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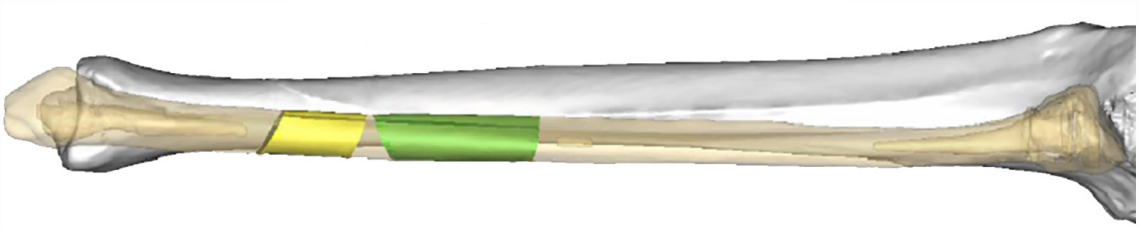

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Official Journal of the
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TANTUM VERDE®

QUICK RELIEF FROM PAIN AND INFLAMMATION IN THE MOUTH AND THROAT[1]

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

- **JAWS FRACTURES[3]**
- **IMPLANTS PLACEMENT[4]**
- **WOUNDS OF ORAL CAVITY[5]**

Reg. № UA/3920/01/01

LOCAL ANESTHETIC AND ANTI-INFLAMMATORY EFFECT[1]

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.angelinipharma.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. Tymofieiev 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 Mastakov ("SCIEDECE—Scientific Center of Dentistry & Ultrasound Surgery" Kyiv, Ukraine)

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Dileo FARMA

About the Journal: Aims and Scope

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Official Title

Journal of Diagnostics and Treatment of Oral and Maxillofacial Pathology

Standard Abbreviation: ISO 4

J. Diagn. Treat. Oral Maxillofac. Pathol.

Acronym

JDTOMP

International Standard Serial Number (ISSN)

Electronic ISSN 2522-1965

Aims & Scope

This is a monthly peer-reviewed oral and maxillofacial surgery journal focused on: 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 30 opinion leaders from 13 countries: Brazil, Canada, Colombia, Greece, Hong Kong (SAR, China), India, Israel, Italy, Slovak Republic, Spain, Ukraine, United Arab Emirates, 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 a several full-time professional editors.
- Gender distribution of the editors: 10% women, 90% men, 0% non-binary/other, and 0% prefer not to disclose.

Frequency

12 issues a year (from January 2020)

Publication History

2017: 4 issues a year
2018: 4 issues a year
2019: 10 issues a year
From 2020: 12 issues a year

Publishing Model

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

Type of Peer Review

The journal employs "double blind" reviewing.

Article Publishing Charge (APC)

The APC in this journal is US $500 and US $250 (excluding taxes) depending on the article`s type. Details at website: dtjournal.org.

13 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.

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Registration: Jul 28, 2016 (Certificate: КВ № 22251-12151 Р)
Re-registration: May 21, 2019 (Certificate: КВ № 23999-13839 ПР)
Re-registration: Aug 10, 2021 (Certificate: КВ № 24951-14891 ПР)

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 publisher focused on medical and linguistic sciences.
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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.

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: uamos.org.

Editorial Board

JANUARY 2023 • VOLUME 7 • ISSUE 1
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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 (≥ 1/10); common (≥ 1/100 to <1/10); uncommon (≥ 1/1,000 to <1/100); rare (≥ 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

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Order of the

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Our Supporters

JANUARY 2023 • VOLUME 7 • ISSUE 1
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FIGURE. Evangelos G. Kilipiris, MD, DMD from the National Institute of Children's Diseases and Faculty of Medicine at Comenius University, Bratislava, Slovak Republic. A kind support of Dr. Kilipiris during the 5 years at the position of Director, Journal Development Department helped our journal to move forward and to evolve. An honorary plaque was presented to him on behalf of the Chief Editor with words "To a Founding Director, Author of Multiple Articles and Reviews, Great Thanks and Appreciation." Photo was taken on November 23, 2021.

Content

of the Volume 7 • Issue 1 • December 2023

COURTESY

Journal`s cover image (virtual surgical planning for a segmental mandibular reconstruction with fibula transplant) is courtesy of Rui P. Fernandes, MD, DMD, FACS, FRCS.

