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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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A RARE CLINICAL CASE OF A GIANT LIPOMA OF THE RIGHT THIGH

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Abstract.

Introduction: Lipoma is a benign tumor of adipose tissue, most often located in the subcutaneous tissue or deep soft tissues. It is usually solitary, slow-growing, and asymptomatic. Giant lipomas (≥10 cm or ≥1 kg) are rare and may cause compression of blood vessels and nerves, restricted mobility, and cosmetic deformity. Genetic predisposition is associated with mutations in genes such as High Mobility Group AT-hook 2 (HMGA2) and Domain-Containing Preferred Translocation Partner in Lipoma (LPP). Diagnosis is based on clinical examination and imaging, including ultrasonography, CT, and, in diagnostically equivocal cases, MRI. Suspicious cases are confirmed by histology to rule out malignant tumors.

Clinical presentation: Patient O., 65 years old, was admitted to the surgical department with a giant lipoma of the right thigh, present for over 15 years and associated with discomfort, a feeling of heaviness, and cramps. On examination, a mass measuring 40 × 35 cm was detected, of soft-elastic consistency, painless, mobile, with no skin changes. Diagnostic work-up included ultrasonography (US), computed tomography (CT), and biopsy, confirming a benign lipoma.

Planned surgical excision was performed under spinal anesthesia; the lipoma was completely removed. The excised mass measured 50 × 35 cm and weighed 5700 g. The surgery was uneventful, with a blood loss of 100 ml. The postoperative period was smooth; drains were removed on postoperative days 4–5, and sutures were removed on days 9–10. The patient was discharged in satisfactory condition, with complete wound healing and a recommendation for follow-up with a surgeon.

Discussion: Giant lipomas are rare but can cause compression of blood vessels and nerves, restricted mobility, and cosmetic discomfort. Their size and atypical course may mimic malignant tumors, necessitating thorough preoperative evaluation using MRI, histology, and, if necessary, genetic testing by fluorescence in situ hybridization (FISH) for MDM2 (Mouse Double Minute 2) gene amplification. The primary and safest treatment remains radical surgical excision with preservation of anatomical structures. Small or cosmetically significant lipomas may be treated with less invasive methods, but giant forms require full surgical intervention to restore function and improve the patient's quality of life.

Conclusion: Giant thigh lipomas require a comprehensive and carefully planned approach, including thorough diagnostic assessment and radical surgical intervention. Effective treatment results in sustained improvement of the patient's physical and psycho-emotional condition, reduction of pain, and restoration of quality of life, as reflected by a marked improvement in SF-36 and EQ-5D scores during long-term follow-up.

Key words. Lipoma, thigh, giant size, computed tomography, morphology, diagnosis, surgical treatment.

Introduction.

Lipoma is a benign adipocytic neoplasm composed of mature adipocytes and can occur in almost any anatomical region containing fat. Most lesions are superficial, slow-growing, and clinically silent for long periods, although deep or enlarging tumors may produce discomfort, cosmetic deformity, or compression-related symptoms [1,2].

Giant lipomas are generally defined as lesions measuring at least 10 cm in one dimension or weighing more than 1000 g. They are uncommon and may cause pain, impaired ambulation, restricted joint motion, and functional limitation, particularly when located in the thigh or other large soft-tissue compartments [2,3].

Lipomas may occur at any age but are most often diagnosed in adults. In a subset of patients, their development is associated with genetic alterations, including rearrangements involving HMGA2 and LPP, which are implicated in adipocytic tumorigenesis [1].

Clinically, lipomas are usually soft, mobile, painless, and well circumscribed. However, giant or deep-seated lesions may present diagnostic uncertainty because they can simulate other adipocytic tumors, including atypical lipomatous tumor/well-differentiated liposarcoma (ALT/WDLPS) [3,4].

The diagnostic work-up is based on clinical examination and imaging. Ultrasonography is useful as an initial tool, whereas CT and MRI provide more detailed assessment of tumor size, depth, internal architecture, and relationship to surrounding structures. MRI is particularly informative in diagnostically equivocal cases and in the differential diagnosis between lipoma and ALT/WDLPS [4,5].

Histopathological examination remains essential for confirmation of the diagnosis. In selected difficult cases, ancillary molecular studies, including assessment of MDM2 amplification, may further support the differential diagnosis between benign lipoma and ALT/WDLPS [5,6].

