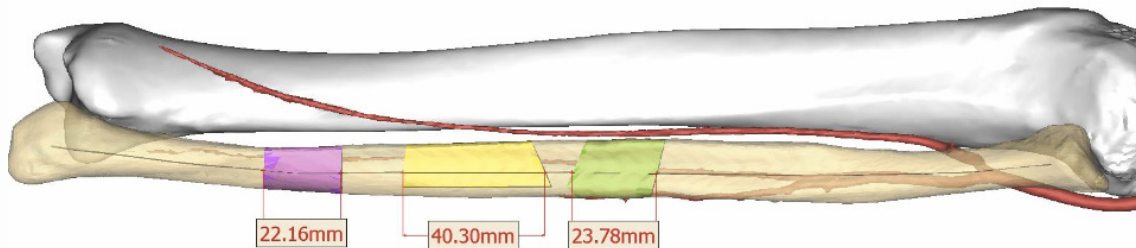
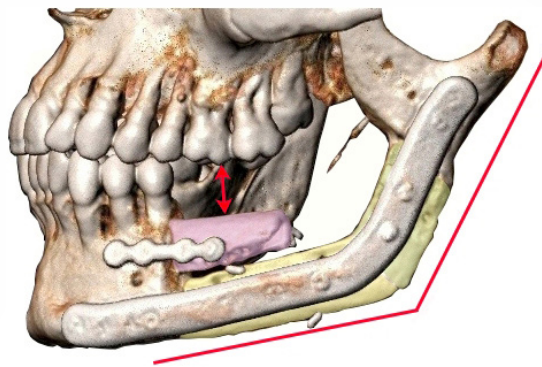


Journal of Diagnostics and Treatment of Oral and Maxillofacial Pathology

3

 2025

The cover images indicate the key direction of the journal and highlight an article titled “The ‘Beveled One-and-a-Half-Barrel’ Fibula Transplant with Virtual Surgical Planning and CT-Guided Implant Surgery for Prosthetic Rehabilitation in Posterior Mandible Defects: A Pictorial Essay” by Olindo MASSARELLI and Silvio Mario MELONI. The article was published in Volume 6, Issue 3.

This is a monthly open access and peer-reviewed journal for oral and maxillofacial surgeons. The journal made the transition from a print and an online version to an online-only version on January 1, 2022. The Editor in Chief is Oleksii Tymofieiev, Kyiv, Ukraine.



TANTUM VERDE®

QUICK RELIEF FROM PAIN
AND INFLAMMATION IN THE
MOUTH AND THROAT¹

**AN INTEGRAL COMPONENT OF THE TREATMENT
OF PAIN AND INFLAMMATION IN THE ORAL CAVITY
IN 60 COUNTRIES WORLDWIDE!²**



Reg. № UA/3920/01/01

**LOCAL ANESTHETIC
AND ANTI-INFLAMMATORY
EFFECT¹**

- **JAWS FRACTURES³**
- **IMPLANTS PLACEMENT⁴**
- **WOUNDS OF ORAL CAVITY⁵**



SUMMARY OF PRODUCT CHARACTERISTICS

NAME OF THE MEDICINAL PRODUCT. Tantum Verde 0.15% mouthwash. **QUALITATIVE AND QUANTITATIVE COMPOSITION.** Each 100 ml contains: active ingredient: benzydamine hydrochloride 0.15 g (equivalent to 0.134 g of benzydamine). **Therapeutic indications.** Treatment of symptoms such as irritation/inflammation including those associated with pain in the oropharyngeal cavity (e.g. gingivitis, stomatitis and pharyngitis), including those resulting from conservative or extractive dental therapy. **Posology and method of administration.** Pour 15 ml of Tantum Verde mouthwash into the measuring cup, 2-3 times per day, using it either at full concentration or diluted. If diluted, add 15 ml of water to the graduated cup. Do not exceed the recommended dosage. **Contraindications.** Hypersensitivity to benzydamine or to any of the excipient. **PHARMACOLOGICAL PROPERTIES. Pharmacodynamic properties.** Pharmacotherapeutic group: Stomatologic drugs: other agents for local oral treatment, ATC code: A01AD02. Clinical studies demonstrate that benzydamine is effective in relieving suffering from localised irritation of the mouth and pharynx. In addition, benzydamine possesses a moderate local anaesthetic effect. **Pharmacokinetic properties. Absorption.** Absorption through the oropharyngeal mucosa is demonstrated by the presence of measurable quantities of benzydamine in human plasma. These levels are insufficient to produce systemic effects. **Distribution.** When applied locally, benzydamine has been shown to accumulate in inflamed tissues where it reaches effective concentrations because of its capacity to penetrate the epithelial lining.

Information about medicines. Information for health care professionals for use in professional activities.

1. Інструкція для медичного застосування лікарського засобу Тантум Верде®, розчин для ротової порожнини, РП № UA/3920/01/01, затверджено Наказом Міністерства охорони здоров'я України № 636 від 01.10.2015.

2. <http://www.angelini-pharma.com/wps/wcm/connect/com/home/Angelini+Pharma+in+the+world/>

3. Тимофеев А.А. и др. "Особенности гигиены полости рта для профилактики воспалительных осложнений при переломах нижней челюсти". Современная стоматология 2015;1(75):52-8.

4, 4.5. Tymofiev O.O. et al "Prevention of inflammatory complications upon surgeries in maxillofacial region". J Diagn Treat Oral Maxillofac Pathol. 2017;1:105-12.

Clinical and CT images are courtesy of: Ievgen Fesenko (Department of Oral & Maxillofacial Surgery, PHEI "Kyiv Medical University", Kyiv, Ukraine), Oleg Mostakov ("SCIEDECE—Scientific Center of Dentistry & Ultrasound Surgery" Kyiv, Ukraine).



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About the Journal

MARCH 2025 • VOLUME 9 • ISSUE 3
www.dtjournal.org

Official Title

Journal of Diagnostics and Treatment of Oral and Maxillofacial Pathology

Official Title in Ukrainian

Журнал діагностики та лікування оральної і щелепно-лицевої патології

Standard Abbreviation: ISO 4

J. Diagn. Treat. Oral Maxillofac. Pathol.

Acronym

JDTOMP

International Standard Serial Number (ISSN)

ISSN 2522-1965 (online)

Aims & Scope

This is a monthly open access and peer-reviewed oral and maxillofacial surgeons. The journal is focused on trauma, microvascular and jaw reconstructive surgery, dental implants, salivary gland tumors/diseases, TMJ lesions, virtual surgical planning, implementation of ultrasonography into the practice of oral and maxillofacial surgeons.

Editorial Board (EB) Composition

- EB shows significant geographic diversity representing 35 opinion leaders from 14 countries: Brazil, Canada, Colombia, Greece, Hong Kong (SAR, China), India, Israel, Italy, Slovak Republic, Spain, Ukraine, United Arab Emirates, United Kingdom, and United States.
- The majority of the EB Members have a discernible publication history in Scopus, Web of Science, and journals with a high impact factor.
- The publication records of all EB members are consistent with the stated scope and published content of the journal.
- The journal has several full-time professional editors.
- Gender distribution of the editors: 11.42% women (4 persons), 88.57% men (31 persons), 0% non-binary/other, and 0% prefer not to disclose.

Frequency

12 issues a year (from January 2020)

Publishing Model

The *Journal of Diagnostics and Treatment of Oral and Maxillofacial Pathology* is a fully online-only open access and peer-reviewed publication.

Types of Peer Review

The journal employs “double blind” and open reviewing.

Article Publishing Charge (APC)

The APC in this journal is 500 Euro (\$550 USD) and 250 Euro (\$275 USD)(excluding taxes) depending on the article's type. Details at website: www.dtjournal.org.

Types of Articles Currently Published by the Journal

Editorials/Guest Editorials/Post Scriptum Editorials, Images,

Case Reports/Case Series, Original Articles, Review Articles, Discussions, Paper Scans (*synonyms*: Review of Articles, Literature Scan), Book Scans (*synonym*: Book Reviews), Letters to the Editor (*synonym*: Letters), and Viewpoints.

State Registration in the Ministry of Justice of Ukraine

Registration: Jul 28, 2016 (Certificate: KB № 22251-12151 P)

Re-registration: May 21, 2019 (Certificate: KB № 23999-13839 ПП)

Re-registration: Aug 10, 2021 (Certificate: KB № 24951-14891 ПП).

State Registration in the National Council of Television and Radio Broadcasting of Ukraine

- The journal is registered as print media (Decision of 2024, April 11, No. 1225). The identifier of print media R30-04318.
- The journal is registered as online media (Decision of 2024, April 25, No. 1454). The identifier of online media R40-04708.

Journal is Included in

Encyclopedia of Modern Ukraine, Google Scholar, National Repository of Academic Texts, Register of Scientific Publications of Ukraine (also known as Ukrainian Scientific Periodicals or Register of Scientific Professional Publications of Ukraine), ResearchGate, Scilit, and Vernadsky National Library of Ukraine

Co-Founders

1. Shupyk National Healthcare University of Ukraine (formerly known as Shupyk National Medical Academy of Postgraduate Education).
2. Private Higher Educational Establishment “Kyiv Medical University.”
3. OMF Publishing, Limited Liability Company.

