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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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DEVELOPMENT OF ENDOSALPINGIOSIS IN PATIENTS WITH A HISTORY OF BREAST CANCER

Yuuka Matsumoto[1], Takuma Hayashi[2,3]*, Yasuaki Amano[1], Kaoru Abiko[1], Ikuo Konishi[1,3,4].

[1]*Department of Obstetrics and Gynecology, National Hospital Organization Kyoto Medical Center, Kyoto city, Kyoto, Japan.*

[2]*Cancer Medicine, National Hospital Organization Kyoto Medical Center, Kyoto city, Kyoto, Japan.*

[3]*Seeds Development and Research Platform Project, Japan Agency for Medical Research and Development (AMED), Chiyoda-ku, Tokyo, Japan.*

[4]*Kyoto University Graduate School of Medicine, Kyoto city, Kyoto, Japan.*

Abstract.

Endosalpingiosis occurs in relatively young women. The incidence of endosalpingiosis exceeds that of other diseases affecting female tissues. As endosalpingiosis is a benign tumor, several women with endosalpingiosis are asymptomatic. Endosalpingiosis is a lesion characterized by the presence of ectopic glandular tissues lined with epithelium similar to the tubal-type epithelium. Therefore, the development of endosalpingiosis is frequently incidentally discovered during abdominal surgery for other diseases. A definitive diagnosis of endosalpingiosis is made by pathological diagnosis and pathological findings on the surgically removed tissue. In some cases, glandular structures comprising a single layer of columnar to cuboidal epithelial cells are observed in surgically removed tissues of the uterine body, bilateral peritoneal tissues, omental tissues, and even lymph node tissues. Recently, our medical staff has experienced cases of endosalpingiosis with a history of breast cancer, which rarely has clinically significant consequences. Elucidating the mechanism of endosalpingiosis will facilitate understanding of the origin of primary tumors in the ovaries and peritoneum. Furthermore, to prevent unnecessary additional surgical treatments (e.g., chemotherapy), differentiating endosalpingiosis from ovarian borderline (low-grade) tumors or dissemination of malignant tumors and from endosalpingiosis and primary peritoneal mesothelioma or serous tumors is essential. We here discuss the historical and medical aspects of tubal endometriosis, which was discovered as an intraabdominal mass and incidentally diagnosed.

Key words. Endosalpingiosis, breast cancer, malignant tumor, benign tumor, cyst, fallopian tube.

Introduction.

The diagnostic procedure for fallopian tube tumors commences with clinical assessment (patient interview), followed by physical examination (external and pelvic) and ultrasonography. The results of these tests will determine the presence or absence of fallopian tube and/or ovarian tumors. Moreover, to a certain extent, these tests allow for the determination of whether the tumor is benign or malignant. The tumor is benign in most cases when ultrasonography reveals a cystic tumor (sac-like structure). A large swollen ovary is called an ovarian tumor. Ovarian tumors are divided into the following two categories: cystic ovarian tumors (ovarian cysts), which are fluid-filled sac-like structures, and solid ovarian tumors, which are growing hard lumps. Approximately 80%–90% of ovarian tumors are ovarian cysts that collect fluid. Ovarian cysts are classified into the following four types: serous cystadenomas, mucinous cystadenomas, mature cystic teratomas, and chocolate cysts [1].

However, malignant or borderline malignant tumors are suspected in cases wherein a mixture of solid (lump tissue) and cystic parts is noted or when the entire tumor is observed to be solid [2]. Magnetic resonance imaging (MRI) or tumor marker measurement is performed when more detailed information is deemed necessary. To avoid unnecessary follow-up treatments (e.g., chemotherapy) following surgical procedures, the doctor in charge must comprehensively determine from the results of these tests whether the patient's tumor is benign, malignant, or borderline malignant. However, as the accuracy of these tests is limited, a definitive diagnosis is ultimately made on the basis of the results of a surgical histopathological examination using the tumor tissue removed by surgical treatment.

