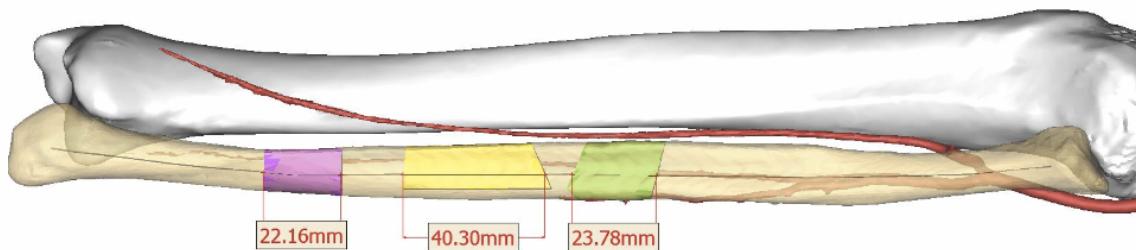
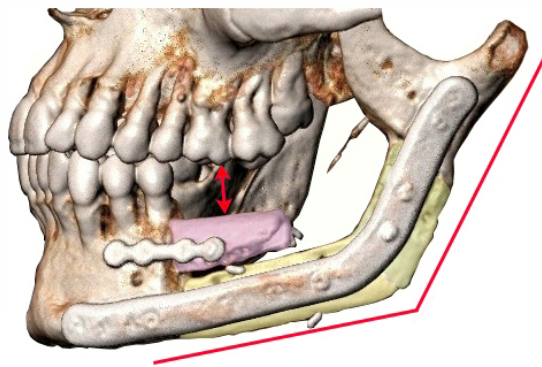


Journal of Diagnostics and Treatment of Oral and Maxillofacial Pathology

8

 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 publication. This is the first Ukrainian journal dedicated exclusively to oral and maxillofacial surgery, registered in 2016. The Editor in Chief is Oleksii Tymofeiev, 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)



04119, Kiev, Melnikova str. 83D, of. 404.
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About the Journal

AUGUST 2025 • VOLUME 9 • ISSUE 8
www.djournal.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 36 opinion leaders from 15 countries: Brazil, Canada, Colombia, Greece, Hong Kong (SAR), India, Indonesia, 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: 11.11% women (4 persons), 88.89% men (32 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.

Open Access

This journal is licensed under the CC BY-NC-SA license.

Types of Peer Review

The journal employs “double blind” and open reviewing.

Article Publishing Charge (APC)

The APC in this journal is 519 Euro (\$590 USD) and 259 Euro (\$295 USD)(excluding taxes) depending on the article's type. Details at website: www.djournal.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.

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ROR ID: <https://ror.org/017s0zm38>.

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.djomp

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.

Website: www.uamos.org.

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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

AUGUST 2025 • VOLUME 9 • ISSUE 8
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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

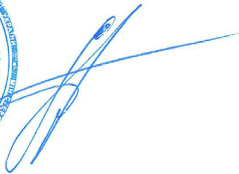
Вид видання
за цільовим призначенням наукове, науково-виробниче
(громадсько-політичне, наукове, навчальне, інформаційне, рекламне (понад 40 відсотків обсягу одного номера – реклама), еротичне тощо)

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

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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

AUGUST 2025 • VOLUME 9 • ISSUE 8
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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

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CASE REPORT

Severe Carbuncle of the Upper Lip and “the Danger Triangle”: A Case Report

Ruslan A. Pavlenko^a & Ievgen I. Fesenko^{b,*}

SUMMARY

A carbuncle is an acute purulent-necrotic inflammation of two or more hair follicles, sebaceous glands, and surrounding soft tissues that can lead to severe local or general complications. Extremely severe general complications such as cavernous sinus thrombosis, meningitis, and sepsis may occur if the carbuncle is in “a danger triangle.” The purpose of this article is to highlight a 36-year-old male with an extremely severe carbuncle that had about 15 pustular openings and was located in the area of “the danger triangle.” Indeed, the anatomical areas to which the dangerous triangle extends are those where the probability of developing dangerous cranial complications is high. At the same time, we believe that “the danger triangle” does not reflect the possible septic risks from furuncles and carbuncles of the lower lip. One of the formidable complications of which can be septic necrotizing pneumonia. Early diagnosis of a carbuncle in the area of “the dangerous triangle,” correctly performed surgical and medical treatment allows to avoid dangerous local and general complications.

