GEORGIAN MEDICAL NEWS

ISSN 1512-0112

NO 7-8 (364-365) Июль-Август 2025

ТБИЛИСИ - NEW YORK

ЕЖЕМЕСЯЧНЫЙ НАУЧНЫЙ ЖУРНАЛ

Медицинские новости Грузии

საქართველოს სამედიცინო სიახლენი

GEORGIAN MEDICAL NEWS

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

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

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

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

GEORGIAN MEDICAL NEWS
No 7-8 (364-365) 2025

CHALLENGES IN RADIOLOGICAL DIAGNOSIS: CRANIOPHARYNGIOMA VS ASTROCYTOMA

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Abstract.

Brain tumors in children and adults differ not only in their cellular characteristics but also in where they typically develop in the brain. In children, 30% of pediatric brain tumors are supratentorial lesions. Low-grade astrocytomas, as pilocytic astrocytoma or craniopharyngioma, are the most common tumors. In this study we describe the case of a 6-year-old male patient, diagnosed with epilepsy at the age of 3, presented to the Pediatric Neurology Clinic for routine check-up. During this visit, it was noticed that the patient has recently experienced frequent epileptic attacks regardless of antiepileptic therapy, and other symptoms such as headache, vomiting, visual problems and tiredness. During these several years of treatment, the patient was never referred for MRI or CT scans of the head. The patient was finally referred to a radiologist for further evaluation and imaging studies. MRI of the head in correlation with CT was performed, due to suspicion of a secondary cause for these epileptic seizures. These imaging studies ultimately identified an unexpected outcome and a real challenge in the right diagnosis.

Key words. Craniopharyngioma, supra sellar benign tumor, epilepsy, CT, Angio CT, MRI, optic chiasm.

Introduction.

Pilocytic astrocytomas are common in children and adolescents, comprising about 15.6% of all brain tumors and 5.4% of all gliomas [1]. In most cases, they are found in the infratentorial structures, such as the cerebellum, and in the midline cerebral structures, such as the optic nerve, hypothalamus, and brain stem [2]. To identify any possibilities of recurrent tumors or growths, pursuing long-term radiological follow-up with magnetic resonance imaging (MRI) is necessary. The 10-year survival rate if the tumor is completely resected is approximately 95% [3,4]. Recurrence is rare if there is a complete resection; however, tumors that recur do so within a few years [5,6]. By comparison, craniopharyngioma is a rare, benign, and slow-growing brain tumor. Craniopharyngioma is classified as a tumor of the sellar region but may present elsewhere in the central nervous system or nasopharynx [7]. Complete resection reduces the risk of recurrence but aggressive resection can also cause hypothalamic–pituitary axis deficits and poor neuropsychological and quality of life outcomes, especially in children [8,9].

Differentiating pilocytic astrocytoma from craniopharyngioma can be particularly challenging, as both tumors may arise in similar suprasellar locations, share overlapping MRI signal characteristics, and present with large cystic components. These similarities in origin and imaging features underscore the importance of a careful differential diagnosis and provide the rationale for the current case discussion.

Case Presentation.

We hereby present a case of a male patient, diagnosed with epilepsy in 2021, with no prior family history of the neurological origin. Upon arrival at the radiology department, a detailed radiological examination was performed to investigate potential pathological changes.

Diagnostic imaging details.

Computed tomography demonstrated a complex mass with very close relationships with the pituitary gland, the optic chiasm, the optical nerve, and the ethmoidal sinus cells, and the skull base. The mass appeared with peripheral microcalcifications in addition.

The magnetic resonance imaging included sequences as T2 axial, axial FLAIR, sagittal T1, and specific pituitary scan including T1 sagittal, T2 sagittal and contrast enhanced T1 axial, T1 sagittal and T1 coronal scans. The MRI demonstrated a heterogeneous iso to hyperintense mass in T2 and FLAIR sequences, while the scans showed mainly hypointensity in T1 scans. After application of intravenous contrast, the mass showed signs of very pronounced pathological vascularization but in a heterogeneous manner due to cystic-necrotic changes. In the hemo sequences, there were peripheral and central hypo-signals with microcalcification probabilities. Notably, the lesion demonstrated marked pathological vascular proliferation and intense, heterogeneous contrast enhancement—an atypical feature for pilocytic astrocytomas, which usually show only mild to moderate enhancement. This unusual enhancement pattern was a major factor contributing to the initial diagnostic challenge and the strong consideration of craniopharyngioma. The lesion measured approximately 44 × 42 mm in the transverse plane, and 42 mm in the craniocaudal plan. The mass had complex relationships with the pituitary gland, the optic chiasm, the optical nerve, and the ethmoidal sinus cells, and skull base. The mass had a compressive effect on the third ventricle, giving initial signs of normotensive hydrocephalus.

