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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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DIFFERENTIAL DIAGNOSIS CHALLENGES OF PULMONARY SARCOIDOSIS IN PRIMARY CARE PRACTICE: THE ROLE OF MULTIDISCIPLINARY AND PERSONALIZED APPROACHES

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Abstract.

Introduction: Sarcoidosis remains one of the most difficult to diagnose granulomatous diseases due to the absence of pathognomonic symptoms and the need to exclude tuberculosis and oncopathology. In the context of primary health care (PHC), diagnostic errors reach 32%, which necessitates the optimization of diagnostic algorithms.

Objective: To substantiate the need for a multidisciplinary, personalized and differentiated approach to the diagnosis of pulmonary sarcoidosis in primary health care (PHC) using the example of a clinical case.

Case presentation: The analysis of a clinical case of a 54-year-old patient with comorbid pathology, who had respiratory and systemic manifestations for 6 months, is presented. The data of radiation (radiography, CT, PET/CT), laboratory and morphological studies, including repeated expert review of histological preparations, were evaluated.

The initial treatment of the patient revealed a peripheral formation of the lower lobe of the left lung according to CT data. Negative cancer markers excluded the cancer process. A video thoracoscopic biopsy of the lungs and lymph nodes, as well as the detection of acid-resistant mycobacteria (KUM+), served as the basis for an erroneous diagnosis of tuberculosis. The lack of response to TB treatment for 3 months and the PET/CT data confirmed the need for a multidisciplinary consultation. Repeated expert review of histological preparations verified the diagnosis of pulmonary sarcoidosis, and subsequently, significant clinical and radiological regression was achieved against the background of glucocorticosteroid therapy.

Conclusion: The presented clinical case demonstrates the fundamental complexity of the differential diagnosis of the classical course of sarcoidosis, tuberculosis and oncological diseases in a patient with comorbid pathology, which necessitates the use of multidisciplinary tactics and personalized analysis in primary health care.

Key words. Sarcoidosis, tuberculosis, differential diagnosis, primary care, biopsy.

Introduction.

Sarcoidosis is a multisystem inflammatory disease of unknown etiology characterized by the formation of specific granulomas in various organs. In more than 90% of cases, the pathological process affects the lungs and intrathoracic lymph nodes [1,2].

To date, epidemiological data on sarcoidosis in most regions remain incomplete and may be distorted. This is primarily due to the presence of "masking" diseases, particularly tuberculosis, insufficiently qualified experts, incomplete case registration, and limited diagnostic resources. The situation is further complicated by the lack of clear patient referral pathways [2].

In recent years, a trend toward increased detection of sarcoidosis has been observed worldwide. This is due to both a potential increase in incidence and improvements in diagnostic methods, including high-resolution computed tomography and mandatory histological verification [2,3].

Clinical manifestations and disease course are extremely diverse. Accordingly, five main phenotypes of sarcoidosis are distinguished based on organ and system involvement, among which the pulmonary phenotype is the most common. Classification into types (phenotypes) should be based on principles such as the extent of the disease process, its activity, clinical patterns, and the effectiveness of the administered therapy.

As noted by A.A. Visel, due to the lack of established causes of sarcoidosis and an understanding of its mechanisms of progression and spontaneous remission, the disease remains a "pulmonological enigma." At the primary care level, the use of phenotypes in clinical practice is complicated by the excessive detail of extrapulmonary manifestations of the disease [4]. Assessment of the clinical picture and exclusion of alternative diagnoses should be conducted simultaneously, as symptom severity directly influences the diagnostic probability of other pathologies [5].

The nonspecific nature of noncaseating granulomas, the polymorphism of symptoms, and the lack of a standardized approach to verification create conditions for both underdiagnosis and overdiagnosis. In particular, the absence of pathognomonic morphological features significantly complicates the differential diagnosis with other granulomatoses [2,6,7].

The above underscores the need to implement a multidisciplinary, personalized approach to the diagnosis and management of sarcoidosis in the early stages.

Case Presentation.