KEY WORDS

Furuncle, boil, carbuncle, upper lip, the danger triangle, complication

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INTRODUCTION

Some sources describe boil (also known as furuncle) as a painful, bacterial infection of a hair follicle and carbuncle as cluster of furuncles that occur when the infection spreads [1]. According to other sources, a carbuncle is a purulent-necrotic inflammation of several adjacent hair follicles and sebaceous glands, which spreads to the surrounding skin and subcutaneous tissue [2, 3].

The frequency ratio of carbuncles to furuncles is 1:6 [3]. In addition to local complications of furuncles and carbuncles of the facial and temporal area, general complications such as cavernous sinus thrombosis, meningitis, and sepsis (various forms) are also possible [2, 4-8]. For example, Rueff-Barroso et al. (2023) demonstrate in their report how infection from the area of “the danger triangle” can lead to such a formidable general complication as cavernous sinus thrombosis [9].

The purpose of this article is to highlight an extremely severe carbuncle that had about 15 pustular openings and was located in the area of “the danger triangle.”

CASE REPORT

On September 07, 2011 (16:32 p.m.), a 36-year-old Caucasian male was referred to the Department of Maxillofacial Surgery and Dentistry with complaints of significant facial edema extending to the lower eyelids, upper lip pain, limited mouth opening, and extreme fever. According to the patient, the swelling began to increase after he tried to squeeze a pimple in the upper lip area. The patient had no comorbidities.

Clinical examination revealed extreme upper lip oedema, erythema, and 15 pustular openings located in the upper lip, philtrum, and even nasal vestibule (Fig 1A). It is worth noting the location of all openings within “the danger triangle” (Fig 1B).

Under bilateral infraorbital potent anesthesia (extraoral method), the carbuncle was opened and drained. Purulent passages were observed penetrating the entire thickness of the lip, reaching and exiting even into the vestibule of the nose. All spaces (passages) in which purulent content were located were drained with rubber strip drainages. After opening the carbuncle and before draining the wound, it was washed with an antiseptic solution. After opening all the passages with purulent contents, the upper lip became soft on palpation. Upon

surgery, a swab from the wound was inoculated onto an appropriate medium and cultured.

Comprehensive antibacterial and detoxification therapy was prescribed using ceftriaxone and metronidazole IV. Day after day, a gradual decrease in swelling of both the lips and the under-eye areas and lower eyelids was noted, and body temperature normalized. According to the bacteriological analysis, *Staphylococcus aureus* was cultured. The patient was treated in the hospital for 7 days.

The wound healed with secondary tension.

DISCUSSION

If several furuncles merge, it's called a carbuncle [12]. The condition sometimes extends widely, and fresh openings appear in the skin, and tend to coalesce with those previously formed [10]. And its treatment should be as urgent and specialized as the treatment of facial furuncles [13]. Particularly careful diagnosis and treatment of boils and carbuncles located in “the danger triangle” and infraorbital areas should be carried out [2, 3, 14, 15]. Pannu et al. (2017) describe that the danger triangle of the face consists of the area from the corners of the mouth to the bridge of the nose, including the nose and maxilla [15]. “The danger triangle of the face” is also terms as “the triangle of death” [10].

Authors emphasize that the facial veins are valveless and communicate directly with the cavernous sinus through pterygoid plexus, angular, and ophthalmic veins [15]. Zhang and Stringer (2010) claim that it is not the absence of venous valves but the existence of communications between the facial vein and cavernous sinus and the direction of blood flow that is important in the spread of infection from the face [16]. The likelihood of a severe general complication is also indicated by septic emboli originating from the upper lip infection [17]. However, we believe that “the danger triangle” does not reflect the possible septic risks from furuncles and carbuncles of the lower lip. One of the formidable complications of which can be septic necrotizing pneumonia [6].

CONCLUSION

Early diagnosis of a carbuncle in the area of “the dangerous triangle,” correctly performed surgical and medical treatment allows to avoid dangerous local and general complications.