Publisher

OMF Publishing, LLC is an academic publishing company.

Address: 13-A Simferopolska Street, office 121, Kyiv 02096, Ukraine.

E-mail: office@omfpublishing.com.

Website: www.omfpublishing.com.

Crossref Membership

OMF Publishing, LLC is a member of Publishers International Linking Association, Inc. which doing business as a Crossref. OMF Publishing's active membership: From February 2017 to present.

Digital Object Identifier (DOI) of the Journal

10.23999/j.dtmp

Official Journal of the Association

Ukrainian Association for Maxillofacial and Oral Surgeons

Ukrainian Association for Maxillofacial and Oral Surgeons (UAMOS)

Address: 4-A Profesora Pidvysotskoho Street, Kyiv 01103, Ukraine. Tel., fax: +38 044 528 35 17.

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TANTUM VERDE®

INFORMATION LEAFLET
for the medicinal product

Composition:

active substance: **benzydamine hydrochloride;**

100 mL of solution contain benzydamine hydrochloride 0.15 g;

excipients: ethanol 96%, glycerol, methyl parahydroxybenzoate (E 218), flavor (menthol), saccharin, sodium hydrocarbonate, Polysorbate 20, Quinoline Yellow (E 104), Patent Blue V (E 131), purified water.

Dosage form. Oromucosal solution.

Basic physical and chemical properties: a clear green liquid with a typical mint flavor.

Pharmacotherapeutic group. Dental preparations. Other agents for local oral treatment.

ATC code: A01A D02.

Pharmacological properties.

Pharmacodynamics.

Benzydamine is a non-steroidal anti-inflammatory drug (NSAID) with analgesic and antiexudative properties.

Clinical studies have shown that benzydamine is effective in the relief of symptoms accompanying localized irritation conditions of the oral cavity and pharynx. Moreover, benzydamine has anti-inflammatory and local analgesic properties, and also exerts a local anesthetic effect on the oral mucosa.

Pharmacokinetics.

Absorption through the oral and pharyngeal mucosa has been proven by the presence of measurable quantities of benzydamine in human plasma. However, they are insufficient to produce any systemic pharmacological effect. The excretion occurs mainly in urine, mostly as inactive metabolites or conjugated compounds.

When applied locally, benzydamine has been shown to cumulate in inflamed tissues in an effective concentration

due to its ability to permeate through the mucous membrane.

Clinical particulars.

Indications.

Symptomatic treatment of oropharyngeal irritation and inflammation; to relieve pain caused by gingivitis, stomatitis, pharyngitis; in dentistry after tooth extraction or as a preventive measure.

Contraindications.

Hypersensitivity to the active substance or to any other ingredients of the product.

Interaction with other medicinal products and other types of interaction.

No drug interaction studies have been performed.

Warnings and precautions.

If sensitivity develops with long-term use, the treatment should be discontinued and a doctor should be consulted to get appropriate treatment.

In some patients, buccal/pharyngeal ulceration may be caused by severe pathological processes. Therefore, the patients, whose symptoms worsen or do not improve within 3 days or who appear feverish or develop other symptoms, should seek advice of a physician or a dentist, as appropriate.

Benzydamine is not recommended for use in patients hypersensitive to acetylsalicylic acid or other non-steroidal anti-inflammatory drugs (NSAIDs).

The product can trigger bronchospasm in patients suffering from or with a history of asthma. Such patients should be warned of this.

For athletes: the use of medicinal products containing ethyl alcohol might result in positive antidoping tests considering the limits established by some sports federations.

Use during pregnancy or breast-feeding

No adequate data are currently available on the use of benzydamine in pregnant and breastfeeding women. Excretion of the product into breast milk has not been studied. The findings of animal studies are insufficient to make any conclusions about the effects of this product during pregnancy and lactation.

The potential risk for humans is unknown.

TANTUM VERDE should not be used during pregnancy or breast-feeding.

Effects on reaction time when driving or using machines

When used in recommended doses, the product does not produce any effect on the ability to drive and operate machinery.

Method of administration and doses.

Pour 15 mL of TANTUM VERDE solution from the bottle into the measuring cup and gargle with undiluted or diluted product (15 mL of the measured solution can be diluted with 15 mL of water). Gargle 2 or 3 times daily. Do not exceed the recommended dose.

Children.

The product should not be used in children under 12 years due to a possibility of ingestion of the solution when gargling.

Overdosage.

No overdose has been reported with benzydamine when used locally. However, it is known that benzydamine, when ingested in high doses (hundreds times higher than those possible with this dosage form), especially in children, can cause agitation, convulsions, tremor, nausea, increased sweating, ataxia, and vomiting. Such acute overdose requires immediate gastric lavage, treatment of fluid/salt imbalance, symptomatic treatment, and adequate hydration.

Adverse reactions.

Within each frequency group, the undesirable effects are presented in order of their decreasing seriousness.

Adverse reactions are classified according to their frequency: very common ($\geq 1/10$); common ($\geq 1/100$ to $<1/10$); uncommon ($\geq 1/1,000$ to $<1/100$); rare ($\geq 1/10,000$ to $<1/1,000$); very rare ($<1/10,000$); frequency unknown (cannot be estimated from the available data).

Gastrointestinal disorders: rare – burning mouth, dry mouth; *unknown* – oral hypesthesia, nausea, vomiting, tongue edema and discoloration, dysgeusia.

Immune system disorders: rare – hypersensitivity reaction, *unknown* – anaphylactic reaction.

Respiratory, thoracic and mediastinal disorders: very rare – laryngospasm; *unknown* – bronchospasm.

Skin and subcutaneous tissue disorders: uncommon – photosensitivity; very rare – angioedema; *unknown* – rash, pruritus, urticaria.

Nervous system disorders: *unknown* – dizziness, headache.

TANTUM VERDE contains methyl parahydroxybenzoate, which can cause allergic reactions (including delayed-type reactions).

Shelf life. 4 years.

Storage conditions.

Do not store above 25°C. Keep out of reach of children.

Packaging.

120 mL of solution in a bottle with a measuring cup; 1 bottle per cardboard box.

Dispensing category.

Over-the-counter medicinal product.

Manufacturer.

Aziende Chimiche Riunite Angelini Francesco A.C.R.A.F. S.p.A., Italy.

Location of the manufacturer and its business address.
Via Vecchia del Pinocchio, 22 – 60100 Ancona (AN), Italy.

Date of the last revision of the text.

September 26, 2018.

Information leaflet is

APPROVED by

Order of the

Ministry of Health of Ukraine

No. 636 dated 01.10.2015

Registration Certificate

No. UA/3920/01/01

State Registration

MARCH 2025 • VOLUME 9 • ISSUE 3
www.djournal.org



Міністерство юстиції України

СВІДОЦТВО

**про державну реєстрацію
друкованого засобу масової інформації**

Серія KB № 24951-14891 ПП

«Журнал діагностики та лікування оральної і щелепно-лицевої патології»
(назва видання державною мовою)

«Journal of Diagnostics and Treatment of Oral and Maxillofacial Pathology»
(назва видання іншою мовою (мовами))

Вид видання журнал
(газета, журнал, бюлетень, збірник, альманах, календар, дайджест)

Статус видання вітчизняне
(вітчизняне, спільне)

Мова (мови) видання змішаними мовами: українська, англійська

Вид видання
за цільовим призначенням наукове, науково-виробниче
(громадсько-політичне, наукове, навчальне, інформаційне, рекламне (понад 40 відсотків обсягу одного номера – реклама), еротичне тощо)

Обсяг, періодичність 23,1 ум. друк. арк., формат А4 (210x297мм), 1 раз на місяць

Сфера розповсюдження та категорія читачів загальнодержавна, зарубіжна
лікарі-стоматологи-хірурги; лікарі ультразвукової діагностики, лікарі-рентгенологи, лікарі-патологоанатоми, студенти, лікарі-інтерни, слухачі, аспіранти, докторанти, наукові, науково-педагогічні та педагогічні працівники закладів вищої освіти та наукових установ

Засновник (співзасновники) Національний університет охорони здоров'я України імені П.Л. Шупика (код за ЄДРПОУ 01896702), Приватний вищий навчальний заклад «Київський медичний університет» (код за ЄДРПОУ 16478809), Товариство з обмеженою відповідальністю «ОМФ ПАБЛІШІНГ» (код за ЄДРПОУ 40493077)

Програмні цілі (основні принципи) журнал присвячений сучасним проблемам діагностики і лікування в хірургічній стоматології та щелепно-лицевій або тематична спрямованість хірургії

Перший заступник Міністра  **Євгеній ГОРОВЕЦЬ**

10.08.2021
(дата реєстрації)



FIGURE 1. Certificate of State Re-Registration of the Print Mass Media (journal) in the Ministry of Justice of Ukraine as of 2021. The *Journal* was registered for the first time in 2016 under the title *Diagnostics and Treatment of Oral and Maxillofacial Pathology*. The next re-registration took place in 2019.