Ultrasonography of a 68-year-old woman with no subjective symptoms revealed a right adnexal tumor measuring 97 × 61 mm consisting of a collection of microcysts. Cervical cancer screening results showed a diagnosis of negative for intraepithelial lesion or malignancy (NILM) [3]. However, at the age of 51, she developed breast cancer and underwent hormone therapy; therefore, our medical staff suspected that she might have developed high-grade serous carcinoma. Furthermore, ultrasonography revealed two left adnexal tumors measuring 8 × 8 and 10 × 9 mm. Conversely, contrast MRI did not reveal any solid areas within the mass, and no findings suggestive of a malignant tumor were observed. However, the tumor was surgically removed owing to its large size. Based on the results of the surgical histopathological examination using the removed tumor tissue, the tumor was diagnosed as endosalpingiosis [4]. Endosalpingiosis is not a malignant tumor; therefore, no additional treatment, including chemotherapy, is necessary. Tumors that develop in the bilateral gynecological appendages are not necessarily malignant tumors. To avoid unnecessary additional treatments (e.g., chemotherapy) following surgical treatment, the differential diagnosis between endosalpingiosis and ovarian borderline (low-grade) tumors or malignant tumor dissemination is essential.

Endosalpingiosis is the presence of glands lined by benign tubal-type epithelium outside the fallopian tube [4,5].

Localization: peritoneum, pelvic or abdominal organs, skin, nerves, and lymph nodes.

Clinical features: It is usually an incidental finding.

Epidemiology: It occurs in approximately 12.5% of women, with a wide age range.

Materials and Methods.

MRI: To determine the presence, size, and location of the patient's mass, contrast-enhanced MRI was performed to localize the patient's mass using MRI equipment (Vantage

Centurian: Vantage Galan 3T MRT-3020, Canon Medical Systems, Inc., Ohtawara, Tochigi, Japan).

Laparoscopic surgery: Pyloric gastrectomy and reconstruction of the remnant stomach and duodenum were performed by laparoscopic surgery using a laparoscope (ENDOEYE FLEX 3D, Olympus Corporation, Shinjuku, Tokyo, Japan) and a surgical device (HICURA, Olympus Corporation, Shinjuku, Tokyo, Japan) for surgically treating the gastric corpus area where the gastric tumor was detected.

Histopathological examination: A surgical pathologist performed a histopathological analysis of the sections from the formalin-fixed paraffin-embedded resected tissue to assess the gross and histopathological characteristics of the resected specimens.

Using the standard procedure, hematoxylin and eosin staining analyses were performed.

Case.

In April 2024, a 68-year-old woman visited a local hospital for a health checkup. At that time, her attending physician emphasized that she had developed ovarian enlargement. Ultrasonography revealed a right adnexal tumor containing a collection of small cysts measuring 97 × 61 mm and two left adnexal tumors containing a collection of small cysts measuring 8 × 8 and 10 × 9 mm. Contrast-enhanced T1low or T2high MRI revealed a homogeneous tumor mass in the left adnexa and a heterogeneous tumor mass in the right adnexa (Figure 1). Contrast-enhanced MRI did not reveal any solid part within the mass; therefore, no findings suggestive of a malignant tumor development were noted.

Her doctor urgently referred her to our medical group for further examination and treatment. Contrast MRI revealed a multilocular cystic mass measuring approximately 70 mm in the short axis in the right ovary, with some stained-glass patterns (Figure 1). A homogeneous cluster of tumors was observed in her right ovary; however, no solid area was noted. Contrast-enhanced MRI revealed multiple small cysts and mild induration in the Douglas pouch and a mobile cystic mass that was believed to be a right adnexal mass on the cranial side of the uterine body. Furthermore, contrast-enhanced MRI revealed two small cysts in the left ovary; however, the cysts were not in contact with each other and were not diagnosed as neoplasm. In the uterine corpus, small uterine leiomyomas were observed; however, no endometrial hyperplasia was noted (Figure 1). Therefore, her physician recommended surgical treatment, including laparoscopic total hemodialysis, bilateral salpingo-oophorectomy (BSO), and partial omentectomy.

Histological findings.

No evidence of mucinous cystadenomas or malignant or borderline malignant lesions was noted in the bilateral ovarian tissues. Leiomyomas, endometrial polyps, ectopic fallopian tube epithelium, and adenomyosis were noted in the uterine body tissue. No squamous intraepithelial lesion (SIL) or malignant findings were observed in the cervical tissue. Ectopic fallopian tube and calcified tissues were observed in the peritoneum of Douglas fossa (Figure 2). Histological examinations revealed no malignant findings.

