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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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PEDIATRIC BURN INJURIES IN GEORGIA: 8 YEAR RETROSPECTIVE STUDY OF HOSPITAL DATA

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Abstract.

Background: Burn injuries represent a significant global public health concern, disproportionately affecting vulnerable populations, particularly young children. Despite the severity of the issue, no comprehensive epidemiological studies have been conducted in Georgia to date.

Aim: This study aimed to fill this existing gap by analyzing the frequency, distribution, and outcomes of pediatric burn injuries.

Materials and Methods: A retrospective, observational study was conducted using data from the national electronic hospitalization registry maintained by the National Center for Disease Control and Public Health (NCDC) from 2017 to 2024. All hospitalized patients aged 0–17 years diagnosed with burn injuries were included. Key variables included demographic characteristics, burn etiology, injury severity, length of hospital stay, outcome related variables and seasonal distribution. Seasonal variation was analyzed using one-way ANOVA and Tukey's HSD test.

Results: A total of 5,268 pediatric cases were identified. Most patients were male (58.4%) and under one year of age (51.5%). Thermal burns accounted for 90.9% of cases, with second- and third-degree burns the most frequent. Nearly half of the patients were discharged within 24 hours, while 28.5% required hospitalization over seven days. Significant seasonal peaks occurred in December and July, especially among children aged 0–5 years ($p < 0.05$).

Conclusion: This first national-level study highlights the high burden of pediatric burn injuries and outlines key epidemiological patterns in Georgia. Findings emphasize the importance of seasonally targeted prevention strategies. Future studies should incorporate more detailed epidemiological data to support effective, evidence-based interventions.

Key words. Burn injuries, pediatric burns, epidemiology of burns.

Introduction.

Burn injuries represent a common and widespread public health issue. Although the global incidence of burn injuries has been gradually declining, these injuries remain a significant public health concern due to their potential to cause severe physical, psychological, and socioeconomic consequences [1,2]. Burns continue to disproportionately affect vulnerable populations and pose ongoing challenges in both prevention and long-term care—especially in low-resource settings, where limitations in healthcare infrastructure are presented [3-5].

Numerous epidemiological studies have demonstrated, that burn injuries significantly impact the pediatric population. Although the specific epidemiological characteristics of burn injuries may vary depending on a country's cultural practices, traditions, and socioeconomic conditions, children under the age of five consistently represent the most affected group across the majority of studies. In some reports, this age group accounts for about 40% to 60% of all burn injury cases [5-7].

According to data from the Institute for Health Metrics and Evaluation (IHME) published in 2021, the estimated mortality rate from exposure to fire, heat, and hot substances in Georgia is 2.7 deaths per 100,000 population. Among 26 Eastern European countries, Georgia ranked seventh in terms of death rate. Across the region, rates varied from as high as 6.0 to as low as 0.4 per 100,000 population [8]. To the best of our knowledge, no comprehensive epidemiological study has been conducted in Georgia to date to examine the patterns, distribution, and characteristics of burn injuries, despite the considerable public health importance of the issue and the existing knowledge gap in the field.

It is important to emphasize that burn injuries are largely preventable [9,10]. This highlights the need for identifying and evaluating key risk factors as a critical component of effective public health strategies. Given that the prevalence and causes of burn injuries may vary significantly across different countries and regions, it is essential to conduct context-specific assessments to understand the underlying social, environmental, and behavioral determinants. Tailored preventive interventions—designed to address the unique needs and vulnerabilities of specific populations—are vital to further reducing the incidence of burn injuries and mitigating their long-term impact.

The aim of this study is to provide the first comprehensive epidemiological analysis of pediatric burn injuries in Georgia. One of the main objectives is to analyze the distribution, underlying risk factors, and clinical outcomes of burn injuries among the pediatric population. By establishing baseline data, the study aims to inform the development of context-specific prevention strategies and contribute to improving pediatric burn care nationwide. An additional aim is to identify and define key variables and data elements that should be prioritized in future surveillance efforts. Establishing such a framework is essential for enabling more accurate, systematic, and comprehensive epidemiological studies in the country.

Materials and Methods.

A retrospective, observational study was conducted from 01.01.2017 to 31.12.2024. This study incorporated all hospitalized patients between the ages of 0 and 17 years who were diagnosed with burn injuries, identified according to the

ICD-10 (WHO classification system for diseases) codes from T20 to T32 (See Supplementary Table S1).

Supplementary Table S1. *ICD-10 (WHO classification system for diseases) codes from T20 to T32.*

ICD-10 Code	Description
T20	Burns and corrosions of head and neck
T21	Burns and corrosions of trunk
T22	Burns and corrosions of shoulder and upper limb, excluding wrist and hand
T23	Burns and corrosions of wrist and hand (including fingers, palm, thumb)
T24	Burns and corrosions of hip and lower limb, excluding ankle and foot
T25	Burns and corrosions of ankle and foot (including toes)
T26	Burns and corrosions confined to eye and its adnexa
T27	Burns and corrosions of respiratory tract
T28	Burns and corrosions of mouth, pharynx, and other internal organs
T29	Burns and corrosions involving multiple body regions
T30	Burns and corrosions of unspecified body region
T31	Burns categorized by extent of body surface area involved
T32	Corrosions (chemical burns) categorized by extent of body surface area involved

The data for our study was retrieved from electronic databases of the National Center for Disease Control and Public Health (NCDC), specifically an electronic module called "Form 066-Hospitalization Module", which is a standardized medical record used in Georgian healthcare to document the clinical information pertaining to a patient's admission, diagnosis, treatment, and discharge. The electronic module captures information on all hospitalizations nationwide. Consequently, our analysis includes all patients hospitalized in Georgia in 2017-2024 diagnosed with thermal, chemical or any other types of burn injuries.