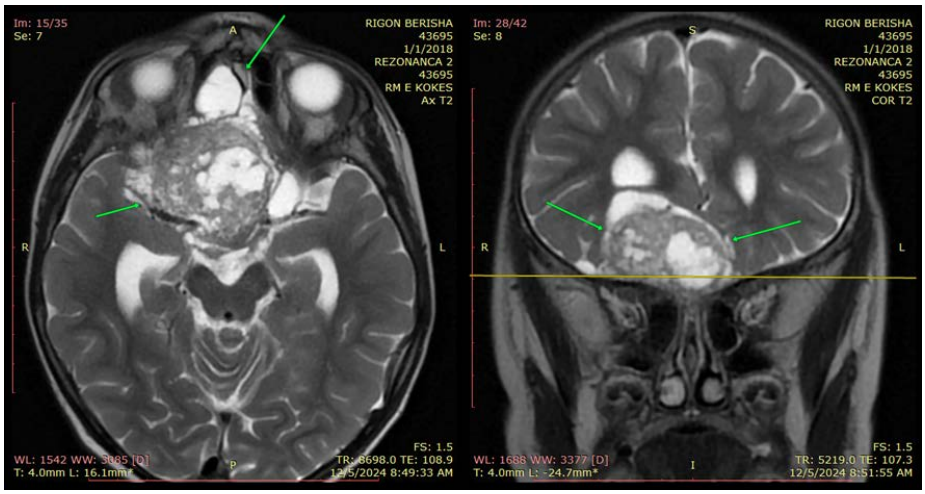

Figure 1. *Axial T2 and coronal T2 showing the presence of a heterogeneous suprasellar mass with compressive effect on the optic chiasm and optic nerve, more prominently on the right.*

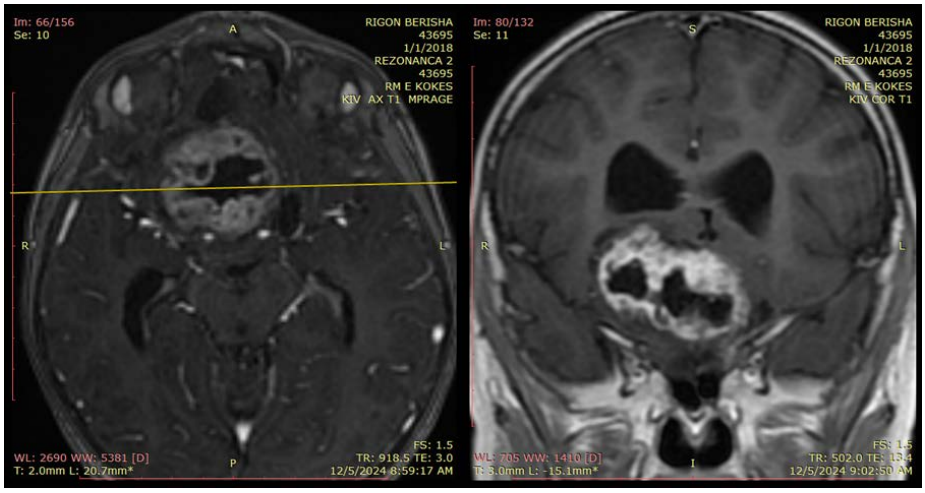

Figure 2. *Contrast enhanced axial T1 and coronal T1 images demonstrate pathological enhancement, distinct from the solid component. Cystic-necrotic changes are centrally localized.*

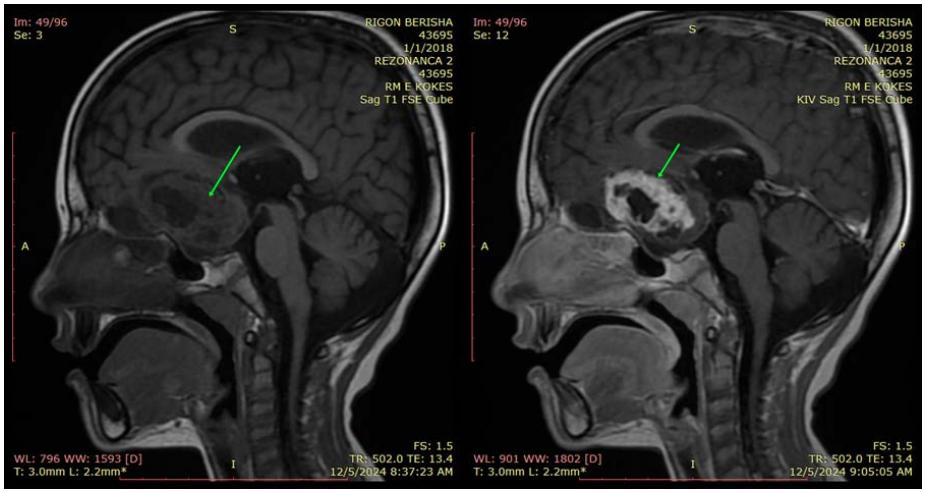

Figure 3. *Sagittal T1 pre and post contrast enhancement, with marginal pathological enhancement from the solid part, and central cystic changes.*