Patient A., 54 years old, presented for an outpatient consultation with a pulmonologist with the following complaints: Respiratory symptoms: a non-productive (dry) paroxysmal cough, most pronounced at night; episodes of expiratory dyspnea and chest tightness; mixed dyspnea during moderate physical exertion. Systemic manifestations: marked general weakness, rapid fatigue, and insomnia. Progressive weight loss (more than 10 kg over 12 months). Extrapulmonary manifestations: pain in the small joints of the hands and ankles; increased vascular fragility (tendency to develop hematomas with minimal trauma). These complaints have been present for 6 months. Medical history (Anamnesis morbi): The first signs of the disease appeared about a year ago in the form of asthenic syndrome. The onset coincided with psychological stress and excessive sun exposure during a vacation. She did not seek medical care. Over the past

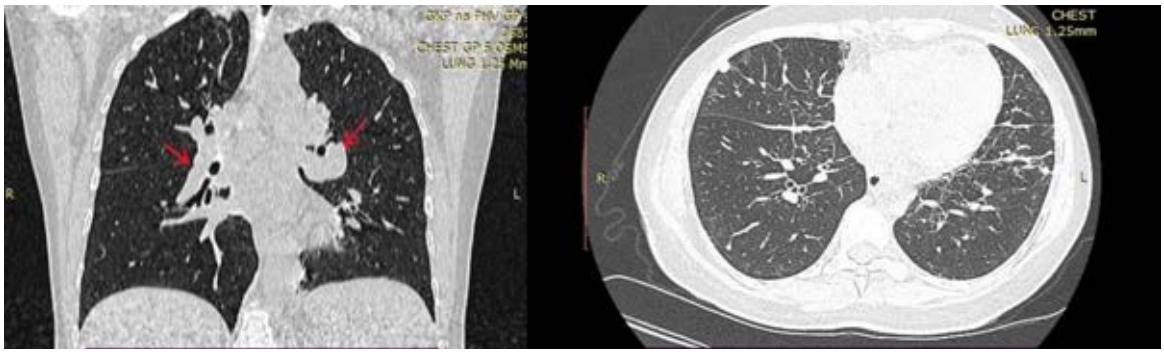

Figure 1. *Computed tomography (CT) of the chest of patient A.*

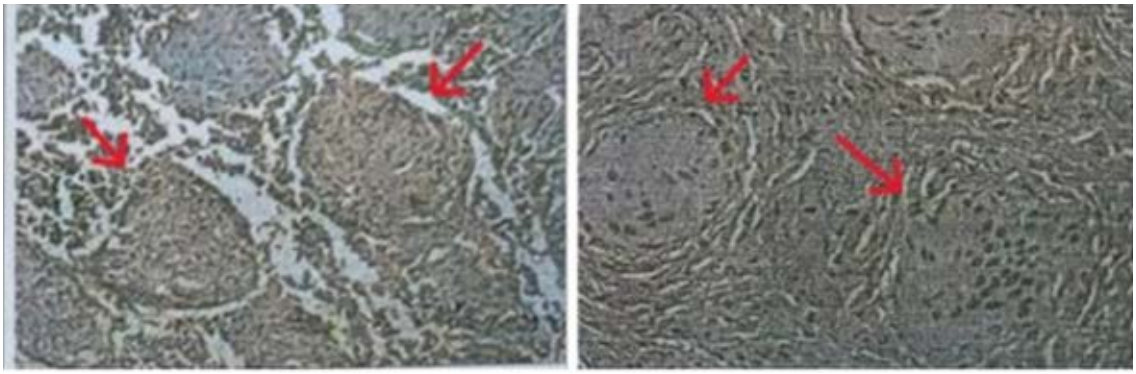

Figure 2. *Microscopic image of lung tissue and lymph node biopsy from patient A..*