Despite the increasing number of case reports and small series, there are still no universally standardized protocols for the management of giant lipomas. Complete surgical excision remains the mainstay of treatment, especially in symptomatic patients and in lesions causing functional impairment [2,7,8].

Clinical Case Presentation.

Patient O., 65 years old (No. 1872-s), was admitted to the Surgical Department of the University Hospital of the Non-Profit Joint-Stock Company "Semey Medical University" (Semey, Abai Region, Republic of Kazakhstan) for inpatient treatment

from June 4, 2024, to June 15, 2024, with a diagnosis of giant lipoma of the right thigh (according to the medical history).

Complaints at admission: Presence of a tumor-like mass in the right thigh, accompanied by discomfort, a feeling of heaviness and fatigue in the leg, and cramps.

History of present illness: According to the patient, the above complaints have been present for more than 15 years. Recently, the mass has increased in size, and moderate pain has developed. Due to these changes, the patient consulted a local clinic, from where he was referred for planned surgical treatment to the Surgical Department of the University Hospital of Semey Medical University. The patient was examined by a surgeon and admitted to the surgical department.

Past medical history: The patient denies a history of Botkin's disease (viral hepatitis), tuberculosis, and sexually transmitted diseases.

Epidemiological history: Measles — denied; rubella — denied; varicella — denied; mumps — denied. There has been no contact with infectious patients during the past 35 days. The patient grew and developed according to age. Family history is unremarkable. Socioeconomic status was not assessed. The patient denies blood transfusions.

Allergic history: Unremarkable.

Objective Findings: General condition satisfactory. Psychoemotional status: Conscious, clear, oriented to time, place, and self. Skin and visible mucous membranes: Normal color, clean. Lymph nodes: Not enlarged, painless on palpation. Subcutaneous fat tissue: Adequately developed. BMI: 24.6. Musculoskeletal system: No visible pathology, range of motion preserved.

Respiratory system: Breathing free through the nose. Chest conical in shape. Percussion over the lungs reveals clear lung sounds in all areas. Auscultation — vesicular breath sounds, no rales. Respiratory rate — 16 per minute.

Cardiovascular system: Visible pulsation in the area of the heart and major vessels absent. Auscultation — heart tones muffled, no murmurs, rhythm regular. Heart rate — 75 bpm. Blood pressure — 130/80 mmHg. Peripheral pulses satisfactory.

Digestive system: Tongue moist, clean. Swallowing free. Abdomen: in the left inguinal region, deformity due to hernial protrusion, participates in respiratory movements. Liver non-tender on palpation, lower edge at the costal margin. Spleen not palpable. Passage of gas normal.

Urinary system: Kidneys not palpable. Urination free, painless, urine of normal color. Costovertebral angle tenderness negative on both sides.

Local examination: In the anterolateral region of the right thigh, a tumor-like mass measuring approximately 40 × 35 cm is identified. The mass has a soft-elastic consistency, is painless on palpation, mobile, and not adherent to the surrounding tissues. The skin over the lesion is unchanged and of normal color; there are no signs of local hyperemia or increased temperature (Figure 1).

Figure 1. *Initial patient examination.*

Laboratory and diagnostic investigations:

Blood group (02.06.2024): B (III), Rh-positive.

Blood microreaction test (02.06.2024): Negative.

Stool examination for helminth eggs (02.06.2024): Not detected.

Anti-HIV blood test (01.06.2024): Negative.

HBsAg and HCV blood tests (01.06.2024): Negative.

Complete blood count (02.06.2024, 08:38): White blood cell count — 6.03 × 10^9/L; red blood cell count (RBC) — 5.12 × 10^{12}/L; hemoglobin (HGB) — 137 g/L; hematocrit (HCT) — 39.2%; platelet count (PLT) — 241 × 10^9/L. Differential leukocyte count: basophils (BA%) — 0.3%, eosinophils (EO%) — 1.5%, monocytes (MON%) — 3.9%, neutrophils (NEUT%) — 72.7%, lymphocytes (LYM%) — 20.8%.

Urinalysis (02.06.2024, 09:12): Urine color — yellow; clarity — clear; specific gravity — 1.027; leukocytes — 1 cell/μL; erythrocytes — 0 cells/μL; urine pH — 5.0; protein — 0.033 g/L.