Histopathological examination

Clinical diagnosis: ovarian tumor and cervical dysplasia

Clinical course: Suspected right ovarian mucinous adenoma (benign~border) left ovarian cyst.

History of cervical intraepithelial neoplasia (CIN) (details unknown, 2024/4: NILM). Laparoscopic total hysterectomy and BSO were performed owing to bilateral ovarian tumors and a history of CIN. The right ovary measured 9 cm in size and was multilocular.

Pathology findings.

The specimens included total hysterectomy tissue specimen, bilateral adnexal specimen, and Douglas fossa peritoneal resection specimen. The ovaries and fallopian tubes were

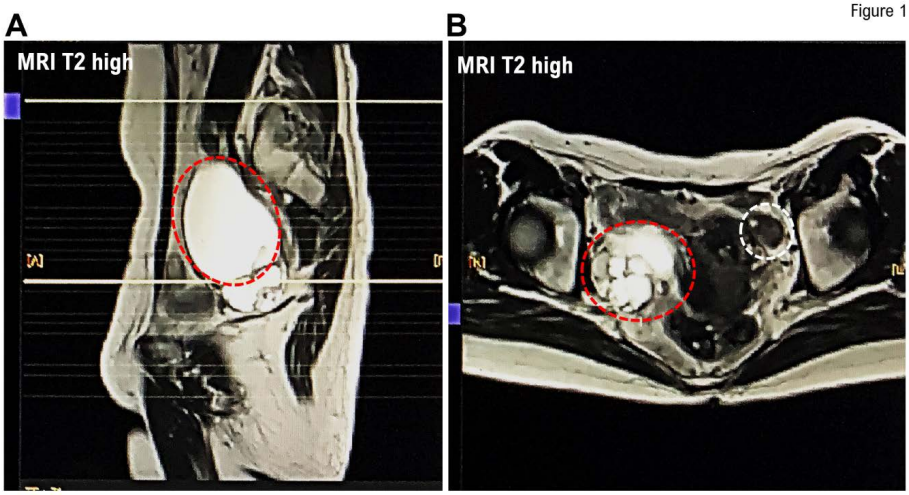

Figure 1. Magnetic resonance imaging (MRI) of tumors in the fallopian tubes and ovaries of a patient with a history of breast cancer.

A patient who developed breast cancer in her 50s and was undergoing hormone therapy developed fallopian tube and ovarian tumors at approximately 10 years following the initial breast cancer onset. ***(A)*** *Horizontal cross-sectional image obtained from MRI.* ***(B)*** *Vertical cross-sectional image acquired from MRI. The results reveal a tumor appearing as a multilocular cystic mass in the right ovary. However, some stained-glass patterns in the right ovarian tissue without solid areas have also been revealed in the MRI. Several very small cysts are also noted in the left ovary on MRI. The red circle indicates the right ovarian tumor. The white circle indicates the left ovarian tumor.*