Data Variables and Grouping Criteria:

1. Demographic Characteristics: Demographic data included age, gender, and geographic distribution. For detailed analysis, the pediatric cohort was stratified into four developmental age groups: Infants and toddlers (0–1 years): Limited mobility and awareness. Preschool-aged children (2–5 years): Increased mobility and curiosity, with limited risk perception. School-aged children (6–12 years): Growing independence and exposure to external environments. Adolescents (13–17 years): Greater autonomy and risk-taking behaviors. This stratification enables targeted analysis of burn mechanisms and outcomes by developmental stage, supporting age-specific prevention strategies. The region of residence was classified in two ways: a) By area type: urban or rural, based on official administrative definitions.

b) By geographic region: a 13-category system comprising Georgia's 12 administrative regions of Georgia (Tbilisi, Adjara, Guria, Imereti, Kakheti, Kvemo Kartli, Mtskheta-Mtianeti, Racha-Lechkhumi and Kvemo Svaneti, Samegrelo-Zemo Svaneti, Samtskhe-Javakheti, Shida Kartli, and Abkhazia) and an additional "Overseas" category for non-residents. For regional comparisons we calculated age-specific hospitalization rates per 100,000 children (0-17 years) using mid-year population denominators from the National Statistics Office of Georgia (GEOSTAT).

2. Burn Types: burn injuries were classified by etiology into three categories: thermal burns (including scalds, flame, and contact injuries), chemical burns, and electrical/other causes. Classification was based on ICD-10 external cause codes (X00–X19), covering burns and corrosions, which were used to extract relevant data from the database.

3. Burn Severity (Depth): Burn depth was classified using internationally recognized standards: first-degree burns/ Superficial (epidermal involvement only), Second-degree burns/Partial-thickness (superficial or deep dermal layers), Third-degree burns/ Full-thickness (complete destruction of the epidermis and dermis), and Fourth-degree burns (extending into subcutaneous tissue, muscle, or bone).

4. Hospitalization data: Collected variables included date of admission; length of hospital stay (LOS) and outcome. LOS was grouped into five categories: I) 1 day (24 hours); II) 2-3 days (short term stays); III) 4-7 days; IV) 8-15 days; V) 15 + days.

5. Seasonal variation: To evaluate temporal trends, burn injury cases were analyzed by both season and month of admission. Seasons were defined as follows: spring (March–May), summer (June–August), autumn (September–November), and winter (December–February). In addition, a monthly breakdown was performed to identify more specific fluctuations in burn incidence throughout the year.

To examine seasonal variation in pediatric burn cases in Georgia, we conducted a retrospective analysis of monthly aggregated hospitalization data from 2017 to 2024.

The data were analyzed using one-way Analysis of Variance (ANOVA), implemented in SPSS v26. Separate analyses were performed for different types of burns (thermal, chemical, based on ICD-10 classification) and age groups (0–1, 2–5, 6–12, and 13–17 years). The month of admission (coded from 1 to 12) was treated as a categorical independent variable, while the number of monthly cases served as the dependent variable. Prior to conducting ANOVA, assumptions of normality and homogeneity of variances were evaluated using the Shapiro–Wilk and Levene's tests, respectively. In cases where ANOVA revealed significant variation ($p < 0.05$), post-hoc comparisons were performed using Tukey's Honestly Significant Difference (HSD) test to identify specific month-to-month differences. Monthly case counts were aggregated across all available years, excluding missing or incomplete data. One-way ANOVA was applied to test for significant differences in mean monthly burn cases. Post-hoc Tukey HSD tests were used to identify specific months with significantly different case numbers. Seasonal patterns were interpreted based on ANOVA results, post-hoc comparisons, and visual examination of peak months. Descriptive statistics, including mean, median, and standard deviation, were used to summarize continuous variables. Categorical variables, such as age groups, gender, burn type, and burn depth, were compared using Pearson's Chi-square test to assess associations. The ANOVA test was applied specifically to evaluate seasonality in burn incidence. Statistical significance

was set at $p < 0.05$ for all analyses. All statistical analyses were performed using SPSS software, version 26.

This study was approved by the Ethics Committee of the National Center for Disease Control and Public Health (IRB # 2022-053). The need for informed consent was waived due to the retrospective use of de-identified data.

Results.

Over the 8-year period from January 2017 to December 2024, 11,472 burn injury cases were recorded. Of these, 5,268 cases (45.9%) involved pediatric patients aged 0 to 17 years, forming the study sample. Although yearly fluctuations occurred, the overall trend in burn cases declined, with the most significant drop in 2020 (−63.99%), and minor increases in 2021 (+3.66%) and 2023 (+6.65%). A full summary of annual changes is presented in Table 1.

