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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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PREVALENCE AND DISTRIBUTION OF ODONTOGENIC CYSTS: A 12-YEAR RETROSPECTIVE STUDY

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Abstract.

Background: Odontogenic cysts, generally classified as inflammatory or developmental, in dental practice are usually identified incidentally, on routine exams and constitute an important aspect of oral and maxillofacial pathology. A few literature sources provide epidemiological data on odontogenic cysts and tumors. However, these findings may help us to better understand such lesions and improve the diagnosis of odontogenic cysts and tumors. The variability of data obtained with other studies can be attributed to various sociodemographic factors.

The aim: This study was performed to evaluate the prevalence and age, gender and site distribution of dentigerous cysts.

Methods: The data presented in this article are the result of a retrospective study conducted at the at the Clinic and Polyclinic for Oral, Maxillofacial, and Facial Surgery Ludwig Maximilian University, Germany. Of the 392 odontogenic cysts studied, 130 were found to be dentigerous cysts. The following variables were analyzed: histological type, age, gender and anatomic location.

Results: The results of our study showed a similar frequency of odontogenic cysts as compared to other results with findings in the literature and populations of the world, with radicular cyst being identified as the most frequent odontogenic cyst. In our cohort, radicular cysts constituted 57.9%, the percentage of dentigerous cysts was 33.17%. The mandible (81.54%) was significantly more affected than the maxilla (16.15%), and the cysts were mostly located in the molar region (60.5%). Male patients were more affected by odontogenic cysts, constituting 66.07% compared to females at 33.93%.

Conclusion: All histologically confirmed radicular cyst, dentigerous cyst, eruption cyst, residual cyst, and lateral periodontal cyst are identified in our patients by using different criteria. Cases were evaluated based on cyst gender, age and site distribution. Radicular cysts and dentigerous cysts were more frequently diagnosed but residual cyst, eruption cyst, and lateral periodontal cyst occurred much less frequently. Our results essentially confirmed the data of previously published studies. A significant association between dentigerous cyst prevalence and patient gender was identified. In pediatric patients, dentigerous cysts were often more frequent in girls than in boys. Significantly statistic relationship was found between this cyst frequency and age.

Key words. Odontogenic cysts, dentigerous cysts, epidemiology, age, gender, location.

Introduction.

Odontogenic cysts are pathological unilocular or multilocular radiolucent lesion with cavities that can be filled with liquid, pasty contents, or gas. They are bounded by a connective tissue capsule, that is, the cyst walls (or membrane), and can be located in bone or soft tissue. The inner layer of the cyst wall is covered from the outside inward by a layer of by fibrous connective tissue and single or multiple layers of squamous epithelial tissue. This epithelial lining can also have different histological features.

The dentigerous (follicular) cyst, also known as a dentigerous cyst forms around an unerupted, retained, and displaced tooth, attaching to the enamel-cement junction [1-3]. Epithelial-lined developmental such cyst type forms with accumulation of fluid between the crown of an unerupted tooth and the reduced enamel epithelium of that tooth. Its capsule mainly consists of dental follicle and enamel epithelium [4,5].

Development of dentigerous cyst is determined with an increasing of fluid between tooth crown and enamel epithelium or between layers of epithelium. Dentigerous cysts mainly develops as a cause of development anomalies. According to a relative location to causative tooth such cysts classified some forms; Pericoronal Type (Central Type), Lateral Type and Interradicular Type [6-8]. When cyst process covers or surrounds all tooth crown its accepted as a central type. In the cyst surrounds the causative tooth crown partially [9]. During central and partially types of cyst attach to the enamel-cement junction. But in interradicular type main mass of cyst localized between roots. In practice, mainly seen central type. Lateral and interradicular types are rare than central type [10,11]. Clinically they determine mainly by radiological methods, for example with X-ray.

The aim of this study was performed to evaluate the prevalence and age, gender and site distribution of dentigerous cysts.

Materials and Methods.

