial for diagnosing Bennett's fractures. Standard imaging views include anteroposterior (AP), lateral, and oblique projections of the thumb and wrist, which typically reveal a triangular fragment of the metacarpal base that remains attached to the trapezium, while the rest of the metacarpal shaft is displaced. This pattern is characteristic of Bennett's fracture and distinguishes it from other thumb fractures [1-3].

In more complex cases or when additional detail is needed, computed tomography (CT) can provide three-dimensional visualization of the fracture and any associated joint involvement. CT is particularly useful when evaluating for comminution or when surgical intervention is anticipated, as it helps to visualize the degree of articular surface involvement and fragment displacement [4].

Primary Management.

The initial management of a Bennett's fracture typically involves immobilization and pain control. A thumb spica splint or cast is applied to stabilize the thumb and prevent further displacement while minimizing pain. This splint positions the thumb in slight abduction and opposition, reducing stress on the CMC joint. Analgesics such as nonsteroidal anti-inflammatory drugs (NSAIDs) are often used for pain management during the initial period [1].

Once initial stability is achieved, referral to an orthopaedic specialist is recommended for further evaluation and to determine if surgical intervention is needed. Because of the forces acting on the metacarpal and the high likelihood of displacement, surgery is often indicated for fractures with more than minimal displacement [4,5].

Conservative Management.

Conservative management is typically reserved for minimally displaced fractures where the joint alignment is nearly anatomical. For these cases, closed reduction followed by prolonged immobilization in a thumb spica cast can be effective.

Closed Reduction and Immobilization.

Closed reduction involves manipulation of the thumb under fluoroscopic guidance to align the metacarpal. The reduction is performed by applying traction along the thumb's axis while simultaneously pushing the metacarpal shaft toward its anatomical position. Fluoroscopy allows real-time visualization of the fracture alignment, ensuring optimal positioning before immobilization. Following reduction, the thumb is immobilized in a thumb spica cast for approximately 4 to 6 weeks. Regular follow-up radiographs are taken to monitor the fracture alignment and to confirm that displacement has not recurred [6].

Outcomes and Limitations of Conservative Management.

Conservative treatment has shown success for fractures with minimal displacement; however, the constant pull of the APL muscle increases the risk of secondary displacement, even after successful initial alignment. This risk makes conservative management less suitable for active patients or fractures with more than 2-3 mm displacement. Studies indicate that while conservative management can be effective, a higher incidence of complications, such as post-traumatic arthritis and joint instability, has been observed in cases where residual displacement was not adequately controlled [1,3,6].

Operative Management.

For displaced fractures or cases where closed reduction is not sufficient, surgical intervention is typically recommended. Operative options include closed reduction with percutaneous pinning (CRPP), open reduction and internal fixation (ORIF), and, in certain cases, arthrodesis.

Closed Reduction with Percutaneous Pinning (CRPP).

CRPP is often chosen for fractures with moderate displacement, where anatomical alignment can be achieved through closed reduction.

Technique: Under fluoroscopy, the surgeon performs a closed reduction by manipulating the thumb to restore joint alignment. Once alignment is achieved, 1 or 2 K-wires are introduced percutaneously to hold the metacarpal in place. The wires are typically placed through the metacarpal base and trapezium or through both fragments, stabilizing the joint.

Advantages: CRPP is minimally invasive, reducing the risk of infection and soft tissue damage associated with open surgery. This technique is often favoured for its shorter recovery time and lower complication rate compared to ORIF.

Drawbacks: The primary limitation of CRPP is that the fixation strength may not be adequate for high-demand patients, and there is a risk of secondary displacement if the initial reduction was not perfectly achieved. Additionally, pin-site infections and wire migration are potential complications [1,4,7].

Open Reduction and Internal Fixation (ORIF).

ORIF is generally preferred for fractures with significant displacement, comminution, or failed closed reduction. ORIF provides greater stability and allows for direct visualization of the fracture, enabling precise alignment and fixation.

Technique: ORIF involves a dorsal or radial incision at the base of the thumb to expose the fracture site. After careful reduction of the fragments, fixation is achieved using either lag screws or a small plate and screws. If using lag screws, a single cortical screw, usually 2.0–2.4 mm in diameter, is placed across the fracture to compress and stabilize the fragments. For comminuted fractures, a mini-plate is applied to achieve strong fixation across multiple fracture lines .

Benefits: ORIF provides a high degree of stability, which is particularly important in active or high-demand patients. This method also allows for more controlled anatomical alignment, reducing the risk of malunion and subsequent arthritis.

Drawbacks: ORIF is more invasive than CRPP and carries a greater risk of soft tissue complications, including scarring and infection. It also requires more extensive postoperative rehabilitation to regain full thumb function [8].

Arthrodesis.

Arthrodesis, or joint fusion, is typically a last-resort procedure reserved for patients with chronic instability, severe arthritis, or failed prior surgeries. Arthrodesis sacrifices some thumb mobility to achieve a pain-free, stable thumb base.

Procedure: The surgeon prepares the joint surfaces and then uses screws or a plate to fuse the metacarpal and trapezium. The thumb is positioned in slight abduction and opposition to allow for maximum function while accommodating joint stiffness.

Benefits and Drawbacks: While effective for pain relief and stability, arthrodesis limits thumb range of motion and is generally considered only when other treatments fail [9].

Discussion.

Bennett's fracture presents a unique challenge due to the biomechanics of the thumb's carpometacarpal (CMC) joint. The forces exerted by the abductor pollicis longus (APL) and the

stabilizing role of the volar beak ligament create a characteristic fracture pattern that often requires surgical intervention to achieve stable alignment and joint function. Conservative management is limited to minimally displaced fractures, but the risk of secondary displacement and joint instability often necessitates surgical treatment. Closed reduction with percutaneous pinning (CRPP) offers a minimally invasive option, providing good outcomes for simple fractures. However, its effectiveness relies on achieving and maintaining precise reduction. Open reduction and internal fixation (ORIF) is the gold standard for complex or significantly displaced fractures, offering superior stability and long-term results. Emerging techniques, such as arthroscopic-assisted fixation and bioabsorbable implants, aim to improve outcomes by minimizing soft tissue damage and hardware-related complications. Postoperative rehabilitation, including structured hand therapy, is critical to restore thumb function and prevent stiffness. Long-term outcomes are generally favourable when anatomical alignment is achieved, but complications such as arthritis and chronic pain remain concerns, emphasizing the need for timely and precise treatment. Advances in imaging, surgical tools, and biologics hold promise for further improving management strategies [1,3,4,6,10].

Conclusion.

In conclusion, the management of Bennett's fractures requires a tailored approach that considers the fracture's characteristics and patient needs. Accurate diagnosis, appropriate imaging, and timely intervention are critical to prevent complications and ensure optimal recovery. While conservative treatment is an option for minor displacements, operative management remains the standard for displaced fractures, with ORIF providing the most stable outcomes for complex cases. Future advances, including improved imaging techniques and minimally invasive procedures, may continue to refine the approach to treating Bennett's fractures. The ultimate goal remains the same: to restore pain-free, functional thumb movement, allowing patients to regain normal hand use and quality of life.

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