Biochemical blood analysis (02.06.2024, 08:23): Glucose — 5.11 mmol/L; urea — 4.25 mmol/L; total bilirubin — 10.12 μmol/L; direct bilirubin — 3.78 μmol/L; alpha-amylase — 48.7 U/L.

Preoperative core biopsy (30.05.2024) revealed fragments of mature adipose tissue composed of relatively uniform adipocytes without nuclear atypia. No lipoblasts, necrosis, or increased mitotic activity were identified in the examined material. The findings were consistent with a benign lipomatous tumor (lipoma).

Chest X-ray (22.05.2024): No pathological changes of the thoracic organs were detected.

Video esophagogastroduodenoscopy (01.06.2024): Conclusion: Chronic mixed gastritis.

Electrocardiography (03.06.2024): Conclusion: Sinus rhythm, heart rate — 72 beats per minute. The electrical axis of the heart is in a horizontal position. Signs of left ventricular hypertrophy are noted.

Computed tomography (CT) of the right hip (12.04.2024): Region examined: CT scan of other organs with contrast enhancement. On a series of CT images of the pelvic bones and right thigh, the pelvic inlet has a normal shape, and the configuration of the iliac wings and iliopsoas muscles is normal. The femoral heads, sacroiliac joints, and pubic symphysis show no signs of pathological changes. The hip joints are congruent, joint spaces are preserved and within normal limits (approximately 4 mm). The femoral neck angles are 126° on the right and 130° on the left, within the age-related normal range

Table 1. *Changes in quality of life of a patient with a large giant lipoma, assessed using the Short Form-36 (SF-36) and the EuroQol 5-Dimension (EQ-5D) questionnaires.*

Follow-up Period	Physical Functioning (PF, SF-36)	Role Physical (RP, SF-36)	Bodily Pain (BP, SF-36)	General Health (GH, SF-36)	Mental Health (MH, SF-36)	EQ-5D Index	EQ-VAS, %
Preoperative Period	35	25	30	40	45	0,42	40
1 Month Postoperative Period	55	50	65	60	60	0,65	65
6 Month Postoperative Period	80	85	90	80	85	0,85	85
12 Month Postoperative Period	90	95	95	90	90	0,95	95

Figure 2. *Computed tomography of a giant lipoma in the right thigh.*

Figure 3. *Patient positioning on the operating table.*

(125–135°). In the anterolateral soft tissues of the right thigh, a large avascular mass is identified, with a densitometric density of approximately −122 HU, consistent with adipose tissue. No contrast enhancement is observed. Conclusion: The CT findings are consistent with a large lipoma in the soft tissues of the right thigh (Figure 2).

Surgical oncologist consultation (31.05.2024): Diagnosis: Giant lipoma of the right thigh. There are no contraindications to surgery; the planned surgical intervention is appropriate and indicated.

MRI was not performed in this patient. Contrast-enhanced CT demonstrated a large lesion with homogeneous adipose density (approximately −122 HU) and no contrast enhancement, while the preoperative biopsy showed no atypical cells. Taken together, these findings were considered sufficient to support the diagnosis of a benign lipomatous tumor and to proceed with planned surgical excision.

Surgical report:

Operation name: Excision of giant lipoma of the right thigh with Redon drainage.

Date and time of surgery: Start — 05.06.2024, 09:30; End — 05.06.2024, 11:30.

Preoperative diagnosis (D17.2): Giant lipoma of the right thigh.

Postoperative diagnosis (D17.2): Giant lipoma of the right thigh.

Type of anesthesia: spinal anesthesia (Bupivacaine-M 0.5% — 15 mL).

Surgery class: Planned.