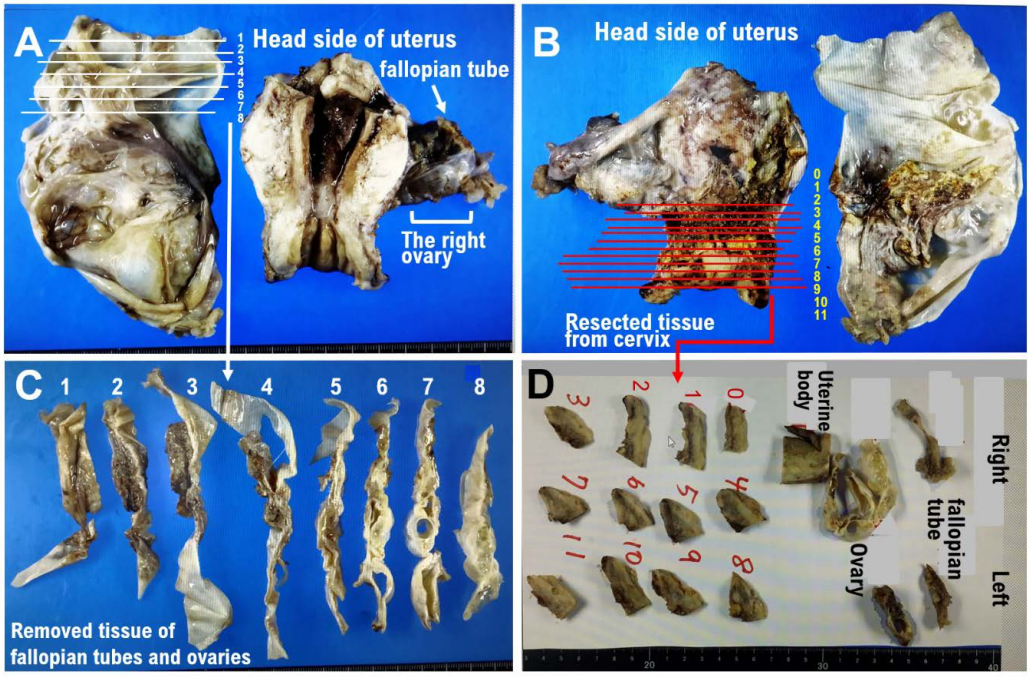

Figure 2. Gross and histopathological morphology of the fallopian tube and ovarian tumors.

Tissue specimens from the whole uterus, bilateral salpingo-oophorectomy (BSO), and Douglas fossa peritoneal resection. ***(A)*** *Gross findings of the excised tissues fixed in formalin. Gross histology revealing a massively enlarged right ovary. A photograph showing an enlarged right fallopian tube. A small white uterine leiomyoma is observed in the uterus. No endometrial thickening is noted.* ***(B)*** *A photograph showing the tissue specimens from the whole uterus, BSO, and Douglas fossa peritoneal resection photographed from the back.* ***(C)*** *The fallopian tube and ovarian tissues shown in panel A are exercised horizontally, which are subsequently further excised horizontally into eight tissue sections, each of which is then prepared as a specimen.* ***(D)*** *The patient requires a diagnosis by surgical pathology examination of the surgically removed cervical tissues owing to her history of cervical intraepithelial neoplasia. The cervical tissue shown in panel B is excised horizontally, which is subsequently further excised horizontally into 12 tissue sections, each of which is then prepared as a specimen.*

divided into eight sections, and all tissue blocks were used as specimens (Figure 2A & 2C). In the right ovary, a multilocular cystic lesion containing mucus was noted (Figure 2C) and no solid areas were observed. The tissue containing the lesion site was used as a specimen. The cervix was divided into 12 sections, and all tissue blocks were used as specimens (Figures 2B & 2D). A 12-mm cyst was observed in the left ovarian tissue. The uterine corpus had a leiomyomatous nodule and an endometrial polyp.

Pathological diagnosis (Figure 3).

Ovary and fallopian tube, bilateral, salpingo-oophorectomy:

- mucinous cystadenoma (bilateral ovaries).

Uterine corpus, hysterectomy:

- leiomyoma, endometrial polyp, endosalpingiosis, and adenomyosis.

Uterine cervix, hysterectomy:

- no evidence of SIL.

Peritoneum of Douglas fossa, excision:

- endosalpingiosis.

Discussion.

In recent years, as an individualized medicine, cancer treatment using antitumor agents selected on the basis of cancer gene panel testing results has been actively implemented in several countries for patients with advanced or metastatic cancer [6]. Individuals with pathogenic variants (PVs) (pathogenic mutations and/or gene amplifications) in the germline breast cancer susceptibility gene I (BRCA1) gene or gBRCA2 gene are prone to developing early onset breast cancer in their 30s [7,8]. Those with gBRCA1 PVs and/or gBRCA2 PVs are prone to developing high-grade serous ovarian cancer within 10 years of the first breast cancer onset. Therefore, BRAC analysis diagnostic system testing (Myriad Genetics, Inc., Salt Lake City, UT, USA) was performed on the patient, and the results showed no gBRCA1 PVs and/or gBRCA2 PVs. Hormone treatment administered for breast cancer sparing can increase the incidence of gynecological malignancies, including ovarian and/or fallopian tube cancers [9].