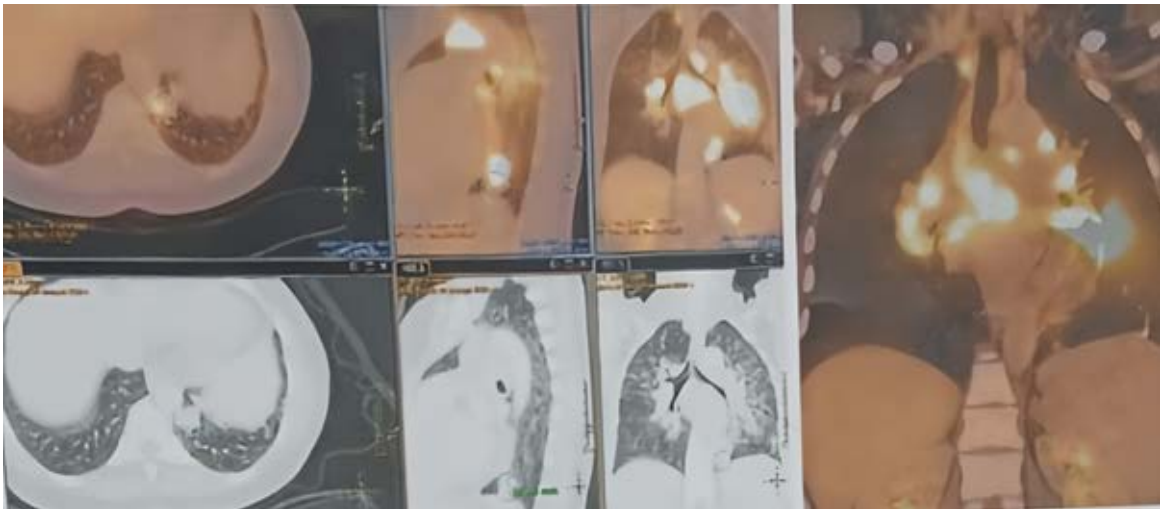

Figure 3. *Positron emission tomography in combination with computed tomography (PET/CT) of patient A.*

6 months, a negative trend has been noted: the development of respiratory symptoms (cough, shortness of breath, dyspnea) and accelerated weight loss. This is her first visit to a pulmonologist. Life history (Anamnesis vitae): Rheumatological history: Preliminary diagnosis: Rheumatoid arthritis, unspecified variant. Raynaud's syndrome? Seropositivity/status to be determined. Cardiological history: Stage III hypertension, risk class 3. NYHA Class I heart failure. Therapy: amlodipine (Coronim) 5 mg/day. Gastroenterological history: GERD, grade 2–3 cardia insufficiency in the acute phase. Hiatal hernia. Liver hemangioma. Biliary sludge. Gynecological history: Endometriosis of the uterus.

Physical examination: General condition of moderate severity. Consciousness is clear, posture is active. Facial puffiness and marked erythema of the skin are noted. Subcutaneous adipose tissue is moderately developed (BMI — 22.2 kg/m²). Body temperature — 36.7 °C. Pastosity of the lower legs up to the middle third is detected. Respiratory system: The chest is normostenic and participates symmetrically in respiration. Comparative percussion over the entire lung surface reveals clear lung sounds. Auscultation: vesicular breathing; no abnormal breath sounds are heard. Respiratory rate—22 breaths per minute (tachypnea). Cardiovascular system: Heart sounds are muffled, rhythm is regular. Blood pressure—140/90 mm

Hg. Heart rate—100 beats/min (tachycardia), pulse rate—100 beats/min. Endocrine and neurological systems: The thyroid gland is not enlarged (Grade 0 according to WHO), painless, and of an elastic consistency. The patient is oriented regarding place, time, and her own identity; meningeal and focal signs are absent. The condition of the remaining organs and systems shows no visible pathological changes. Laboratory and instrumental examination data: A chest X-ray revealed signs of left-sided basal pneumonia. C-r of the left lung? A complete blood count showed leukopenia (3.3×10^9/L) and severe anemia (hemoglobin—74 g/L). Urinalysis showed no pathological abnormalities. In order to verify the diagnosis and conduct a differential diagnosis, the patient underwent a study of the level of tumor markers in the blood serum and computed tomography of the chest organs (Figure 1), which revealed signs indicating a tumor-like process: peripheral formation in the lower lobe of the left lung, requiring differential diagnosis between the primary process (c-r) and other lesions.

Bilateral dissemination (nodular lesions in both lungs) and mediastinal lymphadenopathy, which may indicate metastatic disease (mts). The levels of specific tumor markers (NSE, Cyfra 21-1, AFP, CA-125, HE-4) are within the normal range. Although negative test results for cancer markers do not exclude a malignant process, many solid tumors (especially in the early stages or with certain histological types) do not express these antigens. For morphological verification and further examination, the patient was admitted to the city hospital, where a video-assisted thoracoscopic marginal resection of the lower lobe of the left lung with a biopsy was performed (Figure 2). Initial histological examination of lung tissue and lymph node revealed granulomas with giant Pirogov-Langhans cells.