State Registration

MARCH 2025 • VOLUME 9 • ISSUE 3
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УКРАЇНА

**НАЦІОНАЛЬНА РАДА УКРАЇНИ
З ПИТАНЬ ТЕЛЕБАЧЕННЯ І РАДІОМОВЛЕННЯ**

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на № _____

ВИТЯГ*
З РЕЄСТРУ СУБ'ЄКТІВ У СФЕРІ МЕДІА - РЕЄСТРАНТІВ

Виданий ТОВАРИСТВУ З ОБМЕЖЕНОЮ ВІДПОВІДАЛЬНІСТЮ «ОМФ ПАБЛІШИНГ», м. Київ, код ЄДРПОУ 40493077
(найменування суб'єкта у сфері медіа, код згідно з ЄДРПОУ)

Ідентифікатор медіа R30-04318


Логотип, позивні або назва медіа «Журнал діагностики та лікування оральної і щелепно-лицевої патології» / «Journal of Diagnostics and Treatment of Oral and Maxillofacial Pathology»

Суб'єкт у сфері друкованих медіа, вид друкованого медіа –журнал
(суб'єкт, що здійснює мовлення без використання радіочастотного спектра (лінійне медіа, вид та технологія мовлення), суб'єкт у сфері аудіовізуальних медіа на замовлення (нелінійний медіа-сервіс, технологія, що застосовується для надання сервісу), провайдер аудіовізуальних сервісів (технологія, що застосовується для надання доступу), провайдер платформ спільного доступу до відео (технологія, що застосовується для надання сервісу), суб'єкт у сфері друкованих медіа (вид друкованого медіа), суб'єкт у сфері онлайн-медіа (вид онлайн медіа))

Рішення від 11.04.2024 № 1225
(дата і номер рішення Національної ради про реєстрацію; дата і номер рішення про внесення останніх змін до Реєстру)

М. П.
Перший заступник голови
Валентин КОВАЛЬ

Відповідальний секретар
Олена НІЦКО



* до введення в дію Електронного кабінету (за вимогою суб'єкта)

A

FIGURE 2. The *Journal* is registered by the National Council of Television and Radio Broadcasting of Ukraine as print media **(A)** (Decision of April 11, 2024, No. 1225) and online media **(B)** (Decision of April 25, 2024, No. 1454). The identifier of print media is R30-04318 and the identifier of online media is R40-04708. **(Fig 2 continued on next page.)**

State Registration

MARCH 2025 • VOLUME 9 • ISSUE 3
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УКРАЇНА

**НАЦІОНАЛЬНА РАДА УКРАЇНИ
З ПИТАНЬ ТЕЛЕБАЧЕННЯ І РАДІОМОВЛЕННЯ**
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ВИТЯГ*
З РЕЄСТРУ СУБ'ЄКТІВ У СФЕРІ МЕДІА - РЕЄСТРАНТІВ

Виданий ТОВАРИСТВУ З ОБМЕЖЕНОЮ ВІДПОВІДАЛЬНІСТЮ «ОМФ ПАБЛІШИНГ», м. Київ, код ЄДРПОУ 40493077
(найменування суб'єкта у сфері медіа, код згідно з ЄДРПОУ)

Ідентифікатор медіа R40-04708

Логотип, позивні або назва медіа «Journal of Diagnostics and Treatment of Oral and Maxillofacial Pathology» / «Журнал діагностики та лікування оральної і щелепно-лицевої патології»

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Contents

of the Volume 9 • Issue 3 • March 2025

Article Type	Article Number	Pages	Description
		A1	Publisher & Editorial Office Information
		A2	Editorial Board
		A5-A7	State Registration
		A8	Contents, Courtesy, & Erratum
CASE REPORT + VIDEOS	100303	1-15	Cine Loops in Ultrasonographic Verification of Acquired Lymphatic Malformation (Lymphangioma) of the Neck Associated with Musical Instrument (Violin) Play: A Case Report Olha S. Cherniak, Valentyn H. Demidov, Viacheslav P. Blyzniuk, Valentyna I. Zaritska, & Pavlo P. Snisarevskiy

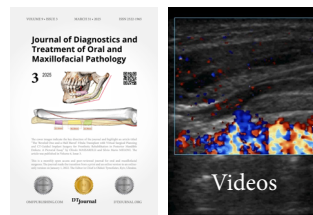


COURTESY

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The images were taken from this article: Massarelli O, Meloni SM. The “beveled one-and-a-half-barrel” fibula transplant with virtual surgical planning and CT-guided implant surgery for prosthetic rehabilitation in posterior mandible defects: a pictorial essay. *J Diagn Treat Oral Maxillofac Pathol* **2022**;6(3):39–59.

<https://doi.org/10.23999/j.dtopm.2022.3.3>



CASE REPORT + VIDEOS

US | MALFORMATION

Cine Loops in Ultrasonographic Verification of Acquired Lymphatic Malformation (Lymphangioma) of the Neck Associated with Musical Instrument (Violin) Play: A Case Report

Olha S. Cherniak^{a,*}, Valentyn H. Demidov^b, Viacheslav P. Blyzniuk^c, Valentyna I. Zaritska^d, & Pavlo P. Snisarevskyi^e

ABSTRACT

Lymphatic malformation (LM) is a rare pathology that is predominantly congenital. However, an increasing number of published cases clearly demonstrate the possibility of developing acquired LM, mainly because of trauma. Causes of injury can include dental restorations in the oral cavity, repetitive surgeries, and even chronic trauma from playing musical instruments. This article presents the case of a 32-year-old female with an acquired lymphatic neoplasm of the neck that developed because of many years of violin playing. Clinical preoperative photography, gray scale and color Doppler ultrasonography data, two ultrasound videos (cine loops), a specimen of the excised mass, and histopathological images are presented. Thus, this paper confirms the possibility of developing acquired LM in the neck region. The fact that the LM developed to its current size by the patient's 32nd year of life, in addition to the patient's musical history, confirms that the development and growth of this acquired LM required time, namely years of playing a violin. Also, two ultrasound videos clearly demonstrate the capabilities of this dynamic examination for verifying this rare pathology. Ultrasound videos show the ability of this lymphatic neoplasm to compress and reduce in size by 2 times. Since LM is a term that refers to a developmental defect of the lymphatic system, we suggest using the term "lymphangioma" for acquired lymphatic formation (i.e., lymphatic neoplasm).

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Article type: Case report.

Please cite this article as: Cherniak OS, Demidov VH, Blyzniuk VP, Zaritska VI, Snisarevskyi PP. Cine loops in ultrasonographic verification of acquired lymphatic malformation (lymphangioma) of the neck associated with musical instrument (violin) play: A case report. *J Diagn Treat Oral Maxillofac Pathol*. 2025 Mar;8(3):100303.

At the time of publication of this article, the journal's impact factor (Exaly) is 0.2. Each author of this article is awarded CPD points according to the Order of the Ministry of Healthcare of Ukraine of February 22, 2019, No. 446.

The word 'Videos' at the upper right icon means that article contains videos (cine loops of the ultrasonography).

Manuscript received 11 February 2025

Accepted 27 February 2025

Available online 31 March 2025

<https://doi.org/10.23999/j.dtmp.2025.3.100303>

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KEY WORDS

Lymphatic malformation, lymphangioma, lymphatic neoplasm, neck, ultrasonography, gray-scale ultrasound, color Doppler ultrasound, cine loop in ultrasonography, violin

INTRODUCTION

Specialists of various profiles may be confused about which diagnosis is correct to use as of 2025 when describing a lymphatic mass of the head and neck area—lymphatic malformation (LM) [1-3] or lymphangioma [4-6]. Both terms are found in modern literature, but the second term is increasingly being abandoned [7]. Most sources state that the LM is a rare, non-malignant mass consisting of fluid-filled channels or spaces thought to be caused by the abnormal development of the lymphatic system [7]. Although numerous authors describe LM as a benign lesion, Yu et al. (2022) have proven that the unusual process of LM gradual malignant transformation into lymphangiosarcoma is also possible [8]. Also, as some authors describe LM as a congenital pathology [1, 5, 7, 9], others provide evidence that it may be an acquired factors for the LM appearance [10, 11]. Direct confirmation of the data on a possible variant of acquired LM of the neck is the data of the patient presented in this article.

The aims of this article are (1) to publish the world's first ultrasound videos of the spongy structure and ease compressibility of an acquired LM of the neck associated with many years of playing the violin, (2) to expand diagnostic options of oral and maxillofacial surgeons.

CASE REPORT

On June 25, 2014, a 32-year-old Caucasian female was referred to the Center of Maxillofacial Surgery and Dentistry with complaints of a tumor on her neck (Fig 1) that was protruding and creating a cosmetic problem. Clinically, the neoplasm was painless and easily compressible upon palpation, the overlying skin was normal. According to the patient and her relatives, this mass has become noticeable over the past few years. The key information in the medical history is that the patient has been playing the violin for many years. Since many sources publish that musicians may have occupational diseases associated with playing a certain type of musical instrument [12-14].