Study Design: The basis of this monocentric retrospective study comprises a total of 392 odontogenic cysts in 344 patients from the Clinic and Polyclinic for Oral, Maxillofacial, and Facial Surgery at Ludwig Maximilian University, Campus Innenstadt, treated on an outpatient, inpatient, and day patient basis.

Inclusion Criteria: All patients with histologically confirmed odontogenic cysts (radicular cyst, dentigerous cyst, eruption cyst, residual cyst, and lateral periodontal cyst) treated at the Clinic and Polyclinic for Oral, Maxillofacial, and Facial Surgery at Ludwig Maximilian University, Campus Innenstadt, on an outpatient, inpatient, and day patient were included. The excised tissues were examined and histologically evaluated by the Institute of Pathology, Ludwig Maximilian University, Munich.

Age and Gender: The age and gender distribution of the entire patient cohort and individual cyst types were determined.

The relationship between the age and gender of patients with odontogenic cysts was analyzed. Patients were divided into two main groups: a) 0-16 years and b) over 16 years. Additionally, patients were also divided into decades of life.

Evaluation of Imaging: Radiological evaluation and determination of cyst localization were carried out using preoperatively created panoramic layer images (OPT), dental X-ray images, bite images, lower jaw overview images according to Clementschitsch, digital volume tomography (DVT), magnetic resonance tomography (MRT), and computed tomography (CT). The description in the respective operation report was also used for localization determination. Both the upper and lower jaw were divided into individual regions (Figure 1).

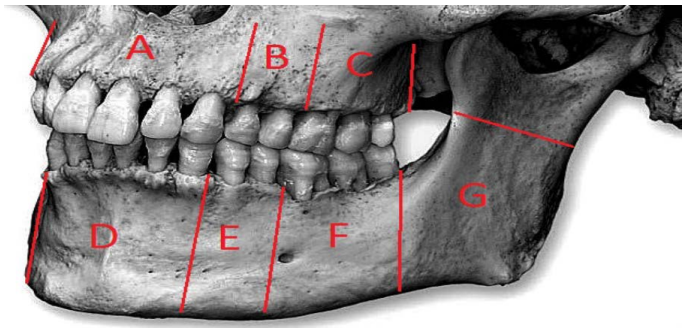

Figure 1. *Cyst locations in the upper and lower jaw he upper jaw was divided into anterior area (A), premolar area (B), molar area (C) and the lower jaw was divided into anterior area (D), premolar area (E), molar area (F) and ascending mandibular ramus (G). The localization boundaries are shown in red.*

Data Processing and Analysis: The statistical analysis used SAS 9.3 software (SAS Institute, Cary NC). Other software programs, such as Microsoft Word® 2007 (word processing), Microsoft Excel® 2007 (tabular presentation of patient data), and Microsoft PowerPoint® 2007 (graphical presentation of results), were also utilized. A descriptive analysis of all collected patient data was performed.

Results.

Evaluation of General Patient Data: From January 2003 to June 2014, 344 patients with 392 odontogenic cysts were treated at the Clinic for Oral, Maxillofacial, and Facial Surgery at Ludwig Maximilian University.

Distribution of Cyst Entities: The analysis of the patient cohort predominantly revealed radicular and dentigerous (follicular) cysts, constituting 91.07% (n=357 cysts) of the total. Residual cysts represented 5.1% (n=20 cysts). Eruption cysts (2.8%, n=11 cysts) and lateral periodontal cysts (1.03%, n=4 cysts) occurred infrequently (Figure 2).

Age-Specific Distribution of Cyst Entities: Radicular and dentigerous cysts were diagnosed more frequently in adults (93.21%, n=316) and pediatric patients (77.36%, n=41). Figures 3 and 4 depict the cyst distribution in children and adult populations.