Operative protocol: After administration of spinal anesthesia, the patient was positioned supine on the operating table (Figure 3). Standard preoperative preparation of the surgical field was performed: threefold antiseptic treatment with povidone-iodine solution, followed by a single application of alcohol-based solution (Figures 4 A, B). The operative field was isolated with sterile drapes. A skin incision up to 30 cm in length was made along the lateral surface of the right thigh. Subcutaneous adipose

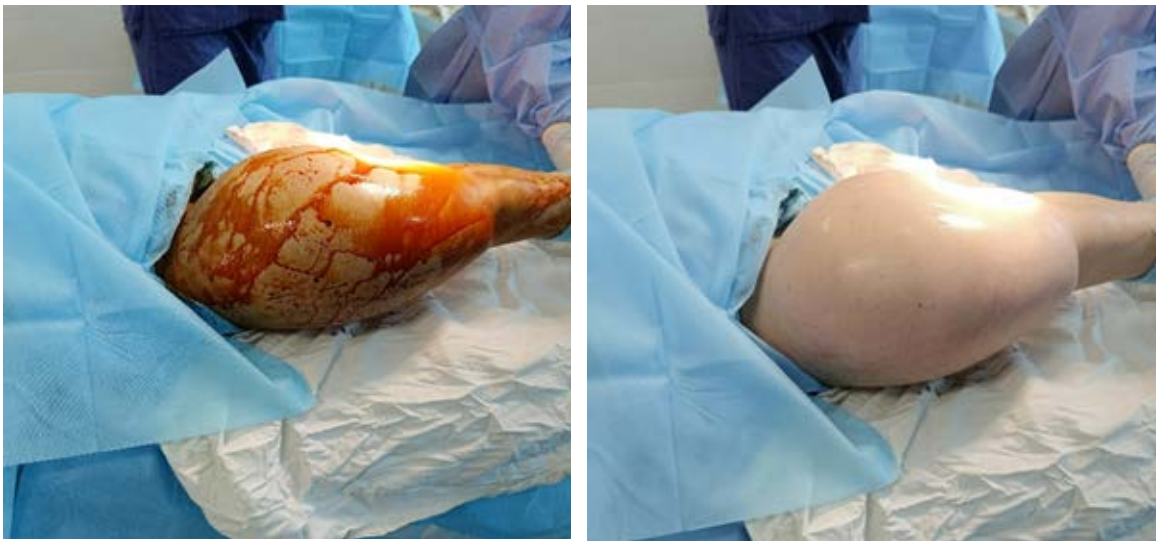

Figure 4. *Antiseptic preparation of the surgical field of the right thigh: A — initial treatment with povidone-iodine solution; B — final treatment with alcohol solution.*

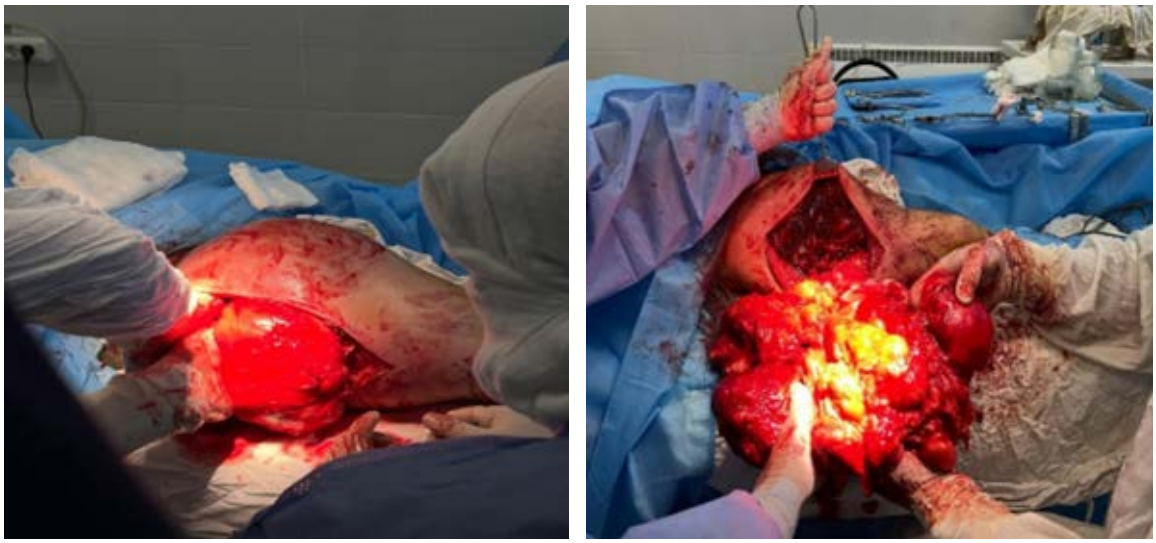

Figure 5. *Intraoperative stages of giant lipoma removal: A — mobilization of the lipoma after skin incision; B — complete excision of the mass.*