Table 1. *Annual Changes in the Number of Burn Injury Cases Over the study period.*

Year	Number of cases	Annual percentage Change (%)
2017	1279	-
2018	1077	-15.79%
2019	1064	-1.21%
2020	383	-63.99%
2021	397	3.66%
2022	346	-12.83%
2023	369	6.65%
2024	353	-4.34%

Demographic Characteristics:

Among the 5,268 pediatric burn cases, 3,077 (58.4%) were male and 2,191 (41.6%) were female, yielding a male-to-female ratio of approximately 1.4:1. The mean age was 3.39 years (± 4.04), with a median of 1.0 year and a mode of 1 year, indicating a predominance of injuries among very young children. The 0–1 year age group accounted for the largest share of cases (51.5%, n = 2,715), followed by 2–5 years (27.0%, n = 1,424), 6–12 years (16.0%, n = 841), and 13–17 years (5.5%, n = 288). Male patients outnumbered females across all age groups. Geographic data were available for 3,450 cases, as urban/rural residence was consistently recorded only from 2019 onward. Of these, 59.3% (n = 2,047) resided in urban areas and 40.7% (n = 1,403) in rural areas. Figure 1 show regional variation in age-specific hospitalization rates for pediatric burns in 2023 (per 100,000 children in the corresponding age group), with the highest rates in Kakheti, followed by Racha-Lechkhumi and Kvemo Svaneti, and Mtskheta-Mtianeti, indicating a disproportionate burden in these regions. Additional demographic details by age, gender, and residence are provided in Table 2.

Types and depth of burns:

Thermal burns were the most common cause, comprising 90.9% (n = 4,788) of all cases. Chemical burns accounted for 7.0% (n = 369), while other causes (including electrical burns)—represented 2.1% (n = 111). The distribution of burn depth was as follows: First-degree: 7.2% (n = 380); Second-degree: 38.7% (n = 2,041); Third-degree: 35.8% (n = 1,887); Fourth-degree: 2.1% (n = 111). Second- and third- degree burns were the most frequently observed overall, particularly in thermal burn cases. In contrast, first-degree burns were most commonly associated with chemical burns.

Anatomical distribution analysis showed that the trunk was the most commonly affected region, followed by the shoulder and upper limb. Burns involving multiple regions or unspecified

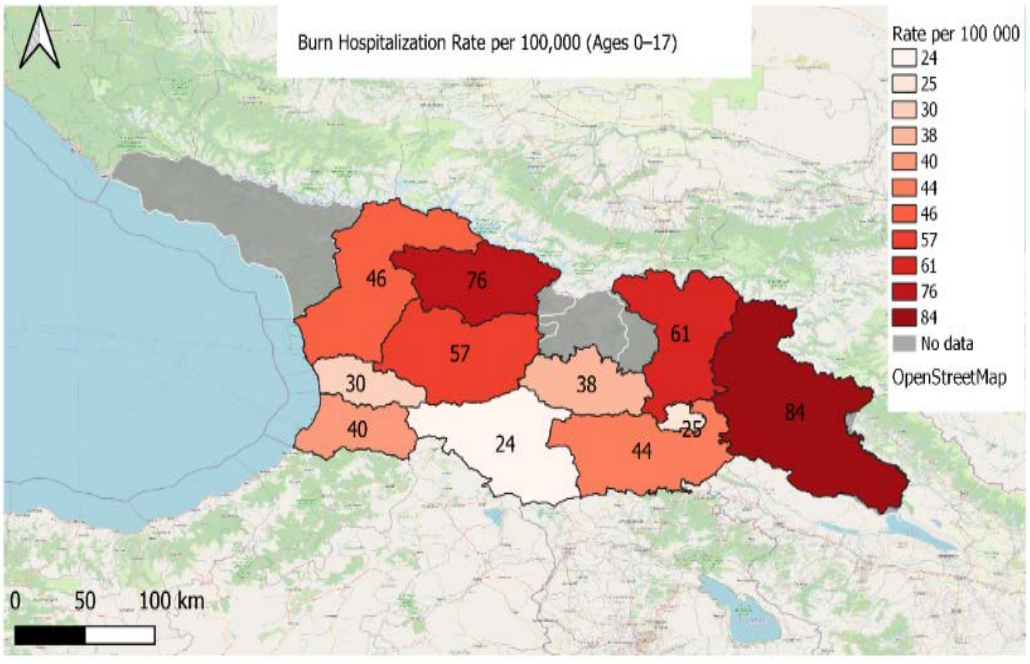

Figure 1. *Age specific hospitalization rates for pediatric burn injuries per 100,000, corresponding age group population, by region, Georgia, 2023.*

Table 2. *Demographic distribution of pediatric burn cases by age, sex, residence, and burn type, Georgia 2017-2024.*

Variables	Sub-category	Thermal Burns	Chemical Burns	Other	Total N (%)
Age Group	0-1	2517	149	49	2715 (51.5%)
	2-5	1265	122	37	1424 (27.0%)
	6-12	750	69	22	841 (16.0%)
	13-17	256	29	3	288 (5.5%)
Gender	Male	2795	203	79	3077 (58.4%)
	Female	1993	166	32	2191 (41.6%)
Place of Residence	Urban	1874	118	55	2047 (59.3%)
	Rural	1304	61	38	1403 (40,7%)

Table 3. *Distribution of Burn Severity by Age Group, Gender, Burn Type, and Affected Body Area.*