Age and Gender Distribution: Male patients were more affected by odontogenic cysts, constituting 66.07% (n=259) compared to females at 33.93% (n=133). In the adult patient cohort, males also dominated with 67.84% (n=230), while females constituted 32.16% (n=109), resulting in a ratio of 2.1:1 (male: female). In patients with all odontogenic cysts under 16 years, the gender distribution was more balanced (54.71%, n=29 male; 45.29%, n=24 female), resulting in a ratio of 1.2:1. The youngest patient was 11 months old, and the oldest was 92 years old. The majority of cases, regardless of gender, occurred in the 5th decade, accounting for 20.9% (n=82). 4th decade followed with 19.4% (n=76). However, patients with follicular cysts after distribution across gender-independent life decades, it was observed that the majority of follicular cysts, 24.6% (n=32), occurred in the age group between 41-50 years, followed by the patient group between 51 and 60 years with 17.7% (n=23) (Figure 5).

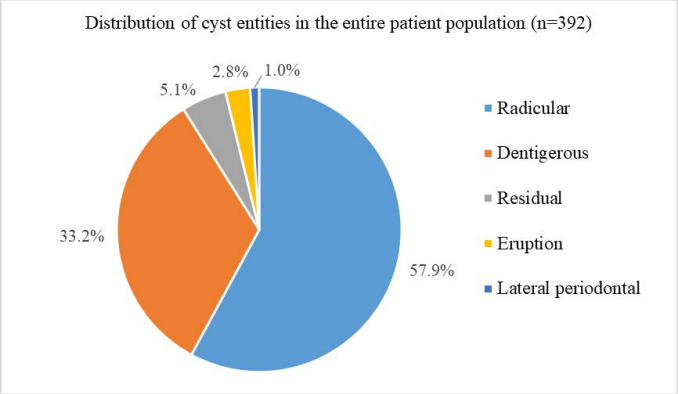

Figure 2. *Distribution of cyst entities in the entire patient population (n=392) Radicular cyst 57,9 % (n=227); Dentigerous cyst 33,17 % (n=130); Residual cyst 5,1 % (n=20); Eruption cyst 2,8 % (n=11); Lateral periodontal cyst 1,03 % (n=4).*

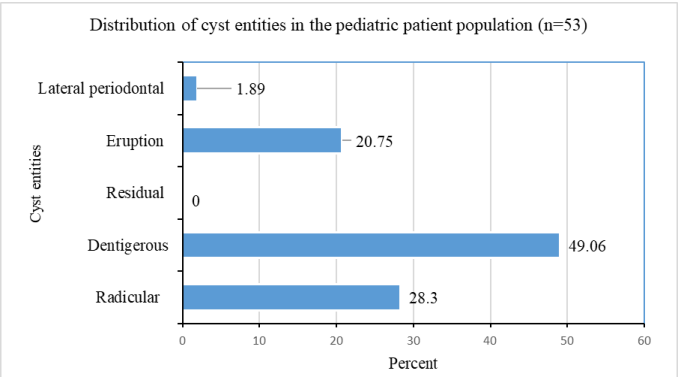

Figure 3. *Distribution of cyst entities in the pediatric patient population (n=53) Radicular cyst 28,3 % (n=15), Dentigerous cyst 49,06 % (n=26), Residual cyst 0 % (n=0), Eruption cyst 20,75 % (n=11), Lateral Periodontal cyst 1,89 % (n=1).*

Gender-specific age distribution across life decades revealed a concentration in female patients during adolescence (11-20) and in male patients in middle adulthood (41-50). In patients with dentigerous cysts under 16 years old, gender ratio was 46.15% (n=12) male, 53.85% (n=14) female. In spite of it, in adult patients with dentigerous cysts that ratio was 74.04% (n=77) male, 25.96% (n=27) female. For all patients with that type of cysts gender ratio was 68.46% (n=89) male, 31.54% (n=41) female (Figure 6).