No tumor growth was detected. Based on the data obtained, a tumor process (lung cancer) was excluded. Initially, the diagnosis of “pulmonary tuberculosis" was confirmed. Microscopy of the smear stained using the Zil-Nielsen method revealed acid-resistant mycobacteria, which served as the basis for the diagnosis of tuberculosis. The patient was diagnosed with Infiltrative tuberculosis of the lower lobe of the left lung A-16.0, MBT category 1, drug-sensitive, new case. Condition after video-assisted thoracoscopic resection of the lower lobe of the left lung. Within 3 months, standard first-line TB therapy was prescribed. Despite the specific therapy, subsequent computed tomography revealed a negative trend with an increase in the spread of infection in the lungs and lymph nodes of the mediastinum. The lack of a clinical and radiological response served as the basis for a multidisciplinary consultation, during which a differential diagnosis of sarcoidosis of the respiratory system was performed. The patient underwent positron emission tomography in combination with computed tomography (Figure 3). The revealed pattern of pathological activity in the lymph nodes of the mediastinum, as well as in the right lower jugular group lymph node, was very specific for sarcoidosis. A typical picture included an intense symmetrical accumulation of radiopharmaceutical in enlarged paratracheal, bifurcation, and bilateral maxillary lymph nodes (the “lambda” or “garland” sign), which confirmed the systemic nature of the granulomatous process.

Repeated examination of histological samples by an expert using additional staining methods led to a radical revision of the diagnosis. Detailed morphological analysis confirmed sarcoidosis of the lungs and intrathoracic lymph nodes. The pathomorphological picture corresponded to the III–IV stage of sarcoid granuloma formation with pronounced perifocal fibrosis and hyalinosis. Previously obtained microscopy results (detection of acid-resistant mycobacteria by Cyll-Nielsen staining) were classified as false positive or interpreted as signs of latent tuberculosis infection against the background of active sarcoidosis. This fact highlights the difficulty of differential diagnosis in cases of concomitant pathology or similarity of granulomatous processes of various etiologies. Based on a comprehensive examination, including positron emission tomography with computed tomography and an expert morphological assessment, the final clinical diagnosis was established: stage II sarcoidosis of the respiratory system (lung and intrathoracic lymph nodes), grade I respiratory failure. The patient was initiated systemic therapy with glucocorticosteroids (oral methylprednisolone) at an initial dose of 24-28 mg / day (0.4–0.5 mg / kg body weight), followed by dose adjustment under the supervision of a pulmonologist. Subsequent positron emission tomography (PET) in combination with computed tomography (CT) after 8 months revealed a noticeable improvement: complete resorption of the lesion in the S10 area of the left lung and regression of the common process. The metabolic activity (SUVmax) of mediastinal lymph nodes decreased significantly. Against the background of ongoing therapy, a stable CT picture with isolated residual foci remains. The revealed pneumofibrosis and signs of chronic bronchitis were interpreted as the consequences of a previous specific inflammation. Despite the pronounced positive radiological dynamics and significant regression of focal and infiltrative changes in the lungs, the patient's clinical condition improved only slightly. The clinical picture continued to include persistent cough and moderate shortness of breath during exercise. Persistent joint symptoms (arthralgia, pain and swelling of the small joints of the hands and ankles) and the appearance of subcutaneous hematomas (ecchymoses) deserved special attention. This case illustrates the phenomenon of dissociation between positive radiological data and persistent systemic complaints characteristic of sarcoidosis. This confirms the need for an integrated approach to evaluating the effectiveness of treatment: computed tomography data should be interpreted solely in conjunction with the dynamics of extrapulmonary manifestations and the subjective condition of the patient. Currently, the patient is under the active supervision of a multidisciplinary team of specialists.

Discussion.

The presented clinical case demonstrates the diagnostic difficulties that arise at the junction of phthisiology, pulmonology and oncology, and underlines the critical importance of a multidisciplinary approach in primary health care institutions [8]. Currently, there is no single diagnostic criterion that can confirm sarcoidosis with 100% certainty.