Ultrasonography (USG) was performed using

HD11 XE model of ultrasound machine (Philips Healthcare, Eindhoven, The Netherlands) with 12-3 MHz linear probe (synonym: linear transducer). USG showed well-circumscribed heterogeneous hypoechoic lesion measured 3.09 cm x 1.03 cm (Fig 2) and which was located slightly above the middle third of the neck between the midline of the neck and the anterior margin of the left sternocleidomastoid muscle.

The formation had cystic cavities of various sizes from medium to very small. Cystic areas visualized as different size anechoic areas. An important feature of this formation was its ability to almost completely compress.

Supplemental Video Content 1 (cine loop) demonstrates the degree of compression of the malformation by the ultrasound transducer when performing gray-scale USG. Screenshots from cine loop demonstrate LM in three states: non-compressed, moderately compressed, and completely compressed. Video is available in the page of the full-text article on dtjournal.org and in the **YouTube channel**, available at <https://youtu.be/1A30SbP0Tsg>. Total video's duration is 33 seconds.

Lesion had no arterial or venous blood flow upon color Doppler USG (Fig 3). The formation was adjacent to such a muscle as omohyoid and was located close to the anterior margin of the sternocleidomastoid muscle.

Supplemental Video Content 2 (cine loop) demonstrates the degree of compression of the malformation by the ultrasound transducer when performing color Doppler USG. Video is available in the page of the full-text article on dtjournal.org and in the **YouTube channel**, available at <https://youtu.be/bliMTnSMCs0>. Total video's duration is 27 seconds.

The operation was performed under general anesthesia and the mass was excised within healthy tissues. At the lancing of the excised mass, was noted its spongy structure (Fig 4) and the fact that the entire lesion was filled with gray fluid (i.e., lymph).

Histopathology (Fig 5) was performed by two experienced doctors-pathologists, V.I.Z. (26 years of experience) and P.P.S (21 years of experience). It showed the lymph in the lumens of the lymphatic

vessels and multiple oval-shaped endothelial cells (visualized as small inclusions with dark blue color) in the inner layer of the lymphatic vessels. A histopathological diagnosis of lymphangioma (i.e., LM) was made.

The patient continued to be recurrence-free at her 3-year follow-up.

DISCUSSION

Lymphangiomas belong to the category of vascular malformations in the Mulliken and Glowacki classification system and are dilated endothelial-lined lymphatic spaces (Yuen and Ahuja, 2012) [15]. The authors classify all types of lymphangiomas as congenital LMs (Gilony et al., 2012; and Kim, 2014) [16, 17]. A characteristic feature of LM is its compressibility with changes in the shape and configuration of the lesion [6]. Fluctuation can be detected during palpation of cystic cavities, and a puncture can yield a clear liquid, sometimes cloudy, often with an admixture of blood [6].

The neck area is one in which there can potentially be noted a wide variety of neoplasms and malformations. Differential diagnosis of LM of the neck is carried out with hemolymphangioma [6, 18], arteriovenous malformation [15, 19], branchial cleft and thyroglossal duct cysts [15, 20], cystic squamous cell carcinoma [20], metastatic nodes [15], nerve sheath tumor [15], etc. USG, as a non-invasive diagnostic method, allows an early diagnosis to be made with fairly high accuracy [15, 21, 22]. Johnson et al. (2020) are more than right when they say that the use of USG has gained momentum because of its accessibility, cost efficiency, quicker collection time [23], and safety. The efficiency of ultrasonography in the detection of cystic and solid components in neoplasms is described in detail in numerous sources [15, 20]. So, USG was an excellent dynamic imaging tool to establish a preliminary diagnosis in the case we described. The described ultrasound characteristics of LM in our patient corresponded to the classic manifestations of LM with cystic cavities of the mixed type [15]. However, according to our knowledge, these are the first two published videos (cine loops) of the possibility of full compression of LM of the neck. Moreover, according to our literature search, this is the first thoroughly described acquired LM caused by prolonged (over many years) violin playing.

Left-sided “submandibular” lesions develop in 62% of violinists and violists from holding their instrument (Blum and Ritter, 1990; Ostwald et al. 1994) [12, 13].

According to Blum and Ritter (1990), in four cases of their observations of the viola and violin players the “tumor” revealed itself not just an induration but as a sialolithiasis of the submandibular gland, and in one case as a cystadenolymphoma of the parotid gland (i.e., Warthin’s tumor) [12]. Therefore, we believe that in this article it is worth paying attention to the ultrasound picture of cystadenolymphomas too [24].

Moraes and Antunes (2012) are emphasizing, the neck, shoulder, and temporomandibular joints are the most affected areas, due to prolonged flexion of the head and shoulder required to hold the violin [14]. Thus, our case not only confirms the statistics of the harmful effects of prolonged playing of certain instruments, but also is the first case of acquired LM described in detail in a patient who was professionally engaged in playing the violin.

Colbert et al. (2013) define LMs of the neck as a diverse group of lymphatic lesions [1]: They can be small and superficial or large and extensive, and management can be a challenge.

Cine loops in USG [23, 25] are an extremely useful method for dynamic diagnosis of the structure of malformations, tumors, and pathologic conditions. The two videos presented above clearly demonstrate this in both B-mode and color Doppler USG.

According to Gilony et al. (2012) and Kim (2014), for the microcystic and mixed types of LMs (which are also termed as lymphangiomas), surgery should be considered rather than sclerotherapy [16, 17]. The same approach was used in our case, namely, the LM was excised within visually healthy tissues.

Treatment decision algorithms for stage I, II, III, IV, and V LMs are described in a study by Perkins et al. (2010) [26].

So, this article is additional confirmation of the emergence of playing-related (i.e., acquired) formations of the neck [12, 13]. And this is in addition to other playing-related musculoskeletal disorders [27]. Table 1 clearly demonstrates references to literary sources that highlight cases of both congenital and acquired LMs (i.e., lymphatic formations of lymphangiomas). Perhaps some authors would consider it appropriate to describe this pathological process in the patient as acquired lymphedema [31].



FIGURE 1. Preoperative view of a 32-year-old female patient upon admission to the hospital. Appearance of the anterior surface of the neck without (A) and with (B) head rotation. Arrow indicates malformation in the projection of the left carotid triangle. (Fig 1 continued on next page.)



FIGURE 1 (continued). Preoperative view of a 32-year-old female patient upon admission to the hospital. Appearance of the anterior surface of the neck without (A) and with (B) head rotation. *Arrow* indicates malformation in the projection of the left carotid triangle.