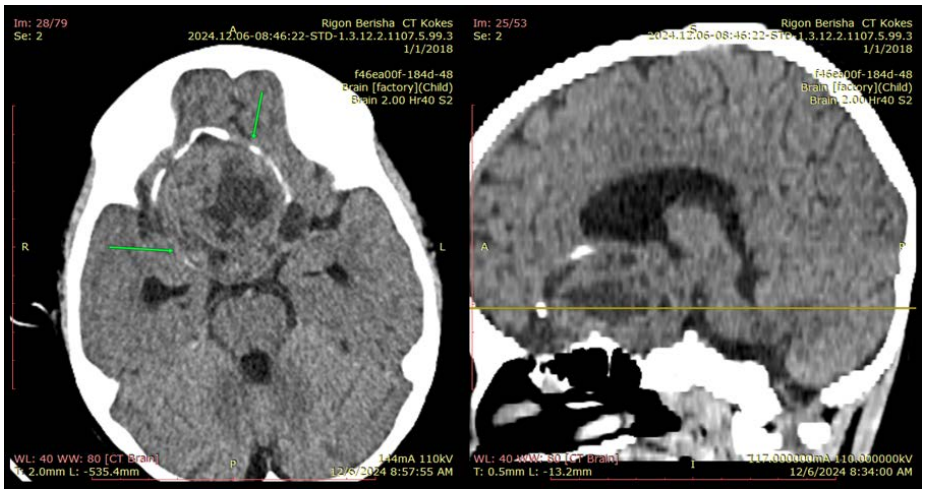

Figure 4. *Native CT was performed to evaluate the marginal calcifications, where a craniopharyngioma was initially suspected. There were no bone destructions evaluated.*

There were no definitive MRI signs of bone destruction. There was no bone destruction on CT documented, as well. There were no visible intraorbital lesions with compression over the optic chiasm. In the posterior cranial fossa, there were not any obvious lesions. The basal cisterns were free. Mastoid cells were highly pneumatized with preserved pneumatization. Mastoid air cells were with normal shape and position without signs of pathological content. The tumor was initially classified as a craniopharyngioma. What made this diagnosis more reliable was the presence of calcifications, but the results from histopathology showed a pilocytic astrocytoma. Pilocytic astrocytomas are ideally curable with total surgical resection, but due to the complexity and delicate location of the lesion, surgical intervention was deemed unfeasible in Kosovo. The patient was referred for urgent surgery abroad, with a recommendation for an angio CT to evaluate the relationship between the lesion and blood vessels before surgery. This case emphasizes the challenges of diagnosing and differentiating intracranial tumors such as pilocytic astrocytomas and craniopharyngiomas.

Histopathological findings.

Clinical findings showed a skull base tumor. Macroscopic findings demonstrated irregular tissue fragments with a total weight of 18 grams, measuring 5.5 x 4 x 2 cm in total. The tissue was yellow-brown in color, with a soft and elastic consistency. Microscopic findings revealed the tumor had minimal infiltration at the peripheral tissues. Tumor had microcystic areas in some places and more compact areas in others, displaying a biphasic pattern. Tumor cells had a bipolar astrocytic phenotype, and rosenthal fibers were commonly observed. Vessel walls were hyalinized, and mitotic activity was low. No vascular endothelial proliferation or necrosis was present. The final histopathological diagnosis was pilocytic astrocytoma (Grade 1, WHO 2021).

Discussion.