Current recommendations are based on a combination of three key conditions: (1) clinical manifestations characteristic of

sarcoidosis; (2) detection of non-caseous granulomas based on biopsy data; and (3) exclusion of other diseases with a similar clinical and morphological picture. Morphological verification of non-caseous granulomas obtained by endobronchial, transbronchial, or skin or lymph node biopsy remains the most objective diagnostic criterion [5,9].

According to Rossides et al., sarcoidosis is asymptomatic in 10-15% of patients and is often detected accidentally by chest X-ray [2,10,11]. The absence of specific clinical and morphological signs, as well as the similarity of manifestations with tuberculosis and oncological diseases, make sarcoidosis one of the most difficult to diagnose systemic granulomatous diseases [2,5,12,13].

The interpretation of the clinical picture largely depends on the specialist's experience. Due to the polymorphism and non-specificity of early manifestations, patients often initially consult general practitioners or emergency departments, which leads to significant diagnostic delays, often exceeding 6 months [5,12]. In 70% of patients, radiography reveals typical bilateral intrathoracic lymphadenopathy with or without pulmonary infiltrates, which has important differential diagnostic significance. As a rule, sarcoid lymphadenopathy is not accompanied by compression of the respiratory tract and vascular structures [5,13].

Due to the difficulty of differential diagnosis of sarcoidosis in the early stages, tuberculosis is misdiagnosed in approximately 16% of cases [14]. It should be noted that the initial interpretation of the positive Cyll–Nielsen stain as confirmation of active tuberculosis had limited diagnostic specificity. Acid-resistant structures can be detected not only in cases of Mycobacterium tuberculosis infection, but also in the presence of non-tuberculosis mycobacteria, technical artifacts of staining, sample contamination, and latent tuberculosis infection.

In the presented case, the most likely cause of the false positive result was contamination of the material with non-tuberculous mycobacteria. Repeated studies, including PCR diagnostics for Mycobacterium tuberculosis, did not confirm the presence of active tuberculosis infection, and the lack of a clinical and radiological response to tuberculosis therapy additionally indicated a diagnosis of active tuberculosis.

Computed tomography of the chest organs plays a key role in the diagnosis of sarcoidosis, allowing a detailed assessment of the pathological changes detected by radiography, as well as objective monitoring of the dynamics of the disease during treatment. In 70-80% of cases, bilateral intrathoracic lymphadenopathy, disseminated granulomatous changes in lung tissue, and areas of the "frosted glass" type are visualized [15,16]. Despite the high sensitivity of the method, its specificity remains limited, since a similar pattern can be observed in tuberculosis, lymphoproliferative processes, and metastatic lung damage [6].

The use of positron emission tomography in combination with computed tomography has a high diagnostic value, allowing to assess the metabolic activity of the process and the prevalence of the lesion, including extrapulmonary localization [7]. According to published data, the aortopulmonary (76%) and right paratracheal (71%) lymph nodes are most often affected [5].

The morphological picture of sarcoidosis is characterized by the formation of epithelioid cell granulomas. Since the presence of epithelioid and giant multinucleated cells is also characteristic of tuberculosis, the analysis of necrotic changes is of fundamental importance. Fibrinoid necrosis is more typical for sarcoidosis, whereas caseous necrosis is pathognomonic for tuberculosis [10]. Additional diagnostic signs of sarcoidosis include the characteristic arrangement of nuclei in giant cells of the "coin scattering" type, the presence of asteroid bodies and zones of perifocal sclerosis [10,14,17].

In the presented clinical case, an expert revision of histological preparations allowed for a detailed morphological assessment of the process and an accurate differential diagnosis between sarcoidosis and tuberculosis, which ensured the final verification of the diagnosis and determined further patient management tactics [12,17-19].

The literature emphasizes the high diagnostic importance of bronchological methods, including bronchoalveolar lavage and transbronchial lung biopsy, considered as a standard for morphological verification of sarcoidosis. The clinical manifestations in this patient, including prolonged unproductive cough and shortness of breath, corresponded to the typical picture of the disease [17,19].