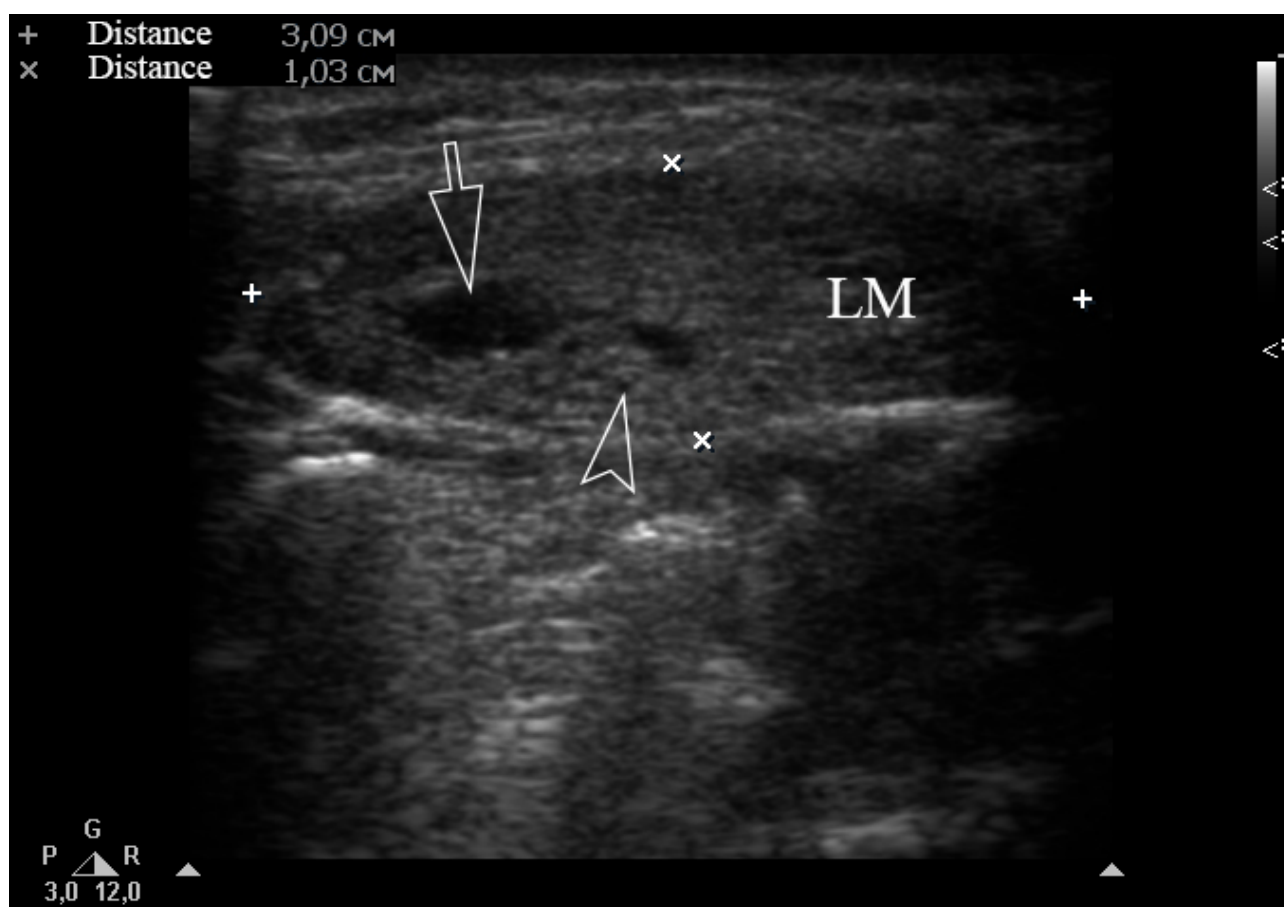
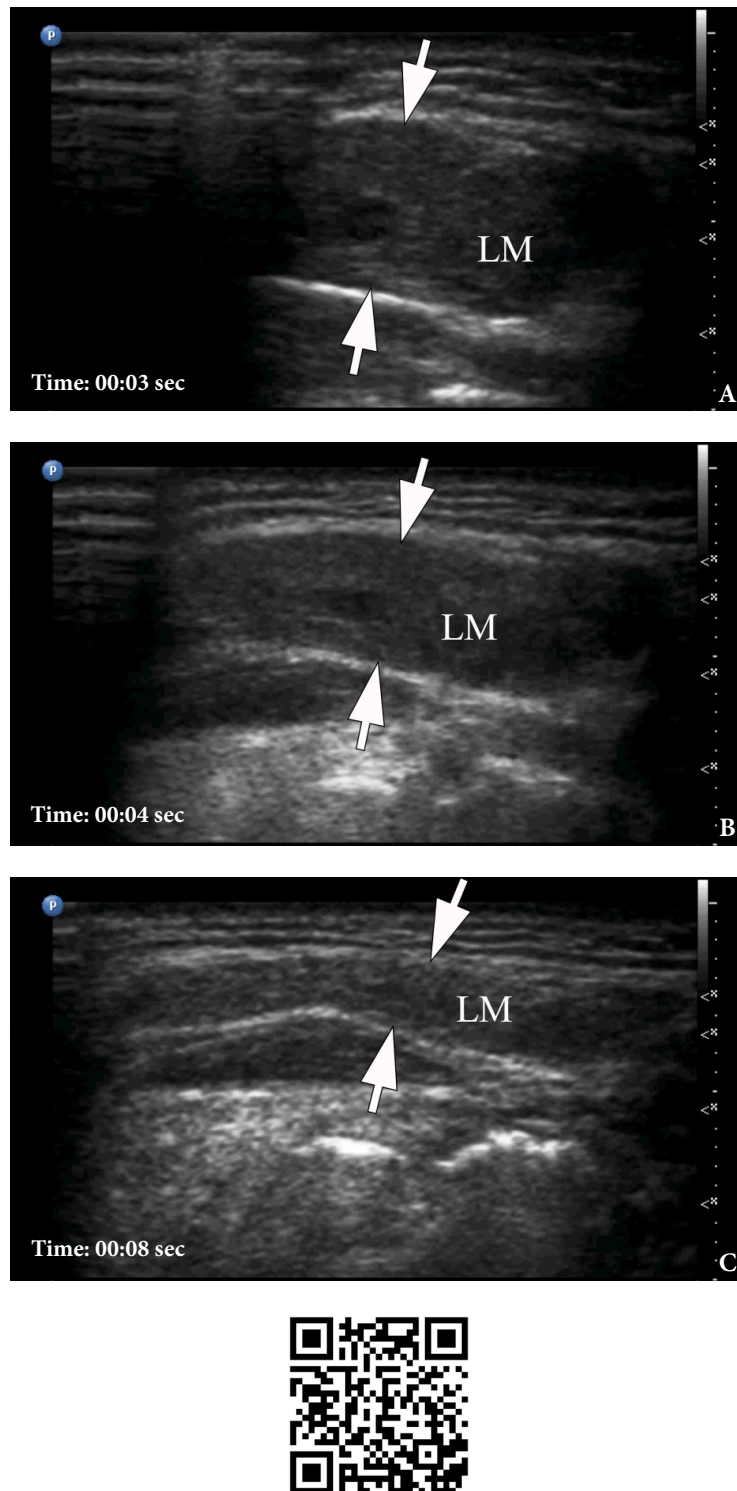


FIGURE 2. Longitudinal gray-scale ultrasound (i.e., B-mode ultrasound) of a lymphatic malformation (LM) demonstrates a well-circumscribed lesion in a slightly compressed state. *Open arrow* indicates larger cystic cavity and *open arrowhead* labels smaller cystic cavity inside the malformation. The LM measured 3.09 cm x 1.03 cm (indicated by “+” and “x” calipers). The depth of the ultrasound-scanned tissues is 3 cm, as indicated by the vertical scale with marks on the right.



QR code leads to that video at *Journal`s* YouTube channel—Videos of JDTOMP.

VIDEO 1. Cine loop of a gray-scale ultrasonography of lymphatic malformation (LM) of the neck. Screenshots show the LM in three states: non-compressed (**A**), moderately compressed (**B**), and completely compressed (**C**). Arrows indicate margins of the LM (i.e., lymphangioma). Compression was performed with a linear probe (i.e., linear transducer). Video is available in the page of the full-text article on www.dtjournal.org and in the YouTube channel 'Videos of JDTOMP,' available at <https://youtu.be/1A30SbP0Tsg>. The letter "P" on a blue circle in the upper left corner of the sonograms indicates the probe's side. Total video's duration: 33 sec. Video time of the screenshots are: 03 sec, 04 sec, and 08 sec.