Variables	Sub-category	I degree N (%)	II Degree N (%)	III Degree N (%)	Unspecified N (%)	Other N (%)	Total N	p-value
Age Group	0-1	155 (5.7%)	1085 (40.0%)	1015 (37.4%)	411 (15.1%)	49 (1.8%)	2715	p=0.0001
	2-5	125 (8.8%)	510 (35.8%)	492 (34.6%)	260 (18.3%)	37 (2.6%)	1424	
	6-12	71 (8.4%)	333 (39.6%)	276 (32.8%)	139 (16.5%)	22 (2.6%)	841	
	13-17	29 (10.1%)	113 (39.2%)	104 (36.1%)	39 (13.5%)	3 (1.0%)	288	
Gender	Male	204 (6.6%)	1178 (38.2%)	1097 (35.7%)	519 (16.9%)	79 (2.6%)	3077	p=0.0001
	Female	176 (8.0%)	863 (39.4%)	790 (36.1%)	330 (15.1%)	32 (1.5%)	2191	
Types of Burns	Thermal	27 (0.6%)	2039 (42.6%)	1880 (39.3%)	842 (17.6%)	0 (0.0%)	4788	p=0.0001
	Chemical	353 (95.7%)	2 (0.5%)	7 (1.9%)	7 (1.9%)	0 (0.0%)	369	
	Other	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	111 (100%)	111	
Body parts injured	*Head and Neck (T20)*	8 (1.7%)	293 (61.4%)	167 (35.0%)	9 (1.9%)	0 (0.0%)	477	p= 0.0001
	Trunk (T21)	5 (0.5%)	475 (45.4%)	561 (53.6%)	6 (0.6%)	0 (0.0%)	1047	
	Shoulder and Upper Limb (T22)	4 (0.4%)	591 (62.2%)	354 (37.3%)	1 (0.1%)	0 (0.0%)	950	
	Wrist and Hand (T23)	4 (0.6%)	310 (49.9%)	303 (48.8%)	4 (0.6%)	0 (0.0%)	621	
	Hip and Lower Limb (T24)	5 (0.7%)	342 (47.9%)	360 (50.4%)	7 (1.0%)	0 (0.0%)	714	
	Ankle and Foot (T25)	350 (73.1%)	5 (1.0%)	122 (25.5%)	2 (0.4%)	0 (0.0%)	479	
	Multiple body regions (T29)	4 (0.5%)	23 (2.7%)	18 (2.1%)	817 (94.8%)	0 (0.0%)	862	
	Other parts of the body (T26; T27; T28; T30; T31)	0 (0.0%)	2 (1.7%)	2 (1.7%)	3 (2.5%)	111 (94.1%)	118	

sites ranked third, while the hip and lower limb were fourth. The head and neck were the least frequently affected. Age-specific analysis indicated that younger children had a higher proportion of severe burns (second- and third-degree). A consistent male predominance was observed across all burn depths. A significant association was found between burn depth and age group (Pearson's Chi-square test, p = 0.0001), indicating that younger children more often sustained superficial burns, while older children experienced a higher proportion of deeper burns. Detailed data about burn depth by gender, age group, burn type, and affected body regions are available in Table 3.

Anatomical distribution of burns:

Analysis of the burn injury cases based on ICD-10 coding revealed that the trunk (T21) was the most frequently affected body region, accounting for 19.9% of all reported burns. This was followed by burns involving the shoulder and upper limb (T22), which constituted 18.0% of the cases. Burns involving multiple body regions (T29) represented 16.4%, indicating a significant proportion of cases with extensive injury distribution. Injuries to the hip and lower limb (T24) ranked fourth, comprising 13.6% of cases. Burns of the wrist and hand (T23) were recorded in 11.8% of cases, while both ankle and foot (T25) and head and neck (T20) injuries were equally represented, each accounting for 9.1%. Less frequently affected areas included the eye and adnexa (T26), reported in 1.0% of cases, followed by internal organs (T28) at 0.5%, and the respiratory tract (T27) at 0.1%. Burns involving unspecified body regions (T30) were also rare, comprising 0.1% of the total (Table 3).

Length of hospital stay (LOS).

Length of hospital stay (LOS) was analyzed for all 5,268 pediatric burn cases. The mean LOS was 5.56 days (± 7.02), with a median of 2.00 days and a mode of 1 day, indicating

a right-skewed distribution. Patients were categorized into five groups based on LOS: • 1 day: 49.6% (n ≈ 2,611) • 2–3 days: 5.1% (n ≈ 271) • 4–7 days: 16.8% (n ≈ 887) • 8–15 days: 20.7% (n ≈ 1,088) • Over 15 days: 7.8% (n ≈ 411).

Almost half of all patients (49.6%) were discharged after a single day of hospitalization, a pattern consistent across age groups, genders, and burn types. Hospital stays longer than 7 days occurred in 28.5% of cases, with infants and toddlers (0–1 years), and preschool-aged children (2–5 years) more frequently represented in longer LOS categories (>8 days) than older children. Male and female patients showed similar LOS patterns. Thermal burns were the most common injury type among both short-term and long-term admissions. A detailed analysis of LOS by demographic and burn characteristics is presented in Table 4.

Clinical Outcomes.

Among evaluated 5,268 pediatric burn patients, 4,839 (91.9%) were discharged after completion of treatment. 379 patients (7.2%) were transferred to other medical facilities, and 36 cases (0.7%) were discharged against medical advice. There were 14 deaths (0.27%) recorded during the study period. Mortality was highest among children under 5 years of age, with 5 deaths in the 0–1 year group and 5 in the 2–5 years group. The remaining deaths occurred in 6–12 years (n = 2) and 13–17 years (n = 2) groups. All fatalities were coded under ICD-10 T29.0 (burns and corrosions of multiple body regions, unspecified degree). The leading external cause of death was contact with hot fluids (X12), accounting for 9 of 14 deaths, followed by exposure to electric transmission lines (W85) in 3 cases, and flammable material ignition (X04, X02) in 2 cases.