Pilocytic astrocytomas, classified as WHO Grade I tumors, are generally slow-growing, well-defined and with a good prognosis. They most often develop in children and young adults, commonly appearing in areas such as the cerebellum, brainstem, optic pathways, and near the third ventricle [10]. In our patient, no cranial imaging was performed for several years after the initial diagnosis of epilepsy. This delay may reflect a reduced clinical suspicion for an intracranial tumor due to the predominance of seizure-related symptoms or limited access to advanced neuroimaging in the regional healthcare setting. These factors are important for primary care physicians and pediatricians to recognize, as early neuroimaging in atypical or refractory epilepsy can facilitate timely diagnosis. These tumors macroscopically are clearly demarcated from surrounding brain parenchyma, they tend to grow slowly and frequently demonstrate a prominent cystic component as suggested from the literature [11], also in our case, as the first line diagnostic imaging Computed tomography (CT) shows a lesion that usually appears hypodense, and contrast enhancement is usually low or absent. To show the tumor's exact location, size, extent, vascularity, and relationship to adjacent structures. MRI is the "gold standard" imaging. MRI often demonstrates hypointense structures on T1-weighted images and as hyperintense lesions on T2-weighted images. Contrast enhancement is almost absent and if they show significant contrast enhancement it can lead to diagnostic confusion with high-grade glioma. Recent studies, MRI without gadolinium has been shown to still offer high diagnostic accuracy in follow-up imaging of pediatric pilocytic astrocytomas [6], offering a safer alternative to contrast-enhanced protocols. Literature reports have documented rare cases where pilocytic astrocytomas presented with pronounced calcifications or vivid contrast enhancement, further complicating the differentiation from craniopharyngiomas. Conversely, some craniopharyngiomas may lack calcification or exhibit atypical enhancement patterns [7-9]. In our case, the presence of calcifications, cystic components, and suprasellar location favored a radiologic diagnosis of craniopharyngioma. Additional radiologic clues that often guide diagnosis include the cyst fluid signal, the clarity of tumor margins, and the degree of compression or infiltration of adjacent structures. Advanced techniques such as diffusion-weighted imaging (DWI) and magnetic resonance spectroscopy (MRS) have been explored to improve differentiation [6,7], and their integration into diagnostic protocols could enhance future diagnostic accuracy.

Complications can occur in patients with pilocytic astrocytoma especially if the tumor is if the tumor is not addressed in time and appropriately. Hydrocephalus is common due to obstruction of CSF pathways, causing increased intracranial pressure. Results from various studies, show that patients with posterior fossa tumors may develop hydrocephalus and require a VP shunt and they can potentially be shunt-dependent for life [12,13]. Tumor growth can cause neurological deficits as it affects critical brain regions, leading to motor, sensory, or cognitive impairments. Furthermore, post-surgical complications may also arise. Long-term studies demonstrate that while pilocytic astrocytomas are associated with high survival rates, follow-up data indicate that quality of life may be compromised by chronic neurological, endocrine, and cognitive deficits [3,4,14]. Patients with pilocytic astrocytoma need to consult with different specialists to ensure comprehensive care and improve quality of life, such as neurosurgeons, neuro-oncologists, radio-oncologists, endocrinologists, ophthalmologists, physical therapists, occupational therapists, rehabilitation specialists, and psychologists [14].

Conclusion.

MRI and CT findings presented a massive suprasellar and intrasellar expansive process with highly described MRI characteristics that was more in favor of craniopharyngioma. From compression, there were initial signs of normotensive hydrocephalus. Both cavernous sinus and blood vessels tended to be free. There were compressed blood vessels without safe infiltration. The tumor was initially classified as a craniopharyngioma on radiology, but histopathological confirmation results showed an astrocytoma. These tumors not only present with radiologic similarities, but they also have similar clinical manifestations, so the definitive diagnosis often requires biopsy or resection and histopathological analysis. Both tumors can occur in the suprasellar region (near the optic chiasm and hypothalamus), and can present with a large cystic component, sometimes with an enhancing mural nodule. On imaging, a cyst with a solid component can look very similar in both entities. They both have similar MRI characteristics: On T1-weighted images, both can appear hypointense, and on T2, hyperintense; also, after contrast, both may show enhancement, though pilocytic astrocytomas often enhance more subtly, while craniopharyngiomas (especially the papillary type) can enhance more vividly. The adamantinomatous type of craniopharyngioma often shows calcifications, but these can be missed on MRI and are better seen on CT.

This case highlights the need for clinicians to consider pilocytic astrocytomas in the differential diagnosis of juvenile suprasellar tumors, even when imaging findings—such as calcification—suggest craniopharyngioma. Atypical imaging features should prompt consideration of a broader diagnostic spectrum, and histopathological confirmation remains essential for establishing the final diagnosis.

Ethical Considerations.

The patient's parents gave informed consent to publish this case report. All radiological images included in this manuscript have been reviewed to ensure that they contain no personal identifiers.

Acknowledgments.

We want to express our special thanks to our colleagues in the Radiology Department of the University Clinical Center of Kosova, and to the Nişantaşı Private Pathology Laboratory in Istanbul, for helping us with the histopathology report.

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