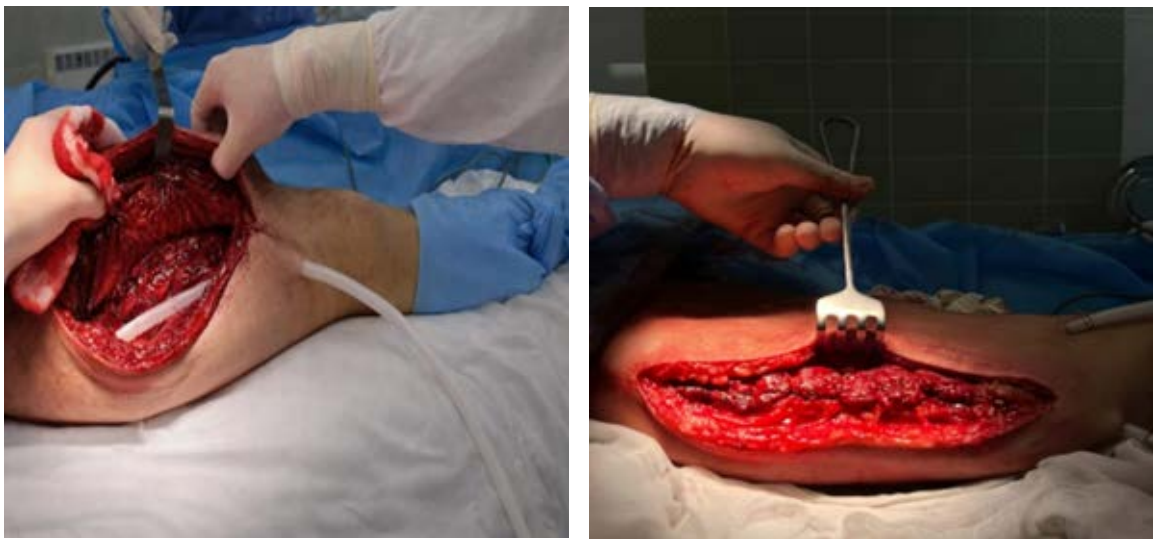

Figure 6. *Final stages of the surgical procedure: A — placement of a drain in the cavity after giant lipoma removal; B — suturing of the thigh fascia.*

tissue was dissected stepwise, and the superficial fascia of the muscles was exposed. Muscle fibers were separated bluntly, preserving the integrity of the muscles.

In the muscle layer, a lipoma was identified, extending to the anterior and medial surfaces of the thigh. Upon exploration, the lipoma encompassed approximately two-thirds of the femur. Blood vessels were carefully separated by blunt and sharp dissection and ligated. The lipoma was mobilized using clamps and completely excised; the removed mass measured 50 × 35 cm, with a total weight of 5700 g (Figures 5 A, B).

The wound cavity was thoroughly irrigated with hydrogen peroxide, dried, and hemostasis was achieved; no active bleeding was observed. Two Redon drains were placed along the wound contour. The wound was closed in layers: muscles (m. biceps femoris), deep fascia (fascia lata), and subcutaneous tissue (Figures 6 A, B). Skin closure was performed with interrupted sutures, and an aseptic dressing was applied (Figures 7 A, B). Total blood loss was 100 mL.

Macroscopic specimen: A giant lipoma was removed from the right thigh, weighing 5700 g. The tumor had well-defined borders, a soft consistency, and was encapsulated (Figures 8 A, B).

On the first postoperative day, in collaboration with physiotherapists, light exercises were performed to restore muscle function and prevent contractures. The patient was under continuous supervision, and movements were carried out within a permissible range of motion without experiencing pain (Figure 9).