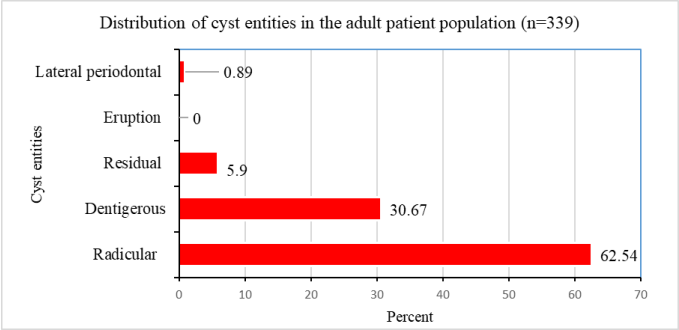

Figure 4. *Distribution of cyst entities in the adult patient population (n=339) Radicular cyst 62,54 % (n=212), Dentigerous cyst 30,67 % (n=104), Residual cyst 5,9 % (n=20), Eruption cyst 0 % (n=0), Lateral Periodontal cyst 0,89 % (n=3).*

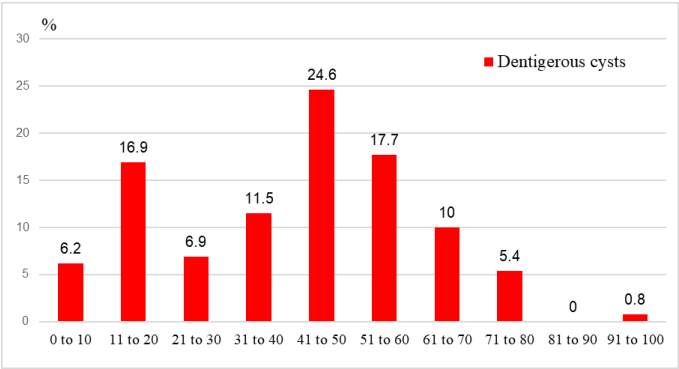

Figure 5. *Gender-unspecific age distribution (by decades of life) of dentigerous (follicular) cysts (n=130).*

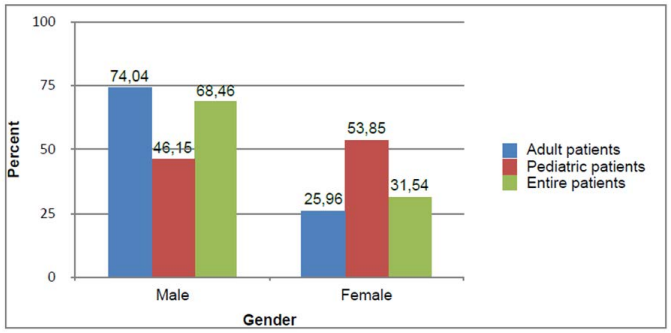

Figure 6. *Gender distribution of the entire patient population (n=130), adult (n=104) and pediatric patients (n=26) with dentigerous cysts.*

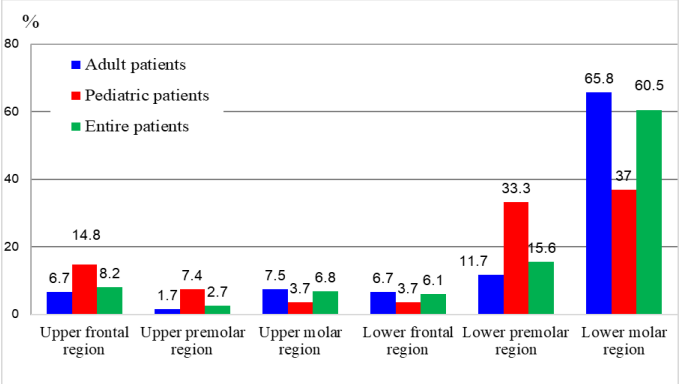

Figure 7. *Location of dentigerous cysts in adult (n=104), pediatric (n=26) and entire patient population (n=130). Y - axis: percentage of follicular cysts, X - axis: location (upper jaw, lower jaw - lower jaw).*

Localization dentigerous cysts were predominantly located in the mandible (81.54%, n=106). The most affected area in the mandible was the molar region, accounting for 60.5% (n=89), while in the maxilla, it was the anterior tooth region, with 8.2% (n=12) (Figure 7).

Discussion.