Seasonality.

One-way ANOVA was conducted in SPSS on monthly aggregated data to assess seasonal differences in the pediatric burns. Thermal burns (91.6% of cases) showed significant monthly variation ($F(11, 84) = 3.5$, $p = 0.001$), with post-hoc Tukey HSD tests indicating higher case counts in December (494) and July (420) compared to May (360) and June (350) ($p < 0.05$). Chemical burns (6.4%) showed no significant monthly differences ($F(11, 84) = 1.2$, $p = 0.30$), though a slight peak was observed in December (34 cases). Age groups 0–1 year (44.9%) and 2–5 years (33.7%) exhibited significant monthly variation ($F(11, 84) = 3.2$, $p = 0.002$; $F(11, 84) = 3.0$, $p = 0.003$), with December peaks (247 and 185 cases, respectively) significantly higher than in May–June ($p < 0.05$). Age groups 6–12 years (13.4%) and 13–17 years (9.0%) showed weaker variation ($p \approx 0.10–0.15$). These findings highlight pronounced seasonal peaks for thermal burns, especially among children aged 0–5 years, with December and July being the highest-risk months (Table 5 and Figure 2).

Table 4. *Distribution of Length of hospital Stay by Age Group, Gender, and Burn Type.*

Variables	Sub-category	LOS 1 Day N (%)	2-3 Days N (%)	4-7 Days N (%)	8-15 Days N (%)	15+ Days N (%)	Total (N)
Age Group	0-1	1300 (47.9%)	141 (5.2%)	540 (19.9%)	569 (21.0%)	165 (6.1%)	2715
	2-5	688 (48.3%)	71 (5.0%)	213 (15.0%)	309 (21.7%)	143 (10.0%)	1424
	6-12	462 (54.9%)	45 (5.4%)	98 (11.7%)	154 (18.3%)	82 (9.8%)	841
	13-17	161 (55.9%)	14 (4.9%)	36 (12.5%)	56 (19.4%)	21 (7.3%)	288
Gender	Male	1521 (49.4%)	160 (5.2%)	543 (17.6%)	623 (20.2%)	230 (7.5%)	3077
	Female	1090 (49.7%)	111 (5.1%)	344 (15.7%)	465 (21.2%)	181 (8.3%)	2191
Types of burns	Thermal	2346 (49.0%)	239 (5.0%)	815 (17.0%)	1001 (20.9%)	387 (8.1%)	4788
	Chemical	228 (61.8%)	13 (3.5%)	46 (12.5%)	67 (18.2%)	15 (4.1%)	369
	Other	37 (33.3%)	19 (17.1%)	26 (23.4%)	20 (18.0%)	9 (8.1%)	111

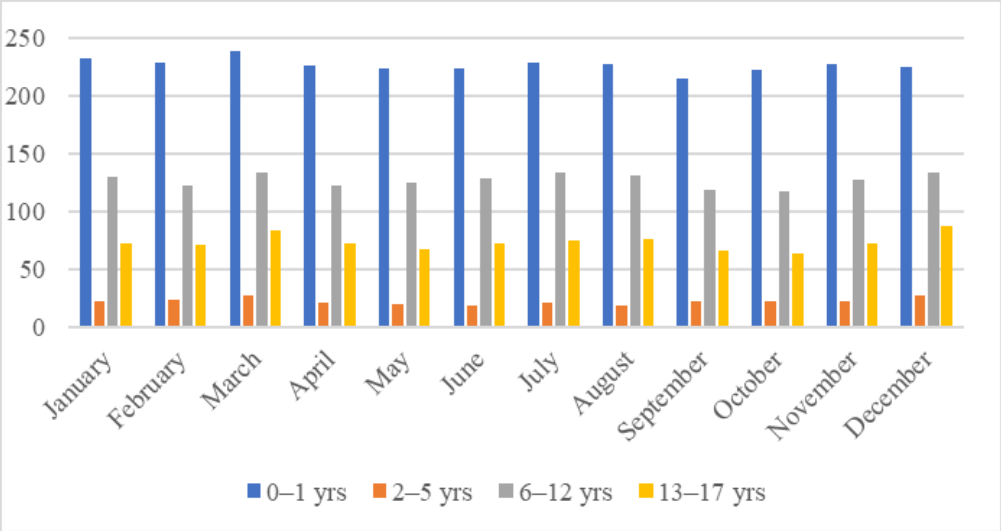

Figure 2. *Monthly distribution of pediatric burn hospitalizations by age group, 2017-2024.*

Table 5. *Seasonal Variation in Pediatric Burn Cases by Month, ANOVA Results (2017–2024).*

Variable	F-statistic (df = 11, 84)	P-value	Interpretation
Thermal Burns	3.48	0.001	Significant peaks in July and December
Chemical Burns	1.21	0.290	No significant monthly variation
Age Group (0–1 years)	3.23	0.002	Significant peak in December
Age Group (2–5 Years)	3.01	0.003	Significant peak in December
Age Group (6–12 Years)	1.80	0.100	Weak peak in December
Age Group (13–17 Years)	1.60	0.150	Weak peak in December

Note: *Analysis base on aggregated monthly counts*

Discussion.

Burn injuries are one of the most frequent causes of injuries and reason of hospitalization among pediatric population worldwide. Morbidity as well as mortality rates for these types of injuries are higher in developing countries compared to developed ones [3,9].