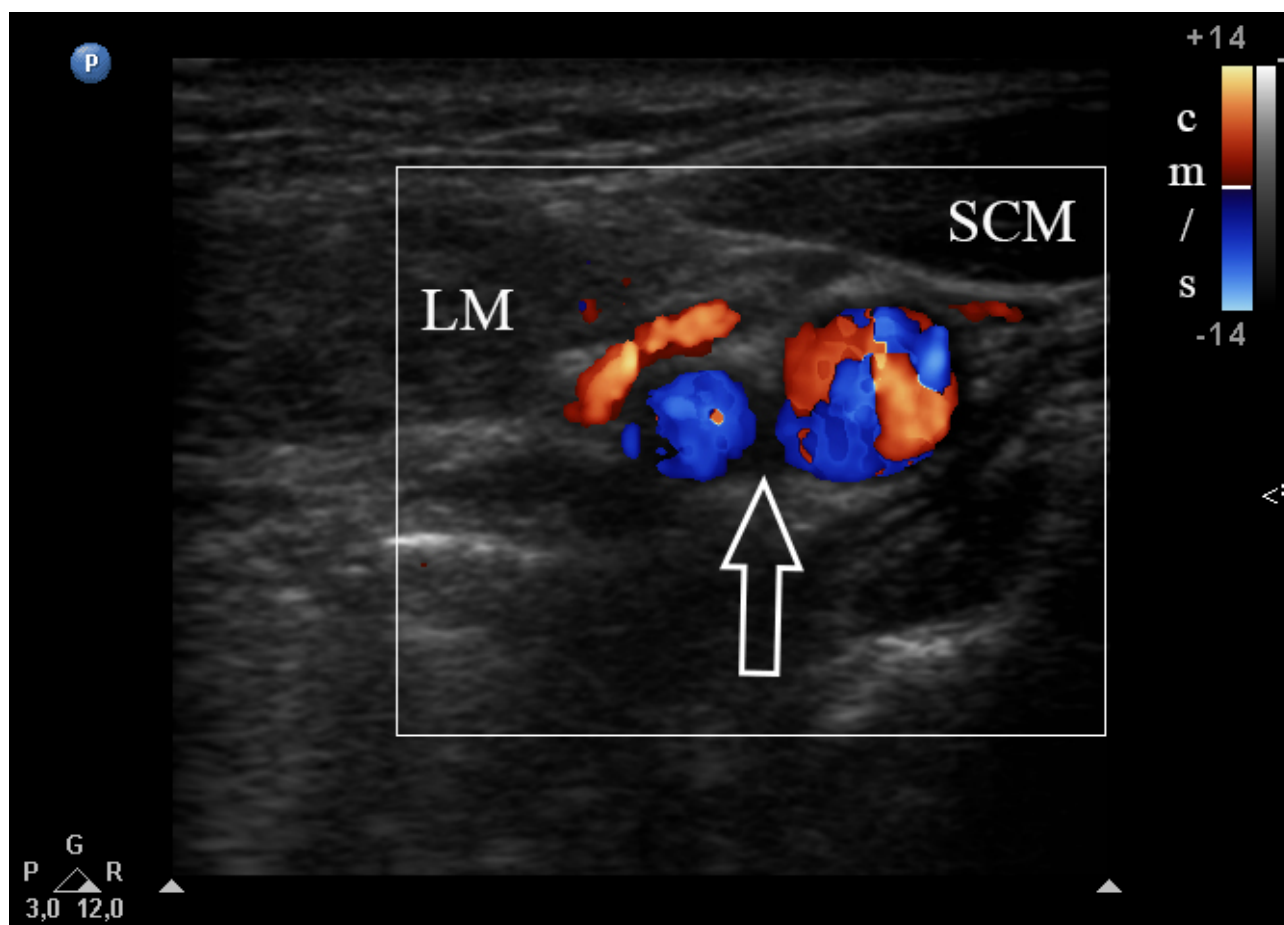
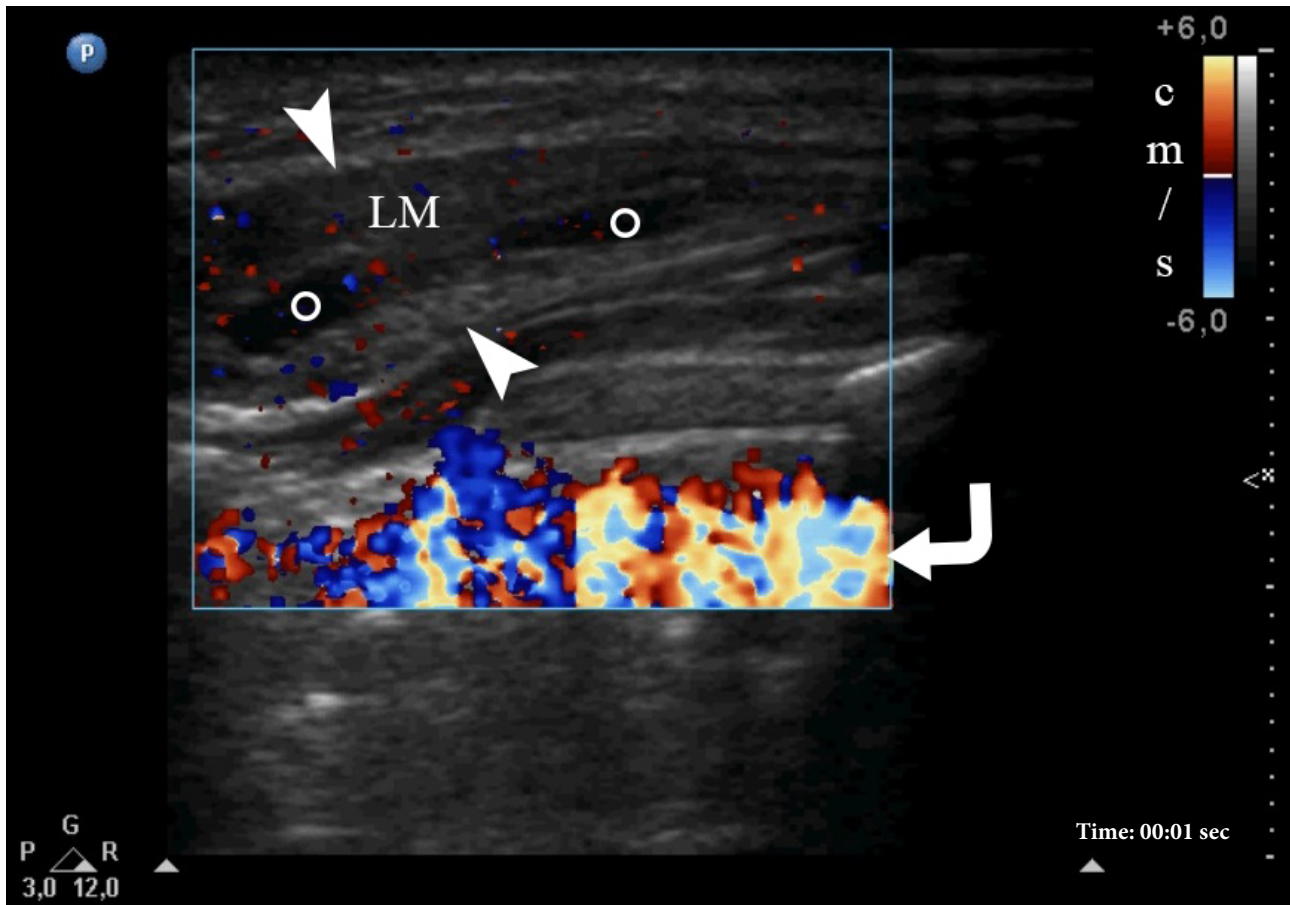


FIGURE 3. Color Doppler ultrasound of the left neck shows the relationship between the lymphatic malformation (LM), left sternocleidomastoid (SCM) muscle, and the main neurovascular structures of the neck (also known as neurovascular bundle of the neck). This neurovascular bundle (*open arrow*) is surrounded by carotid sheath which at different levels contains structures such as common and internal carotid artery, internal jugular vein, vagus nerve, etc. The letter “P” on a blue circle in the upper left corner of the sonogram indicates the probe’s side.



QR code leads to that video at *Journal`s* YouTube channel—Videos of JDTOMP.

VIDEO 2. Cine loop of a color Doppler ultrasonography of lymphatic malformation (LM) the neck. A screenshot from the cine loop demonstrates the possibility of complete compression of the LM (*arrowheads*) with an ultrasound probe. Cystic areas within LM are labeled by *circles*. Screenshot demonstrate LM state upon moderate compression. Notes no blood flow inside the malformation. Ultrasound artifact is indicated by *curved arrow*. The “P” letter at the upper left corner of the screenshot of the cine loop indicates the probe’s side. Video is available in the page of the full-text article on www.dtjournal.org and in the YouTube channel ‘Videos of JDTOMP,’ available at <https://youtu.be/bliMTnSMCs0>. Total video’s duration: 27 sec. Video time of the image: 01 sec.

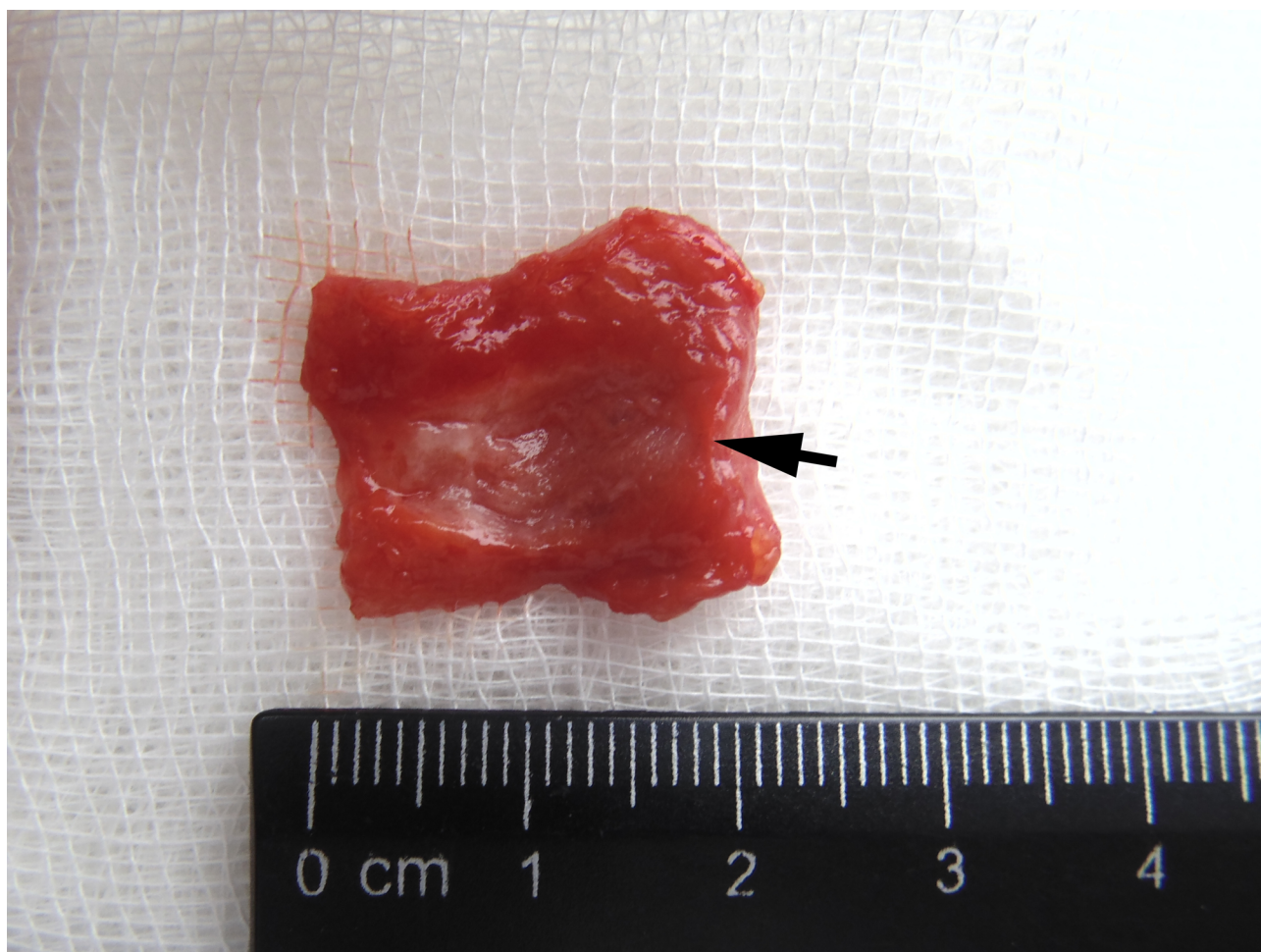


FIGURE 4. Macroscopic view of the excised lymphatic malformation (*arrow*).