Image was taken from the article: Fernandes RP, Quimby A, Salman S. Comprehensive reconstruction of mandibular defects with free fibula flaps and endosseous implants. *J Diagn Treat Oral Maxillofac Pathol* **2017**;1(1):6–10.

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EDITORIAL

Start of the Seventh Volume in 2023 and Analysis of Publishing Achievements of 2022

Oleksii O. Tymofieiev[a] & Ievgen I. Fesenko[b,*]

Starting the 7th volume of the *Journal of Diagnostics and Treatment of Oral and Maxillofacial Pathology* we are becoming stronger, more mature, and resilient. Even though the *Journal* has been published for essentially 11 months of 2022 of large-scale war of Russia against Ukraine and Europe, the editorial and publishing staff demonstrated the ability to withstand the impact of war and continue to publish peer-reviewed achievements. In total, 32 articles were published in the volume 6. Among which, 10 articles were devoted to wartime challenges and gunshot wounds.[1,2]

Two papers presented cutting-edge microvascular and prosthetic techniques. Massarelli and Meloni reported a unique technique in a paper 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*.[3] Le and colleagues manufactured an exclusive tongue prosthesis which was well-described in an article titled *Patient-specific prosthetic appliance for interim management of chronic orocutaneous fistula in the irradiated and vessel-depleted head and neck patient – a case report and technical note*.[4]

Geographical distribution of authors in 2022 included five countries—Italy, Slovak Republic, Qatar, Ukraine, and United States of America (USA).

The first quarter of year 2022 was also marked by the establishment of the resident ambassador position and the appointment of John M. Le, DDS, MD, as a real leader, to this founding position.[5] Also, we were honored to see Michael T. Kase, DMD, a true expert in maxillofacial prosthetics as a new board member who can bring a lot of expertise to the *Journal* in this growing direction.[6] Thus, by the end of 2022, the *Journal*'s editorial board has grown to 30 experts, enhancing *Journal*'s international vision and approaches.

Among all 6,655 users of the *Journal* website in 2022, in 33.66 percent of cases the users were from USA, in 7.71 percent – from India, in 7.26 percent – from Ukraine, and 51.37 percent from other states. According to Google Analytics of the website https://dtjournal.org, the *users* were considered as persons who have initiated at least one session during the date range (January 1, 2022 – December 31, 2022).

The year 2022 was also marked by the stabilization of the article publishing charge at the competitive level of $500 US and $250 US,

Kyiv, Ukraine

[a] Chief Editor, *JDTOMP*.

[b] Managing Editor, *JDTOMP*.

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depending on the articles' type. Such step will help publisher to preserve publishing quality, absorb and implement new publishing technologies, and to develop the *Journal* platform more dynamically, which in turn will increase the visibility of articles and, as a result, contribute to the growth of their citations. We deeply believe that the potentiated sum of the above advantages in combination with rigorous peer-reviewing, hard work, and editorial harmony will allow us to achieve such *Journal* goals as coverage by PubMed, Scopus, and obtain first impact factor.

Summing up the year 2022, we would like to express our deep gratitude to the Armed Forces of Ukraine, which protect not only Ukraine, but also the whole world of free Europe, and make the existence and growth of our *Journal* possible.

Victoria Concordia Crescit [Latin].
Victory grows out of harmony.
Motto of the Arsenal Football Club

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BUSINESS: EDITORIAL

Ivan V. Nagorniak, MSc, PhD, *Section Editor*

A Patient-Dentist Treatment Bridge Between Switzerland and Ukraine Despite the Turbulent Times

Ivan V. Nagorniak

… economic growth offered by medical tourism … .[1]
Xu and colleagues, 2021

Dental and medical tourism in a peaceful time is highly popular in the current century of globalization.[1–7] The share of dental tourism is 32 percent of the total number of the international medical tourism market.[8] COVID-19 pandemic made its impact on such type of "treatment travels" requiring safety measures and appropriate travel health insurance.[9] Nevertheless, dental tourism in a wartime is completely unusual and needs to be analyzed. That is why we present a case of such treatment.