Global data consistently shows that males are more susceptible to injuries across childhood and adolescence compared to females [12-14]. The epidemiological studies about pediatric burn injuries similarly demonstrate a higher incidence among boys compared to girls [15]. This trend is likely due to greater involvement in risk-prone behaviors and activities which is commonly observed among males. The same pattern was evident in our study: with a male-to-female ratio of 1.4:1.

A recent study about global trends for pediatric burn injuries has shown that most affected countries for burn injuries are low and middle-income countries [12]. Most vulnerable age group for this type of injury is children under 5 years, especially the ones from 0–2-year-old age group. The age distribution of burn injuries in our study revealed a clear predominance among infants and toddlers (0–1 years), who accounted for 51.5% of all cases, followed by children aged 2–5-years, who made up 27% of cases. Together, these two groups represented the majority of pediatric burn injuries. This early age group's high vulnerability may be attributed to limited mobility, lack of hazard awareness, and complete dependence on caregiver supervision. This pattern is commonly observed in other similar studies as well [16]. For example, a study conducted in Sweden on pediatric burn injuries found that more than 70% of the injured children were under 3 years old [17]. A six-year retrospective, epidemiological study conducted in central China reported a corresponding age distribution, with the average age of pediatric burn patients being 3 years [15]. These findings highlight the need for targeted prevention efforts focused on home safety and caregiver education during early childhood. The next, most vulnerable age group from our study were children aged 6-12 years, constituting 16% of cases. For school-aged children, both preventive and educational initiatives should be considered and implemented. These programs should target not only parents but also the children themselves. Integrating safety education into school curricula could be highly effective. Additionally, public education on proper first aid techniques is essential. Prompt and appropriate first aid can significantly improve recovery outcomes and prevent further injury. Promoting basic first aid knowledge across all sectors of society should be a public health priority.

A comprehensive 11-year analysis on the Global Burden of Disease (GBD) caused by fire, heat, and hot substances has shown that the burden of burn injuries—as well as associated morbidity and mortality—has significantly decreased worldwide. This positive trend can be attributed to the implementation of preventive strategies and improvements in injury-specific care [18].

Our study has revealed, that the incidence of burn injuries has sharply declined over the eight-year study period in Georgia as well. Between 2017 and 2020, the number of pediatric burn cases decreased by approximately 70.1%, declining from 1,279 cases in 2017 to 383 cases in 2020. One potential explanation for this marked decrease is the COVID-19 pandemic. During the pandemic, both global and local (Georgian) lockdowns were implemented, resulting in parents spending more time at home. It is plausible that increased parental supervision led to a reduction in childhood burn injuries. Alternatively, it is possible that caregivers avoided seeking medical attention for minor burn cases due to fear of contracting the virus in healthcare settings. Interestingly, the number of burn injuries has remained relatively low even after the pandemic, compared to the significantly higher rates observed during the first three years of the study. From 2021 through 2024, reported cases varied slightly between 397 and 353, indicating a relatively stable trend with a modest, continued decrease. This pattern suggests that the factors contributing to the initial reduction may have had a lasting impact beyond the pandemic period. As no formal preventive measures have been introduced during this period, further investigation is warranted to understand the underlying factors contributing to this sustained decline. Such insights could inform future strategies to maintain or even further reduce burn injury incidence.

Thermal burns and specifically scald burns are widely recognized as the primary cause of pediatric burn injuries in both developed and developing countries [3,4,16,17,19,20]. This trend is supported by a recent multinational analysis, which found that scalds accounted for approximately 62% of pediatric burn cases [14]. Our study revealed an even higher proportion, with scald-related thermal burns comprising 90.9% of all pediatric burn injuries.

The analysis of our study revealed clear seasonal trends in pediatric burn hospitalizations, particularly for thermal burns and children under 5 years of age. The most prominent peaks occurred in December and July, likely reflecting a combination of environmental, behavioral, and societal factors. The December peak may be attributed to increased exposure

to heating devices (e.g., stoves, electric heaters, open fires), which are often used inappropriately or without adequate safety measures in colder households. Additionally, festive activities during the winter holidays may involve candles, fireworks, and cooking-related hazards—all of which increase the risk of burns in young children. These winter-month injury peaks are consistent with findings from other studies conducted in both developed and developing countries. For example, a study from Switzerland found that scald injuries peaked in January, whereas flame-related burns were more common in May and August [19]. By comparison, a winter predominance was observed in underdeveloped minority areas of Guangxi, China, where both scalds and flame burns were the leading etiologies, reflecting regional climatic and lifestyle influences [21]. The July peak may be linked to children spending more time at home or outdoors during school holidays, often without consistent adult supervision. Increased interaction with hot surfaces (e.g., grills, sun-heated materials) and liquids, as well as water-related hazards (e.g., burns from hot water in outdoor taps or hoses left in the sun), are likely contributors. Comparable seasonal peaks were reported in studies from Beijing and southeast Turkey, where the majority of cases occurred during spring and summer months [22,23]. In Beijing, burns peaked in May, while in southeast Turkey, most cases were reported between May and October. In contrast to these findings, a study conducted in Sarajevo found no significant seasonal variation in pediatric burn injuries [24].

Interestingly, chemical burns in our cohort did not display notable seasonal variation. This suggests that their occurrence may be less influenced by environmental or calendar-based factors and more related to year-round risks, such as unsupervised access to household chemicals.

The pronounced seasonality in younger age groups (0–1 and 2–5 years) is consistent with known developmental patterns: young children are more likely to explore their environment without understanding danger and are physically more vulnerable to injury from thermal sources.