As part of a multidisciplinary approach, the patient was consulted by a rheumatologist. There were signs of rheumatoid arthritis and Raynaud's syndrome in the anamnesis, accompanied by arthralgias of the small joints of the hands and ankles, which persisted despite glucocorticosteroid therapy. A differential diagnosis was performed between extrapulmonary manifestations of sarcoidosis and the activity of concomitant rheumatological disease. It was not possible to completely exclude the contribution of the systemic rheumatic process, however, the absence of erosive joint changes according to X-ray data, as well as partial regression of arthralgia after increasing the dose of glucocorticosteroids, suggested that the joint syndrome was mainly associated with the systemic inflammatory activity of sarcoidosis.

The tendency to form subcutaneous hematomas was probably multifactorial and could be caused by a combination of chronic inflammation and long-term glucocorticosteroid therapy.

An objective examination revealed hyperemia of the facial skin, but the typical nodular erythema characteristic of sarcoidosis was not detected. There were no specific skin manifestations of sarcoidosis, and therefore no skin biopsy was required. Thus, the classic Lefgren syndrome was not verified in this case.

Despite the marked radiological improvement on the background of methylprednisolone therapy (24-28 mg / day), clinical symptoms, including persistent cough and arthralgia, regressed only partially. In such situations, if systemic corticosteroids are not effective enough or cannot be used for a long time, the appointment of steroid-sparing therapy, including methotrexate, azathioprine or leflunomide, may be considered. In the refractory course of the disease, the use of biological drugs, primarily TNF-α inhibitors such as infliximab or adalimumab, is a promising direction [20]. Such therapy requires mandatory multidisciplinary follow-up with the participation of a pulmonologist, rheumatologist and phthisiologist.

Of particular interest are the cases of sarcoidosis described in the literature against the background of anti-tuberculosis therapy [21]. In diagnostically difficult situations, trial therapy is sometimes considered as a necessary stage of differential diagnosis, which makes it possible to assess the nature of the clinical response and clarify the nature of the granulomatous process [5,21].

According to the Registry of Interstitial Lung Diseases of the Republic of Kazakhstan, primary diagnoses are reviewed in 32.4% of cases after an expert assessment. Such a high frequency of diagnostic discrepancies underlines the crucial importance of a multidisciplinary approach both for the verification of sarcoidosis and for optimizing patient management tactics [8,21]. This clinical case confirms that multidisciplinary collaboration is currently a key element of the diagnostic algorithm for granulomatous lung diseases.

Conclusion.

This case demonstrates that a multidisciplinary and personalized approach is crucial for differentiating the diagnosis of pulmonary sarcoidosis from other diseases, including tuberculosis and cancer, in a patient with concomitant pathology in primary care settings. Early diagnosis of sarcoidosis in the practice of a primary care physician is difficult without careful attention to the disease, careful examination of radiation diagnostic data and morphological studies to verify the diagnosis.

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Введение: Саркоидоз остается одним из наиболее сложных для диагностики гранулематозных заболеваний вследствие отсутствия патогномоничных симптомов и необходимости исключения туберкулеза и онкопатологии. В условиях первично медико-санитарной помощи (ПМСП) диагностические ошибки достигают 32%, то диктует необходимость оптимизации диагностических алгоритмов.

Цель: Обосновать необходимость мультидисциплинарного, персонифицированного и дифференцированного подхода к диагностике саркоидоза легких в условиях первичной медико-санитарной помощи (ПМСП) на примере клинического случая.

Описание клинического случая: Представлен анализ клинического случая пациентки 54 лет с коморбидной патологией, у которой на протяжении 6 месяцев наблюдались респираторные и системные проявления. Проведена

оценка данных лучевых (рентгенография, КТ, ПЭТ/КТ), лабораторных и морфологических исследований, включая повторный экспертный пересмотр гистологических препаратов.

Первичное обращение пациентки выявило периферическое образование нижней доли левого легкого по данным КТ. Отрицательные онкомаркеры исключили онкопроцесс. Проведение видеоторакоскопической биопсии легких и лимфатических узлов, а также обнаружении кислотоустойчивых микобактерий (КУМ+) послужило основанием для ошибочной постановки диагноза туберкулеза. Отсутствие ответа на противотуберкулезное лечение в течение 3 месяцев и данные ПЭТ/КТ подтвердили необходимость применения мультидисциплинарного консилиума. Повторный экспертный пересмотр гистологических препаратов верифицировал диагноз саркоидоза легких, впоследствии на фоне глюкокортикостероидной терапии достигнут значительный клинико-рентгенологический регресс.