The patient was undergoing hormone treatment for breast cancer sparing. Therefore, we suspected the development of fallopian tube and ovarian cancers induced by hormone treatment for breast cancer preservation. Ultimately, following a histopathological examination, her ovarian tumor was diagnosed as endosalpingiosis.

The etiology of endosalpingiosis is believed to be due to the coelomic metaplasia theory, in which tissues derived from the Mullerian duct invade and proliferate within the coelomic epithelium during development, and the transplantation theory, in which shed tissues reflux into the peritoneal cavity [10,11]. Surgical treatments, including tubal ligation and salpingectomy, as well as chronic pelvic inflammatory diseases, including salpingitis, are believed to be triggers for endosalpingitis. Furthermore, although the clinical significance

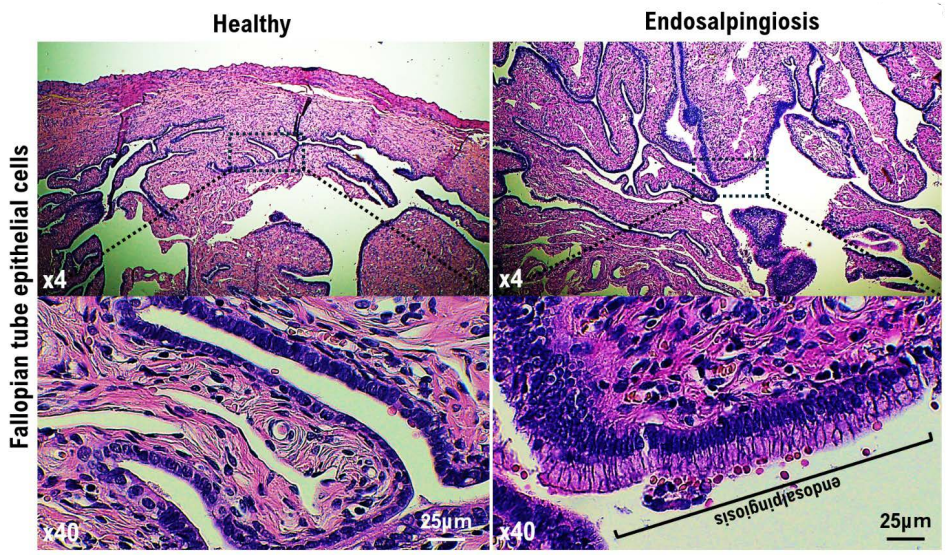

Figure 3. Endosalpingiosis development within the right fallopian tube as revealed by histopathological examination.

(A) *A photograph showing the fallopian tube tissue obtained from the healthy donor. The normal architecture of age-appropriate tubal tissue is observed in the fallopian tubes obtained from volunteers of the same age as the patients.* ***(B)*** *A photograph showing the fallopian tube tissue obtained from the patient. Abnormal architecture of non-age-appropriate tubal tissue is observed in the fallopian tubes obtained from the patient. The epithelial cells formed in the patient's fallopian tube form ciliated cuboidal structures. The ciliated cuboidal epithelium lines both the fallopian tubes and cysts that develop in endosalpingiosis. The epithelial cells formed in the patient's fallopian tube form ciliated cuboidal structures. The ciliated cuboidal epithelium lines both the fallopian tubes and cysts that develop in endosalpingiosis.*