These findings highlight the need for seasonally targeted burn prevention strategies, especially in the home environment. Public health messaging campaigns and parental education programs could be particularly effective if launched before the winter and summer months.

The observed U-shaped distribution of hospital length of stay (LOS) likely reflects a combination of systemic and clinical factors. Contextual aspects of Georgia's healthcare organization and insurance reimbursement policies may influence discharge patterns, especially for minor cases, while variation in burn severity among pediatric patients contributes to longer hospitalizations in severe cases.

This pattern emphasizes the importance of interpreting administrative data within its health-system context and of distinguishing short observation admissions from clinically complex hospitalizations. From a public health perspective, these findings highlight the need for prospective clinical studies that integrate burn severity and treatment complexity indicators to better understand LOS patterns, optimize hospital resource allocation, and strengthen injury prevention strategies.

Epidemiological studies confirm that it is very important to collect proper epidemiological information/variables of burn injuries in order to plan proper preventive measures [6].

To enhance the quality and utility of national burn injury surveillance, it is recommended that hospitals systematically collect and report more comprehensive epidemiological data associated with risk factors for burn injuries. Key variables that should be included are the Total Body Surface Area (TBSA) affected, the location and time of injury, causative agents (e.g., specific liquid or material), whether and what type of first aid was administered, etc.

Access to such comprehensive and standardized data would enable the design and execution of more in-depth epidemiological studies in the future. These, in turn, could inform the development and implementation of more effective, targeted, and evidence-based prevention strategies.

In addition, as it is well known, in 2017 the World Health Organization (WHO) established the Global Burn Registry [11,14]. The registry offers the statistical information about burn injuries from 20 countries already. It would be highly beneficial for our country to join this registry in order to contribute to global efforts in assessing the magnitude of the burn injury problem and to gain access to internationally developed preventive strategies.

Limitations.

A key limitation of this study is the lack of complete and essential epidemiological variables in the database on which the analysis was based. Important data points—such as Total Body Surface Area (TBSA) affected, location and timing of the injury, first aid measures administered, among others—were missing. These variables are critical for conducting a comprehensive epidemiological analysis of burn injuries, identifying contributing risk factors, and developing effective, targeted prevention strategies. One contributing factor to this limitation is the absence of standardized data collection protocols in hospitals; medical personnel are neither informed nor mandated to record these variables systematically. As a result, the available epidemiological information remains insufficient.

Additionally, this study focused exclusively on hospitalized burn cases and did not capture milder injuries managed at home or in outpatient settings. However, it is reasonable to assume that achieving full coverage of all burn injuries—including those not requiring hospitalization presents a significant worldwide challenge. Comprehensive data collection on burn injuries that do not require hospitalization is difficult due to underreporting and the fact that many cases are managed in informal or non-centralized settings.

Strength of the Study.

A key strength of this study is its large scope and comprehensive approach. It is the first national-level study to examine pediatric burn injuries over an eight-year period. This long-term and wide-ranging analysis provides important information about how burn injuries affect children of different age groups and regions across the country. By using the complete national hospitalization database, the study includes all recorded cases,

which makes the results more accurate and representative of the whole population. In addition, the long study period made it possible to analyze seasonal trends in burn injuries, offering useful insights into patterns related to specific times of the year, which may help guide prevention efforts

Conclusion.

This study presents the first comprehensive analysis of pediatric burn injuries in Georgia, covering an eight-year period (2017–2024). The findings highlight a substantial burden, particularly among infants and toddlers (0–1 years), who accounted for over half of all cases. Thermal burns—especially scalds—were the leading cause, with a high proportion of second- and third-degree injuries requiring intensive care. The study has demonstrated that pediatric burn hospitalizations show clear seasonal peaks in December and July, mainly due to thermal burns among children under 5. These findings suggest that seasonally focused prevention efforts, before winter and summer, are essential to reduce burn risks in young children. Implementing targeted prevention, improving caregiver education, and establishing data collection protocols for key burn injury indicators are crucial for better surveillance, prevention, and policy planning.

Although this study provides fundamental and reliable evidence on pediatric burn injuries, its potential for informing targeted prevention is limited due to the absence of key epidemiological variables such as the time and location of injury, the context of the incident, and the application of first aid. Future studies should be designed with a more detailed and context-specific approach, including the collection of such variables, to support the development of more effective, data-driven preventive strategies.

Conflict of Interest.

The authors declare no conflicts of interest related to the conduct, authorship, or publication of this study.

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ბავშვთა ასაკში დამწვრობით გამოწვეული დაზიანებები საქართველოში: 8 წლიანი რეტროსპექტული ანალიზი ჰოსპიტალურ მონაცემებზე დაყრდნობით

შესავალი: დამწვრობით გამოწვეული დაზიანებები, საზოგადოებრივი ჯანდაცვის უმნიშვნელოვანესი პრობლემაა. ამ ტიპის დაზიანებებისთვის განსაკუთრებით მოწყვლად ჯგუფს ადრეული ასაკის ბავშვები წარმოადგენენ.

მიუხედავად პრობლემის სიმძიმისა, საქართველოში დღემდე არ არის ჩატარებული ბავშვთა პოპულაციაში დამწვრობით გამოწვეული დაზიანებების ეპიდემიოლოგიური კვლევა.

კვლევის მიზანი: კვლევის მიზანს წარმოადგენს, საქართველოში 0–17 წლის ასაკის ბავშვებში, დამწვრობების ეპიდემიოლოგიური მახასიათებლების (მათ შორის სიხშირის, გავრცელების, შედეგების და სხვა) შესწავლა და ანალიზი.