Treatment administered: The patient was placed on Diet 15 and a ward regimen, level 2b. Medications prescribed included: Ceftriaxone-AKOS (1 g, powder for solution for intravenous and intramuscular administration) — 1 g intramuscularly with Novocain 0.5% (200 mL injection solution) — 5 mL intramuscularly, once daily for 1 day; Ceftriaxone-AKOS — 1 g intramuscularly with Novocain 0.5% — 5 mL intramuscularly, twice daily for 5 days; Analgin 50% (500 mg/mL injection solution) — 2 mL intramuscularly with Diphenhydramine 1% (10 mg/mL injection solution) — 1 mL intramuscularly, once daily for 1 day, then 2 mL intramuscularly with Diphenhydramine 1% — 1 mL intramuscularly, twice daily for 3 days; Promedol

Figure 7. *Final stages of the operation: A — placement of skin sutures; B — wound treatment with povidone-iodine.*

Figure 8. *Macroscopic specimen of the giant lipoma: A — excised lipoma; B — measurement of its mass.*

Figure 9. *Early postoperative period (postoperative day 1).*

2% (20 mg/mL injection solution) — 1 mL intramuscularly with Diphenhydramine 1% — 1 mL intramuscularly, twice daily for 1 day; Tramadol 5% (50 mg/mL injection solution) — 2 mL intramuscularly with Diphenhydramine 1% — 1 mL intramuscularly, once daily for 1 day. Postoperative wound dressings were applied regularly.

Follow-up Laboratory Tests and Examinations:

Electrocardiographic examination (06.06.2024, 08:01): Conclusion: Sinus tachycardia with a heart rate of 91 beats per minute. The electrical axis of the heart is within normal limits. Signs of left ventricular hypertrophy are noted.

Urinalysis (10.06.2024, 12:46): Specific gravity — 1030; glucose (GLU) — negative; bacteria — negative; urobilinogen (URO) — negative; pH — 5.5; erythrocytes (BLD) — negative; transitional epithelium — negative; leukocytes (LEU) — 2 cells/μL; urine color (COLU) — light yellow; clarity (TURB) — clear; casts (SNLNCH) — hyaline (+); salts — uric acid absent; squamous epithelium — negative; yeast — negative; mucus — (+).

Biochemical blood test (10.06.2024, 14:14): Glucose — 5.39 mmol/L; urea — 5.49 mmol/L; total bilirubin — 8.17 μmol/L; direct bilirubin — 3.54 μmol/L; alpha-amylase — 41.6 U/L.

Complete blood count (10.06.2024, 14:56): ESR — 4 mm/h; leukocytes (WBC) — 7.95 × 10^9/L; erythrocytes (RBC) — 4.46 × 10^{12}/L; hemoglobin (HGB) — 127 g/L; hematocrit (HCT) — 34.7%; platelets (PLT) — 307 × 10^9/L; mean corpuscular hemoglobin (MCH) — 26.1 pg; plateletcrit (PCT) — 0.300%; RDW-CV — 14.6%; neutrophils — 61.5% (4.89 × 10^9/L); monocytes — 7.8% (0.62 × 10^9/L); eosinophils — 1.9% (0.15 × 10^9/L); basophils — 0.1% (0.01 × 10^9/L); lymphocytes — 28.7% (2.28 × 10^9/L); PDW — 16.1%.

Histological examination of biopsy material (Category II complexity, standard staining) (10.06.2024, 14:26). Pathology report № 12641–12644. Material received: 06.06.2024, 11:08:25. Pathohistological conclusion: Lipoma of the right thigh.

Representative histopathological images of the excised specimen stained with hematoxylin and eosin are shown in Figure 12.

Histopathological examination of the excised specimen (H&E staining) showed a well-circumscribed encapsulated adipocytic neoplasm composed of mature univacuolated adipocytes separated by delicate fibrous septa. No significant variation in adipocyte size, stromal cell atypia, lipoblasts, tumor necrosis, abnormal vascular proliferation, or mitotic figures was identified. These findings supported the diagnosis of conventional lipoma of the right thigh.

Condition at discharge: At the time of discharge, the patient's condition was satisfactory, and he reported no complaints. The skin and visible mucous membranes were of normal color and clean. Vesicular breathing was auscultated over the lungs, with no wheezing. Heart sounds were clear, rhythm regular. Blood pressure was 130/80 mmHg, pulse 72 bpm, regular. The tongue was clean and moist. The abdomen was of normal shape, symmetrical, and participated evenly in respiration; on palpation, it was soft and non-tender. No signs of peritoneal irritation were observed. Physiological functions were within normal limits.