An 82-year-old female patient, the resident of Switzerland, received a full circle of dental treatment on the lower jaw (Fig) in our Kyiv-based private practice. The surgical stage of rehabilitation with dental implants was performed in a pre-war period, on January 23, 2022. Two-stage implant surgery technique was applied under sedation, and totally fourteen intraosseous dental implants were placed. The permanent dentures have been produced and fixed in December 2022—a period when the full-scale Russian military invasion into Ukraine has already started and been continued[10,11]. It is important to understand that at the moment of final prosthetic treatment there were no military actions in Kyiv city and the multiple businesses and hotels gradually returned to their pre-war state. Moreover, our practice applies a management system in accordance with the ISO 9001:2015 standard in the field of activity *private stomatological practice* and was certified by TÜV Thüringen e.V. (Jena, Germany) and their intermediary in Ukraine. Certification is performed on annual basis even in a wartime applying the rigorous audit process. Such certification implemented by accreditation institution from a German-speaking state is signalizing to German-speaking patients from the countries like Austria, Germany, Switzerland, and Italy that their health can be trusted to this particular private practice.

It is important to notice, that the difficulty of moving the patient to Kyiv for the second stage of treatment was caused by the fact that the air flights were not possible due to the temporary no-fly zone over Ukraine. Therefore, the partner of our clinic

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E-mail: *ivan.nagorniak@gmail.com*

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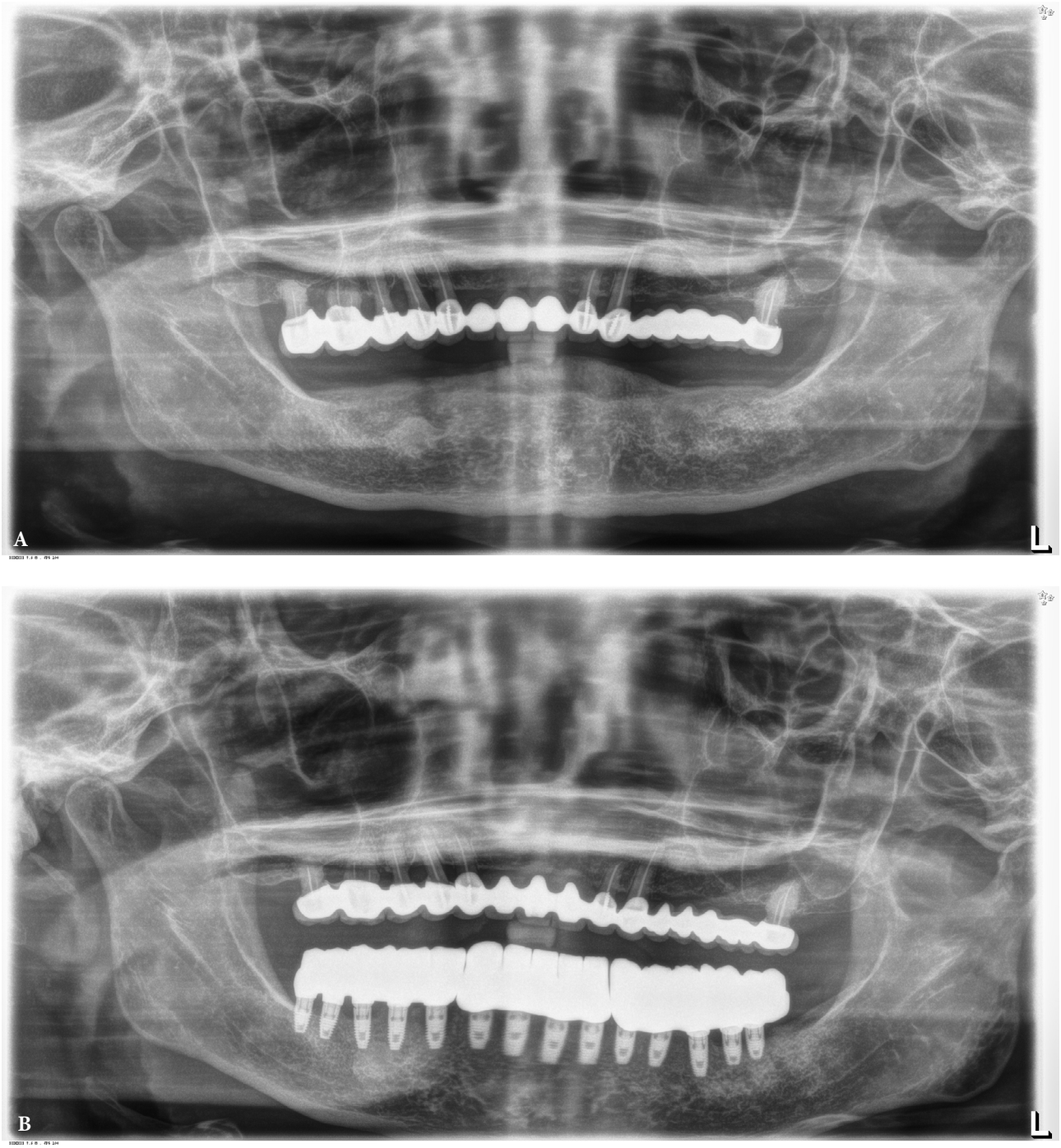