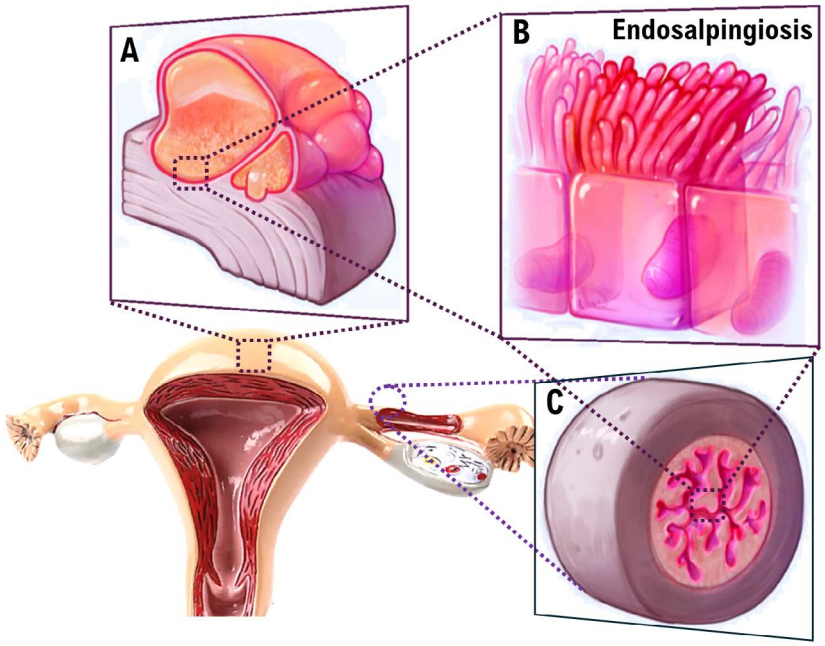

Figure 4. Illustrations of endosalpingiosis.

(A) *A photograph illustrating endosalpingiosis.* ***(B)*** *Ciliated cuboidal epithelium lining the fallopian tubes and cysts that develop in endosalpingiosis.* ***(C)*** *A photograph showing endosalpingiosis in the fallopian tube.*

of endosalpingiosis remains unclear, endosalpingiosis frequently occurs in cases of low-grade serous ovarian cancer and borderline tumors [12]. It is believed that the fallopian tube epithelium is the most likely source of high-grade serous ovarian cancer [13]. However, as the mechanism of development of low-grade serous ovarian cancer remains unknown, research into the relationship between endosalpingiosis and serous ovarian cancer has been ongoing based on the abovementioned reports. In the present case, our medical staff employed a 4K camera to demonstrate that the white lesion approximately 3 mm in size with a 1-mm transparent cyst formation in the center, located in the postmenopausal Douglas cavity peritoneum, was endosalpingiosis.

Conclusion.

Tumors arising in the bilateral gynecological appendages are not necessarily malignant. The differential diagnosis between endosalpingiosis and ovarian borderline (low-grade) tumors or malignant tumor dissemination is significant to avoid unnecessary additional treatments, including chemotherapy, following surgical treatment.

Author Contributions.

All authors had full access to the data in the study and take responsibility for the integrity of the data and accuracy of the data analysis. Y.M. Y.A. and K.A. performed the recommendation operations (TLH, BSO, pOM). Conceptualization, T.H. and I.K.; writing—original draft, T.H. and I.K.; writing—review & editing, I.K.; visualization, T.H. and I.K.; supervision, T.H. and I.K.; funding acquisition, T.H. and I.K. All authors have read and agreed to the published version of the manuscript.

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Institutional Review Board Statement.

This study was reviewed and approved by the Central Ethics Review Board of the National Hospital Organization Headquarters in Japan (Tokyo, Japan) on 8 November 2019, and Kyoto University School of Medicine (Kyoto, Japan) on 17 August 2019, with approval codes NHO H31-02 and M192. The completion numbers for the authors are AP0000151756, AP0000151757, AP0000151769, and AP000351128. As this research was considered clinical research, consent to participate was required. After briefing regarding the clinical study and approval of the research contents, the participants signed an informed consent form.

Informed Consent Statement.

A multi-center retrospective observational clinical study of subjects who underwent cancer genomic medicine at a cancer medical facility in Kyoto, Japan. This study was reviewed and approved by the Central Ethics Review Board of the National Hospital Organization Headquarter in Japan (Tokyo, Japan) on 18 November 2020, and Kyoto University School of Medicine (Kyoto, Japan) on 24 August 2022, with approval codes NHO R4-04 and M237. All participants agreed to take part in the present study. We have obtained Informed Consent Statements from people participating in clinical studies.

Data Availability Statement.

Data available on request due to restrictions e.g. privacy or ethical the data presented in this study are available on request from the corresponding author.

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Conflicts of Interest.

The authors declare no conflict of interest.

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