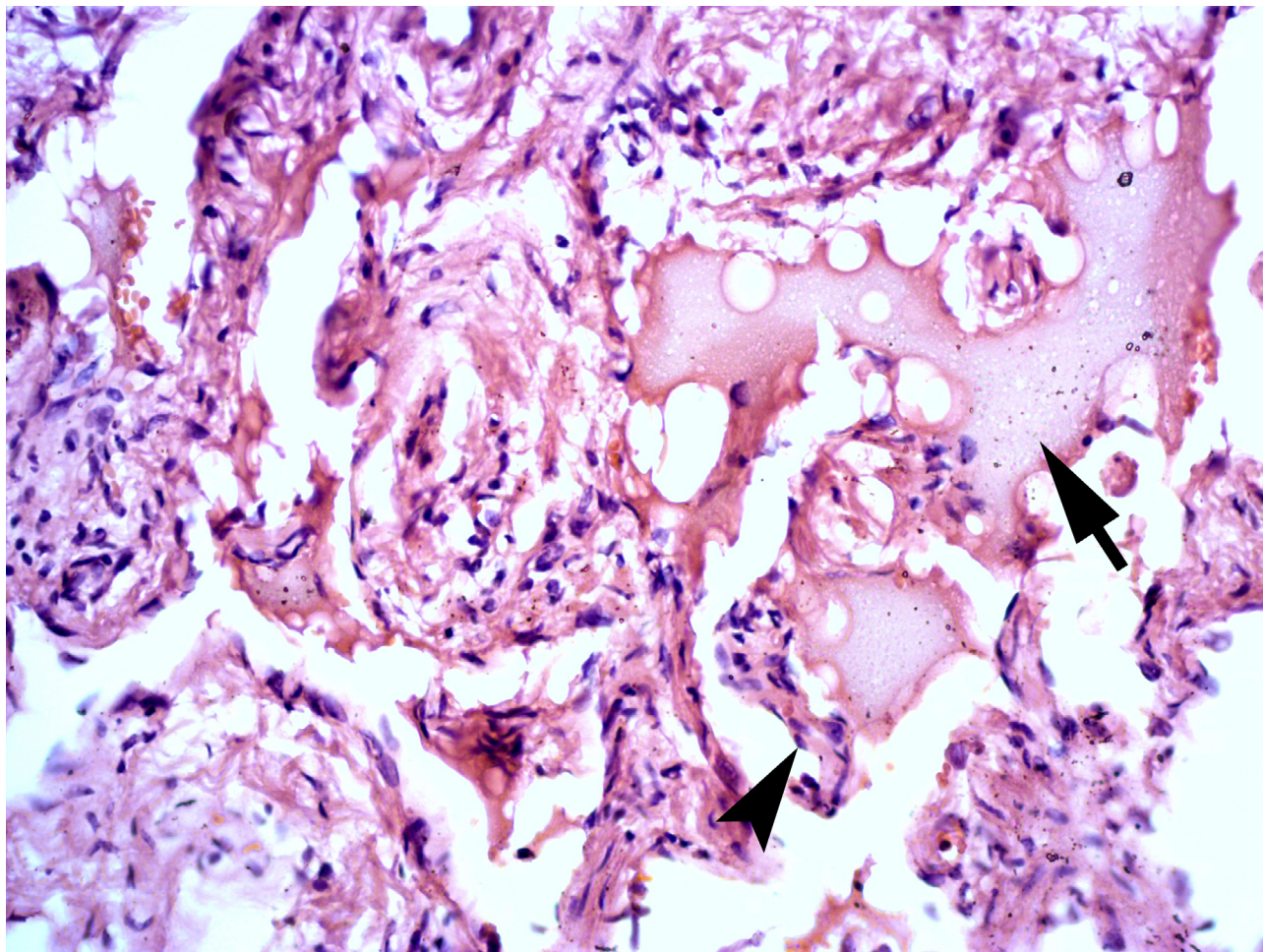


FIGURE 5. Histopathology shows the lymph (*arrow*) in the lumens of the lymphatic vessels. Oval-shaped small inclusions with dark blue color in the inner layer are endothelial cells (*arrowhead*) of the lymphatic vessels. Hematoxylin and eosin staining; magnification $\times 200$.

TABLE 1. Literary Sources That Highlight Congenital Lymphatic Malformations and Acquired Lymphatic Formations (i.e., Lymphangiomas).

Lymphatic Malformations/Formations	
Congenital (Perkins et al., 2010; Lerat et al., 2016; Watanabe et al., 2022; etc.) [26, 28, 29]	Acquired (Abe et al., 2018; Choayb et al., 2023; Cherniak et al., 2025; etc.) [11, 30, this paper]

CONCLUSION

Thus, this article confirms the possibility of developing acquired LM in the neck region. The fact that the LM developed to its current size by the patient's 32nd year of life, in addition to the patient's musical history, confirms that the development and growth of this acquired LM required time, namely years of playing a violin. Also, two ultrasound videos clearly demonstrate the capabilities of this dynamic examination for verifying this rare pathology. Since LM is a term that refers to a developmental defect of the lymphatic system, we suggest using the term "lymphangioma" for acquired lymphatic formation.

TERM OF CONSENT

Writing patient's consent was obtained for publication the photos and data.

AUTHORS' CONTRIBUTIONS

Drafting of the manuscript: Cherniak OS, Blyzniuk V. Critical revision of the manuscript: all authors. Approval of the final version of the manuscript: all authors.

CONFLICT OF INTERESTS

The authors declare no conflict of interest.

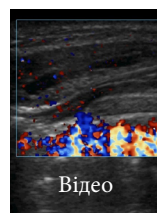
FUNDINGS

No funding was received for this study.

REFERENCES (31)

- Colbert SD, Seager L, Haider F, et al. Lymphatic malformations of the head and neck-current concepts in management. *Br J Oral Maxillofac Surg*. 2013;51(2):98-102. <https://doi.org/10.1016/j.bjoms.2011.12.016>
- Yang W, Wang H, Xie C, et al. Management for lymphatic malformations of head and neck. *Front Neurol*. 2024;15:1450102. <https://doi.org/10.3389/fneur.2024.1450102>
- Tokarski M, Wierzbicka M. Giant lymphangioma of supraclavicular region mimicking branchial cleft cyst. *Postępy w chirurgii głowy i szyi/Advances in Head and Neck Surgery*. 2013;12(1):14-17. In Polish.
- Al Qooz F, Alanezi M, Al Olaimat MS, et al. Supraclavicular cavernous lymphangioma: A rare entity. *Oral Maxillofac Surg Cases*. 2023 Jun;9(2):100313. <https://doi.org/10.1016/j.omsc.2023.100313>
- Kandakure VT, Thakur GV, Thote AR, Kausar AJ. Cervical lymphangioma in adult. *Int J Otorhinolaryngol Clin*. 2012;4(3):147-150. <https://doi.org/10.5005/jp-journals-10003-1101>
- Tymofeiev OO. Manual of oral and maxillofacial surgery. 5th ed. Kyiv: Chervona Ruta-Turs; 2012.
- National Organization of Rare Disorders. Ganti S, Perkins JA. Lymphatic malformations [internet]. 2021 Jun [cited 2025 Jan 16]. Available from: <https://rarediseases.org/rare-diseases/lymphatic-malformations/>
- Yu H, Mao Q, Zhou L, Li J, Xu X. Rare case of cystic lymphangioma transforming into lymphangiosarcoma: A case report. *Front Oncol*. 2022 Feb;12:814023. <https://doi.org/10.3389/fonc.2022.814023>
- Klibngern H, Ariyanon T, Pornchaisakuldee C, et al. A Large adult postcricoid lymphatic malformation: A case report and literature review. *Ear Nose Throat J*. Published online February 6, 2024. <https://doi.org/10.1177/01455613241229979>
- Allen JG, Riall TS, Cameron JL, Askin FB, Hruban RH, Campbell KA. Abdominal lymphangiomas in adults. *J Gastrointest Surg*. 2006 May;10(5):746-751. <https://doi.org/10.1016/j.gassur.2005.10.015>
- Abe A, Kurita K, Ito Y. Acquired lymphatic malformations of the buccal mucosa: A case report. *Clin Case Rep*. 2018 Aug;6(10):1929-1932. <https://doi.org/10.1002/ccr3.1756>
- Blum J, Ritter G. Violinists and violists with masses under the left side angle of the jaw known as "fiddler's neck". *Med Probl Perform Art*. 1990;5(4):155-160.
- Ostwald PF, Baron BC, Byl NM, Wilson FR. Performing arts medicine. *West J Med*. 1994;160(1):48-52.