Local examination (postoperative): The postoperative wound on the right thigh healed without signs of complications. Redon drains were removed on the 4th and 5th postoperative days. Sutures were removed on the 9th–10th postoperative days. The wound healed by primary intention, with even edges, without edema or hyperemia. No discharge was observed, and

Figure 10. *Wound healing dynamics in the long-term period: A — 1 month after surgery, B — 6 months after surgery.*

Figure 11. *Wound healing dynamics in the long-term period, one year after surgery.*

the dressing was dry and clean. Inguinal lymph nodes were not enlarged. Body temperature was within normal limits. The patient was discharged in good condition with recommendations for follow-up with a surgeon at the place of residence.

After discharge, the patient was re-examined by the operating and attending physicians at 1, 6, and 12 months. During these follow-ups, the postoperative wound, limb function, recovery of muscular activity, presence of tumor recurrence, and possible complications were assessed (Figures 10 A, B and 11). Continued monitoring and adherence to an individualized rehabilitation program were recommended.

Patient Quality of Life.

The quality of life of the patient with a large giant lipoma was assessed dynamically at 1, 6, and 12 months after treatment. Prior to the intervention, the presence of the large mass was associated with pronounced physical and psycho-emotional discomfort, limited mobility, pain, and reduced social activity (Table 1).

Quality of life was assessed using the SF-36 and EQ-5D questionnaires at four time points: preoperatively and at 1, 6, and 12 months after surgery. The preoperative assessment was performed prospectively before surgical treatment, while the postoperative assessments were completed during scheduled follow-up visits. Because this report describes a single clinical case, the questionnaire results are presented descriptively.

Pre- and Postoperative Quality of Life.

Prior to surgery, the patient with a giant lipoma experienced a significant reduction in quality of life, particularly in the physical and psycho-emotional domains. At 1 month postoperatively, there was an improvement in physical condition and a reduction in pain, although scores remained below normal. By 6 months, quality of life had markedly increased, with restoration of physical activity and psycho-emotional well-being. At 12 months, SF-36 and EQ-5D scores showed marked improvement, indicating substantial functional recovery and favorable treatment outcome.