Заключение: Представленный клинический случай демонстрирует фундаментальную сложность дифференциальной диагностики классического течения саркоидоза, туберкулеза и онкологических заболеваний у пациентки с коморбидной патологией, что обуславливает необходимость применения мультидисциплинарной тактики и персонализированного анализа в условиях ПМСП.

Ключевые слова: Саркоидоз, туберкулез, дифференциальная диагностика, ПМСП, биопсия.

შესავალი: სარკოიდოზი რჩება ერთ-ერთ ყველაზე რთული დიაგნოსტიკა granulomatous დაავადებების არარსებობის გამო pathognomonic სიმპტომები და უნდა გამოირიცხოს ტუბერკულოზისა და oncopathology. პირველადი ჯანდაცვის (PHC) კონტექსტში დიაგნოსტიკური შეცდომები აღწევს 32% - ს, რაც საჭიროებს დიაგნოსტიკური ალგორითმების ოპტიმიზაციას.

მიზანი: უნდა დაასაბუთოს, რომ საჭიროა მულტიდისციპლინური, პერსონალურად და დიფერენცირებული მიდგომა დიაგნოზი ფილტვის სარკოიდოზი პირველადი ჯანდაცვის (ჯანდაცვის) გამოყენებით, მაგალითად, კლინიკური შემთხვევაში.

კლინიკური შემთხვევის აღწერა: წარმოდგენილია კომორბიდული პათოლოგიის მქონე 54 წლის პაციენტის კლინიკური შემთხვევის ანალიზი, რომელსაც რესპირატორული და სისტემური გამოვლინებები ჰქონდა 6 თვის განმავლობაში. შეფასდა რადიაციის (რენტგენოგრაფია, CT, PET/CT), ლაბორატორიული და მორფოლოგიური კვლევების მონაცემები, მათ შორის ჰისტოლოგიური პრეპარატების განმეორებითი საექსპერტო მიმოხილვა.

პაციენტის პირველადი მკურნალობის შედეგად გამოვლინდა მარცხენა ფილტვის ქვედა წილის პერიფერიული ფორმირება CT მონაცემების მიხედვით. უარყოფითი კიბოს მარკერები გამორიცხავენ კიბოს პროცესს. ფილტვებისა და ლიმფური კვანძების ვიდეო თორაკოსკოპიული ბიოფსია, ასევე მჟავაგამძლე მიკობაქტერიების (KUM+) გამოვლენა, საფუძვლად დაედო ტუბერკულოზის მცდარ დიაგნოზს. 3 თვის განმავლობაში ტუბერკულოზის მკურნალობაზე რეაგირების არარსებობამ და PET/CT მონაცემებმა დაადასტურა მულტიდისციპლინარული კონსულტაციის საჭიროება. ჰისტოლოგიური პრეპარატების განმეორებით ექსპერტულმა მიმოხილვამ დაადასტურა ფილტვის სარკოიდოზის დიაგნოზი და შემდგომში გლუკოკორტიკოსტეროიდული თერაპიის ფონზე მიღწეული იქნა მნიშვნელოვანი კლინიკური და რადიოლოგიური რეგრესია.

დასკვნა: წარმოდგენილი კლინიკური შემთხვევა აჩვენებს სარკოიდოზის, ტუბერკულოზისა და ონკოლოგიური დაავადებების კლასიკური კურსის დიფერენციალური დიაგნოზის ფუნდამენტურ სირთულეს კომორბიდული პათოლოგიის მქონე პაციენტში, რაც საჭიროებს მულტიდისციპლინარული ტაქტიკის გამოყენებას და პერსონალიზებულ ანალიზს პირველადი ჯანდაცვის სფეროში.

საკვანძო სიტყვები: სარკოიდოზი, ტუბერკულოზი, დიფერენციალური დიაგნოზი, PHC, ბიოფსია.