14. Moraes GF, Antunes AP. Musculoskeletal disorders in professional violinists and violists. Systematic review. *Acta Ortop Bras.* **2012**;20(1):43-47.
<https://doi.org/10.1590/S1413-78522012000100009>
15. Yuen HY, Ahuja AT. Benign clinical conditions in the adjacent neck. In: Ultrasound of the thyroid and parathyroid glands. Sofferman RA, Ahuja AT, editors. Springer Science + Business Media; **2012**:229-259.
https://doi.org/10.1007/978-1-4614-0974-8_11
16. Gilony D, Schwartz M, Shpitzer T, et al. Treatment of lymphatic malformations: a more conservative approach. *J Pediatr Surg.* **2012** Oct;47(10):1837-1842.
<https://doi.org/10.1016/j.jpedsurg.2012.06.005>
17. Kim JH. Ultrasound-guided sclerotherapy for benign non-thyroid cystic mass in the neck. *Ultrasonography.* **2014** Apr;33(2):83-90.
<https://doi.org/10.14366/usg.13026>
18. Demidov VH, Cherniak OS. Hemolymphangioma of the neck. *J Diagn Treat Oral Maxillofac Pathol.* **2022** Aug;6(8):114-116.
<https://doi.org/10.23999/j.dtomp.2022.8.2>
19. Nozhenko OA, Savchuk LA, Zaritska VI, et al. Phleboliths, not sialoliths: a report of submandibular gland arteriovenous malformation with numerous calcifications: analysis of cine images and literature review for the 54 years. *J Diagn Treat Oral Maxillofac Pathol.* **2023** Jul;7(7):63-86.
<https://doi.org/10.23999/j.dtomp.2023.7.1>
20. Tymofieiev OO, Fesenko II, Cherniak OS, Zaritska VI. Features of diagnostics, clinical course and treatment of the branchial cleft cysts. *J Diagn Treat Oral Maxillofac Pathol.* **2017**;1(1):15-31.
<https://doi.org/10.23999/j.dtomp.2017.1.3>
21. Mittal A, Anand R, Gauba R, et al. A step-by-step sonographic approach to vascular anomalies in the pediatric population: A pictorial essay. *Indian J Radiol Imaging.* **2021** Jan;31(1):157-171.
<https://doi.org/10.1055/s-0041-1729486>
22. Gritzmam N, Hollerweger A, Macheiner P, Rettenbacher T. Sonography of soft tissue masses of the neck. *J Clin Ultrasound.* **2002** Jul-Aug;30(6):356-373.
<https://doi.org/10.1002/jcu.10073>
23. Johnson AW, Stoneman P, McClung MS, et al. Use of cine loops and structural landmarks in ultrasound image processing improves reliability and reduces error in the assessment of foot and leg muscles. *J Ultrasound Med.* **2020** Jun;39(6):1107-1116.
<https://doi.org/10.1002/jum.15192>
24. Cherniak OS, Savchuk LA, Ripolovska OV, et al. Ultrasonographic identification of the parotid cystadenolymphoma (Warthin's tumor) by oral and maxillofacial surgeons: supplement to the Matsuda and colleagues' classification. *J Diagn Treat Oral Maxillofac Pathol.* **2022** Jul;6(7):92-110.
<https://doi.org/10.23999/j.dtomp.2022.7.1>
25. Marangelli V, D'ambrosio G, Carella L, et al. Digital cine loop technology. In: Iliceto S, Rizzon P, Roelandt JRTC, editors. Ultrasound in coronary artery disease. Amsterdam: Kluwer Academic Publishers; **1991**:95-105.
https://doi.org/10.1007/978-94-009-0611-2_10
26. Perkins JA, Manning SC, Tempero RM, et al. Lymphatic malformations: review of current treatment. *Otolaryngol Head Neck Surg.* **2010** Jun;142(6):795-803.e1.
<https://doi.org/10.1016/j.otohns.2010.02.026>
27. Berezutska M, Berezutsky V. Professional injuries in musicians' hands: The perennial problem. Musicological Thought of Dnipropetrovsk Region. **2021** Dec;21(2):486-528. In Ukrainian.
<https://doi.org/10.33287/222161>
28. Lerat J, Mounayer C, Scomparin A, et al. Head and neck lymphatic malformation and treatment: Clinical study of 23 cases. *Eur Ann Otorhinolaryngol Head Neck Dis.* **2016** Dec;133(6):393-396.
<https://doi.org/10.1016/j.anorl.2016.07.004>
29. Watanabe S, Funato Y, Miyata M, Suzuki, T. A neonatal large neck lymphatic malformation successfully treated with Eppikajyutsuto. *J Pediatr Surg Case Rep.* **2022** Mar;78:102174.
<https://doi.org/10.1016/j.epsc.2022.102174>
30. Choayb S, Jidal M, Zahi H, et al. Acquired cystic lymphangioma imitating breast cancer recurrence. *Radiol Case Rep.* **2023** Jun;18(8):2707-2710.
<https://doi.org/10.1016/j.radcr.2023.05.018>
31. Sleigh BC, Manna B. Lymphedema. [Updated 2023 Apr 19]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; **2025** Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK537239/>



ЗВІТ ПРО ВИПАДОК + ВІДЕО

UKRAINIAN LANGUAGE

Кінопетлі в ультразвуковій верифікації набутої лімфатичної мальформації (лімфангіоми) шиї, пов'язаної з грою на музичному інструменті (скрипці): опис випадку

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АНОТАЦІЯ

Лімфатична мальформація (ЛМ) – це рідкісна патологія, переважно вроджена. Проте все більше опублікованих випадків чітко демонструють можливість розвитку набутої ЛМ, головним чином через травму. Причинами травми можуть виступати, як стоматологічні конструкції в порожнині рота, повторювані операції, так навіть і хронічна травма викликана грою на музичних інструментах. У цій статті представлено випадок 32-річної жінки з набутим лімфатичним новоутворенням шиї, яке розвинулося внаслідок багаторічної гри на скрипці. Наведено клінічні передопераційні фотографії, дані ультразвукової діагностики (УЗД) в В-режимі та режимі кольорового Доплерівського картування (КДК), два відео (кінопетлі) УЗД, видалену пухлину та патогістологічне зображення. Таким чином, дана робота підтверджує можливість розвитку набутої ЛМ в області шиї. Той факт, що ЛМ розвинувся до свого поточного розміру до 32-го року життя пацієнта, на додаток до музичної історії пацієнта, підтверджує, що розвиток і зростання цієї набутої ЛМ вимагав часу, а саме років гри на скрипці. Також два відео УЗД наочно демонструють можливості цього динамічного обстеження для верифікації цієї рідкісної патології. Відеопетлі УЗД показують здатність цього лімфатичного новоутворення стискатися і змен-

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Для цитування: Cherniak OS, Demidov VH, Blyzniuk VP, Zaritska VI, Snisarevskyi PP. Cine loops in ultrasonographic verification of acquired lymphatic malformation (lymphangioma) of the neck associated with musical instrument (violin) play: A case report. J Diagn Treat Oral Maxillofac Pathol. 2025 Mar;8(3):100303.

На момент публікації даної статті імпакт-фактор (Exaly) журналу становить 0,2. Кожному автору статті нараховуються бали БПР згідно Наказу МОЗ України від 22 лютого 2019 р. № 446.

Слово «Відео» у верхньому правому значку означає, що стаття містить відео (кінопетлі УЗД).

Рукопис отриманий 11 лютого 2025
Прийнятий до публікації 27 лютого 2025
Стаття доступна онлайн 31 березня 2025

<https://doi.org/10.23999/j.dtopm.2025.3.100303>

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шуватися в розмірах в 2 рази. Оскільки ЛМ — це термін, який позначає ваду розвитку лімфатичної системи, ми пропонуємо використовувати саме для набутого лімфатичного утворення (тобто лімфатичного новоутворення) термін «лімфангіома».

КЛЮЧОВІ СЛОВА

Лімфатична мальформація, лімфангіома, лімфатичне новоутворення, шия, ультразвукове дослідження (УЗД), В-режим УЗД, кольорове Доплерівське картування (КДК), кінопетля в УЗД, кіноподібна петля в УЗД, скрипка

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