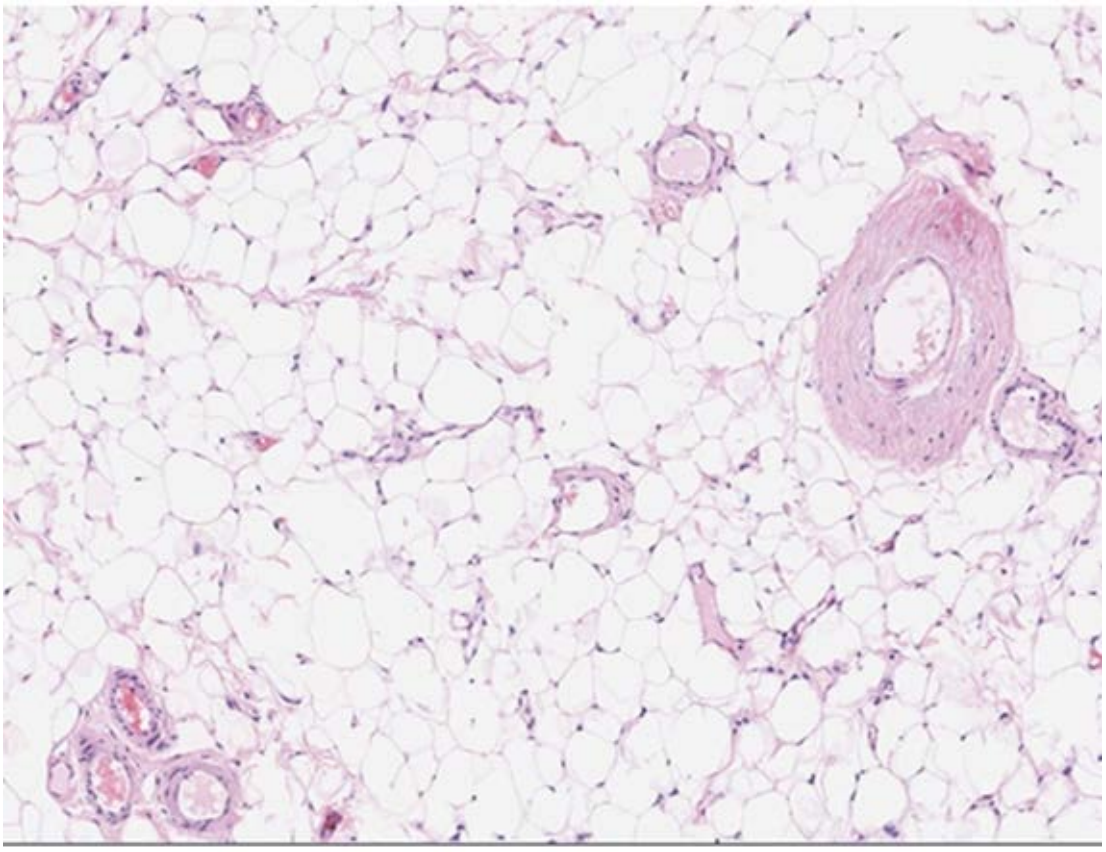

Figure 12. *Histopathological examination of the excised tumor (hematoxylin and eosin staining).*

Discussion.

Although lipomas are common benign tumors, giant lesions of the thigh are uncommon and may lead to pain, limited mobility, local compression, and marked deterioration in daily functioning. For this reason, large adipocytic masses require careful preoperative assessment and individualized surgical planning [2,3,7].

The principal diagnostic challenge in such cases is differentiation between benign lipoma and ALT/WDLPS. Current literature indicates that lesion size, deep location, thick septa, enhancement of septa or nodular components, and the presence of lipoblasts increase suspicion for ALT/WDLPS. MRI is especially useful when these features are suspected, whereas histopathological evaluation remains the cornerstone of final diagnosis [5].

In selected diagnostically difficult cases, ancillary molecular testing may provide additional value. In particular, assessment of MDM2 amplification by FISH is relevant in the differential diagnosis of ALT/WDLPS, as MDM2 amplification is a recognized hallmark of liposarcoma rather than benign lipoma [6].

In the present case, MRI was not performed because contrast-enhanced CT demonstrated a large but homogeneous adipose lesion without enhancement, and the preoperative biopsy revealed no atypical cells. Taken together, these findings were considered sufficiently consistent with a benign lipomatous tumor to proceed with surgical treatment [3,4].

Molecular testing was also considered unnecessary in this patient because neither the imaging findings nor the preoperative and postoperative histological assessments showed features suspicious for ALT/WDLPS. Thus, CT combined with biopsy and final histopathology was considered adequate for clinical decision-making in this case [5,6].

From a therapeutic standpoint, complete surgical excision remains the treatment of choice for giant symptomatic lipomas of the thigh. Favorable outcomes depend on accurate preoperative assessment, atraumatic dissection, preservation of adjacent muscular and neurovascular structures, adequate drainage when required, and careful wound closure [7,8].

Our case supports these observations. The tumor was completely removed without intraoperative complications, the postoperative period was uneventful, and long-term follow-up demonstrated restoration of limb function, reduction of pain, and substantial improvement in quality of life. Therefore, even very large benign lipomas can be managed successfully when diagnostic evaluation and surgical planning are appropriately individualized [2,3,7].

Conclusion.

Giant lipomas of the thigh require a comprehensive and carefully planned approach, including thorough diagnostics and radical surgical intervention. Effective treatment results in sustained improvement of the patient's physical and psycho-emotional condition, reduction of pain, and restoration of quality of life, as reflected by a marked improvement in SF-36 and EQ-5D scores during long-term follow-up.

Author Contributions.

Conceptualization, M.A., M.A.,S.A., A.M.; methodology, M.A., M.A., E.K., A.K., S.I., Alt.D.; software, M.A., M.A., E.K., A.K., A.A., D.A., A.Zh., R.B.; validation, M.A., M.A., E.K., A.K., S.I., Alt.D., S.A., A.M., A.A., D.A., R.B.; formal analysis, M.A., M.A., S.A., A.M.; investigation, M.A., M.A., S.A., A.M.; data curation, M.A., M.A., S.A., A.M., D.A., A.Zh, R.B.; writing—original draft preparation, M.A., M.A., S.A., A.M.; writing—review and editing, M.A., M.A., S.A., A.M. visualization, M.A., M.A.; supervision, M.A., M.A., S.A. project administration, M.A., M.A., S.A.; funding acquisition, M.A., M.A.; All authors have read and agreed to the published version of the manuscript.

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Conflicts of Interest.

None of the authors have any conflicts of interest to disclosure.

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