მეთოდოლოგია: რეტროსპექტული, ობსერვაციული კვლევის საფუძველზე შესწავლილ იქნა საქართველოს დაავადებათა კონტროლისა და საზოგადოებრივი ჯანმრთელობის ეროვნული ცენტრის, ჰოსპიტალიზაციის ბაზის ელექტრონული რეგისტრი. კვლევამ მოიცვა 2017-2024 წლებში დამწვრობის დიაგნოზით ჰოსპიტალიზირებული ყველა პედიატრიული შემთხვევა. სტატისტიკური ანალიზისთვის გამოყენებული იქნა შემდეგი ძირითადი ცვლადები: დემოგრაფიული მახასიათებლები, დამწვრობის ეტიოლოგია, დაზიანების სიმძიმე, ჰოსპიტალიზაციის ხანგრძლივობა, ჰოსპიტალიზაციის გამოსავალი და სეზონური განაწილება. სეზონური ვარიაცია შეფასდა დისპერსიული ანალიზით (one-way ANOVA) და Post hoc Tukey-ს HSD ტესტით.

შედეგები: სულ იდენტიფიცირებულ იქნა 5,268 პედიატრიული შემთხვევა. პაციენტების უმეტესობა იყო მამრობითი სქესის (58.4%) და 1 წლამდე ასაკის (51.5%). შემთხვევათა 90.9%-ს აღენიშნებოდა თერმული დამწვრობები, ხოლო ყველაზე ხშირად გვხვდებოდა მეორე და მესამე ხარისხის დამწვრობები. პაციენტთა თითქმის ნახევარი ჰოსპიტლიდან გაეწერა პირველი 24 საათის განმავლობაში, მაშინ როდესაც შემთხვევათა 28.5%-ის ჰოსპიტალში დაყოვნების პერიოდი შეადგენდა შვიდ დღეზე მეტს. მნიშვნელოვანი სეზონური პიკები გამოვლინდა დეკემბერსა და ივლისში, განსაკუთრებით 0–5 წლის ასაკის ბავშვებში (P< 0.05).

დასკვნა: ჩატარებული კვლევა წარმოადგენს პირველ ეროვნულ კვლევას, რომლის შედეგადაც მოხდა პედიატრიულ ასაკში დამწვრობით გამოწვეული დაზიანებების ძირითადი ეპიდემიოლოგიური მახასიათებლების დადგენა საქართველოში. კვლევის ჩატარების შედეგად გამოვლინდა ქვეყანაში არსებული ბავშვთა ასაკის დამწვრობების მაღალი ტვირთი. მიგნებები ასევე ცხადყოფს სეზონურად მორგებული პრევენციული ღონისძიებების მნიშვნელობას. გასათვალისწინებელია, რომ ეფექტიანი და მტკიცებულებებზე დაფუძნებული უსაფრთხოების ზომების დასანერგად, მომავალში აუცილებელია დაიგეგმოს ისეთი კვლევები, რომლებიც მოიცავენ უფრო დეტალურ და სიღრმისეულ ეპიდემიოლოგიურ მონაცემებს.

Травмы, вызванные ожогами у детей в Грузии : ретроспективный анализ за 8 лет, основанный на данных больниц

Введение: травмы, вызванные ожогами, являются серьезной проблемой общественного здравоохранения. Особенно уязвимой группой для этого вида травм являются малолетние дети. Несмотря на серьезность проблемы, до настоящего времени в Грузии не проводилось эпидемиологического исследования травм, вызванных ожогами, среди детского населения.

Цель исследования: Целью исследования является изучение и анализ эпидемиологических характеристик (включая частоту, распространенность, последствия и т.д.) ожогов у детей в возрасте 0-17 лет в Грузии.

Методология: На основе ретроспективных обсервационных исследований был изучен электронный реестр базы данных о госпитализации Национального центра по контролю заболеваний и общественного здравоохранения Грузии. В исследование были включены все случаи госпитализации детей с диагнозом ожога в период с 2017 по 2024 год. Для статистического анализа были использованы следующие основные переменные: демографические характеристики, этиология ожогов, тяжесть травмы, продолжительность госпитализации, исход госпитализации и сезонное распределение. Сезонные колебания оценивались с помощью дисперсионного анализа (one-way ANOVA) и HSD теста Post hoc Tukey.

Результаты: Было выявлено в общей сложности 5268 педиатрических случаев. Большинство пациентов были мужского пола (58,4%) и в возрасте до 1 года (51,5%). В 90,9% случаев наблюдались термические ожоги, а чаще всего встречались ожоги второй и третьей степени. Почти половина пациентов были выписаны из больницы в течение первых 24 часов, в то время как в 28,5% случаев пребывание в больнице составляло более семи дней. Значительные сезонные пики были выявлены в декабре и июле, особенно у детей в возрасте 0-5 лет (P< 0,05).

Заключение: Проведенное исследование является первым национальным исследованием, в результате которого были выявлены основные эпидемиологические характеристики ожоговых травм в педиатрическом возрасте в Грузии. Исследование выявило высокую распространенность ожогов у детей в стране. Полученные результаты также свидетельствуют о важности профилактических мер с учетом сезонных колебаний. Следует иметь в виду, что для внедрения эффективных и научно обоснованных мер безопасности необходимо планировать исследования на будущее, которые будут включать более подробные и углубленные эпидемиологические данные.