In this study, 392 odontogenic cysts were examined in a total of 344 patients, and the results were evaluated. The WHO classification of odontogenic tumors and cysts from 2005 served as the basis [12,13]. Although many studies conducted since 2005 have often analyzed odontogenic keratocyst along with odontogenic cysts [14-16]. We did not include keratocystic odontogenic tumors according to the 2005 classification. he ratio of individual cyst entities was similar in different patient cohorts in many studies. Radicular cysts usually accounted for approximately 50%-54%, and dentigerous cysts for about 20%-24% of cyst entities [17-22].

In our cohort, radicular cysts constituted 57.9%. Yet, the percentage of dentigerous cysts in our study was 33.17%. Our results showed that the frequency of cysts significantly decreased from the 7th decade of life onwards. A possible cause for this could be the extensive tooth loss in this age group and the irregular attendance of control examinations by patients with care needs due to health complaints. The literature commonly describes dentigerous cysts as the second most prevalent type of all odontogenic cysts and the most frequent form of developmental odontogenic cysts by various authors [23-25]. Our results essentially aligned with this. In our study, males were more affected (68.46%) than females (31.54%). Numerous studies also reported higher occurrences in males, ranging from 61% to 74.2% (over 60%), compared to females [26,27].

However, other studies reported the percentage of affected male patients at 52% to 57.3% (below 60%) [28,29]. In pediatric patients, other studies showed that dentigerous cysts were often more frequent in boys than in girls [30,31]. In contrast, our study showed a higher percentage of affected girls (53.85%) than boys (46.15%). Numerous authors described dentigerous cysts most commonly in the 2nd decade of life [32,33].

In our cohort, patients in the 5th decade of life accounted for the highest proportion, at 24.6%, when affected by a dentigerous cyst. Similar results were reported in retrospective study of an English population (United Kingdom) [34]. In both the aforementioned study and ours, the 6th decade presented as the second most common period of affliction. In numerous studies, dentigerous cysts were predominantly found in the mandible, especially in the molar region [35-37] and the maxillary anterior tooth region [38]. Other described an exception, with the most common localization in the mandibular premolar region. [39]. In our study, the mandible (81.54%) was significantly more affected than the maxilla (16.15%), and the cysts were mostly located in the molar region (60.5%). The mandibular premolar region was identified as the second most common localization. In pediatric patients, numerous studies indicated a preference for dentigerous cysts in the maxilla [40-43].

However, in our study, the most frequent location was the mandible, accounting for 73.08%. This could be explained by the fact that younger patients often have retained and displaced

wisdom teeth, which cannot erupt properly due to lack of space. This impeded eruption is a cause of dentigerous cyst formation. Such cysts are often detected during orthodontic treatment of pediatric patients and referred for therapy. In 19.23% of cases, the maxilla alone, and in 7.69% of cases, the maxilla together with the maxillary sinus were affected. The dentigerous cysts in this study were mostly located in the 3rd and 4th quadrants, especially in the molar region. This could be related to retained and displaced wisdom teeth, which are often not removed and thus remain retained for a long period. The age distribution of patients with dentigerous cysts also showed that the majority in our study was in the 5th and 6th decades of life. This confirms that older patients often present with such findings, which are diagnosed and treated late due to their asymptomatic course.

Conclusion.

All histologically confirmed radicular cyst, dentigerous cyst, eruption cyst, residual cyst, and lateral periodontal cyst are identified in our patients by using different criteria. Cases were evaluated based on cyst gender, age and site distribution. Radicular cysts and dentigerous cysts were more frequently diagnosed but residual cyst, eruption cyst, and lateral periodontal cyst occurred much less frequently. Our results essentially confirmed the data of previously published studies. A significant association between dentigerous cyst prevalence and patient gender was identified. In pediatric patients, dentigerous cysts were often more frequent in girls than in boys. Significantly statistic relationship was found between cysts frequency and age.

Authors' Contributions.

All authors contributed to the manuscript development and to the final version of the manuscript for submission.

Ethics.

The study was performed in full accordance with the World Medical Association Declaration of Helsinki.

Conflicts of Interest.

The authors declare no conflict of interest.

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