FIGURE 1. Patient appearance upon admission to hospital (**A, B**). Notes extreme swelling of the upper lip with numerous pustular openings (*arrows*). The spread of reactive edema to the infraorbital areas and lower eyelids is also noted. Image **B** shows “the danger triangle” (*in pink*).

Authors’ contribution

Both authors made substantial contributions to the conception, design of the study, analysis and interpretation, composition of the manuscript, and final approval of the manuscript.

Declaration of competing interest

The authors have no conflicts of interest to declare regarding this article.

Consent for publication

The author declares that signed informed consent was obtained for publication of patient’s images in this article.

Generative AI statement

The author(s) declare that no Generative AI was used in the creation of this manuscript.

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REFERENCES (17)

1. Moore SW. B: Boils (furuncles). In: Griffith's instructions for patients. Moore SW, edition. 8th edition. Saunders, Elsevier; 2011:29-49.
2. Tymofieiev OO. Non-odontogenic inflammatory diseases of the face. In: Maxillofacial surgery and surgical dentistry. Tymofieiev OO, editor. Volume

1. Kyiv: Medicine, All-Ukrainian Specialized Publishing House; 2020:563-588. In Russian.
3. Tymofieiev OO. Nonspecific soft tissue diseases of the maxillofacial region. In: Surgical dentistry and maxillofacial surgery. Tymofieiev OO, editor. Volume 1. Lviv: Marchenko TV; 2024:208-287. In Ukrainian.
4. Pratt GH. Furuncle of upper lip. *Am J Surg*. 1937;36(1):118-121.
5. Wheeler WIdC. The danger of sepsis about the lips. *Ir J Med Sci*. 1926;1:369-371.
6. Morkotun V, Tymofieiev OO, Fesenko II, et al. A lower lip infection (furuncle) complicated by abscess of the lip, suppurative cheilitis glandularis, lip necrosis, septic bilateral multilobar necrotizing (destructive) pneumonia, and pleurisy (pleuritis): a case report and literature review. *J Diagn Treat Oral Maxillofac Pathol*. 2023;7(9):94-114.
7. Simha A, Suresh S, Sreeveni B, et al. Beyond the danger triangle: Septic cavernous sinus thrombosis following a temporal forehead furuncle. *Trop Doct*. 2025;55(3):278-280.
8. Cho CY, Kim KS, Kim KB. A case of cavernous sinus thrombosis due to a mistreated facial furuncle. *Clin Exp Pediatr*. 1999;42(4):584-588.
9. Rueff-Barroso CR, de Oliveira Mariani JF, Lumbreras EJ, et al. Clinical and anatomical aspects of cavernous sinus thrombosis associated to nasal piercing. *J Morphol Sci*. 2023;40:181-186.
10. Ghosh G. Boils and carbuncles: Treatment by x-rays. *Indian M Gaz*. 1942;77:82-87.
11. Kim HS, Chang YJ, Chung CH. *Klebsiella pneumoniae* necrotizing fasciitis on the upper lip in a patient with uncontrolled diabetes. *Arch Craniofac Surg*. 2020;21(2):127-131.
12. InformedHealth.org [Internet]. Cologne, Germany: Institute for Quality and Efficiency in Health Care (IQWiG); 2006-. Overview: Boils and carbuncles. [Updated 2022 Nov 22]. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK513141/>
13. Cherniak OS, Fesenko II. Periorbital abscessing furuncle. *J Diagn Treat Oral Maxillofac Pathol*. 2021;5(1):13-14.
14. Amin D, Satishchandran S, Drew S, Abramowicz S. Diagnosis and treatment of lip infections. *J Oral Maxillofac Surg*. 2021;79(1):133-140.
15. Pannu AK, Saroch A, Sharma N. Danger triangle of face and septic cavernous sinus thrombosis. *J Emerg Med*. 2017;53(1):137-138.
16. Zhang J, Stringer MD. Ophthalmic and facial veins are not valveless. *Clin Exp Ophthalmol*. 2010;38(5):502-510.
17. Jeng PY, Kao CT, Jeng JH, Yang CM. Severely swollen upper lip associated with methicillin-resistant *Staphylococcus aureus* infection. *J Dent Sci*. 2025;20(2):1328-1330.

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