FIGURE. Pre- (**A**) and post-operative (**B**) panoramic radiographs show dental rehabilitation in an 82-year-old patient. Fourteen intraosseous dental implants were placed and three dentures with a screw fixation were produced.

accompanied the patient to the Ukrainian border, and a ground transport was organized throughout the territory of Ukraine.

According to Lwin and colleagues (2021), among all types of dental treatments received by dental tourists, the share of dental implants is taking 24 percent from the total number of dental procedures.[12] And similar dental travel cases are unique in this difficult time for Ukraine and Europe as a whole. We believe that this is not only a case of resilience of the

dental services in Ukraine, a contribution of private practices as part of state economy to the resilience of the national economy, but also an example of integration of Ukraine into the common economic and healthcare space of free and democratic European zone.

Such patient-doctor treatment bridges contribute to the internationalization[13,14] of private practice. Moreover, each of the dental tourist cases contributes to the entry and expansion of private practice to the market of another country. According to the small proportion data, the patient who live in border region between Switzerland and Germany predominantly choose to receive dental treatment in Germany.[15] Simultaneously with that the most popular European destinations for dental tourism—Hungary, Greece, and Poland[16]—nowadays, despite the COVID-19 and wartime periods, Ukraine opens its opportunities in this significant part of medical tourism[12].

In summary, we wish private practice owners to stick to the resilience and perseverance principles in growing their practice and contribution to the people's dental health despite any obstacles.

Thank you to everyone who keeps their businesses running, who keeps jobs so that people can provide for themselves and their families, who pays taxes. Gratitude to all of you!
—Volodymyr Zelenskyy
President of Ukraine as of 308th day of
Russian-Ukrainian war (Dec 28, 2022)

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ORIGINAL

The Impact of the COVID-19 Pandemic on Primary Cleft Surgery

Andi Setiawan Budihardja[1,*] & Adrielle Alpha Lius[2]

ABSTRACT

Objective: The main objective of this study is to evaluate the early effects of the COVID-19 pandemic on primary cleft lip surgeries in a single high-volume center.

Material and Methods: A retrospective comparative cohort study of patients undergoing primary cleft lip and primary cleft palate repair before and during the pandemic was conducted. A sum of 194 patients, comprising of 100 patients taken pre-pandemic, and 94 patients who underwent primary cleft repairs during the pandemic were used in this study. The demographic factor and age groups were compared.

Results: Mean age of primary cleft repair was 6.1 ± 2.9 pre-pandemic (n = 66) and 6.9 ± 4.9 (n = 69) in the pandemic cohort (p = 0.229). The mean age at primary cleft palate repair was 22.3 ± 13.5 (n = 34) pre-pandemic and 23.6 ± 10.7 (n = 25) in the pandemic cohort (p = 0.7).

Conclusion: Primary cleft surgery was not significantly affected by the COVID-19 pandemic. Further studies are required to evaluate the psychological effects of the pandemic to patients and their families.

Keywords: Cleft lip; cleft palate; COVID-19

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INTRODUCTION

COVID-19, or coronavirus disease, is defined as an infectious disease caused by the SARS-CoV-2 virus. People infected with this virus will typically develop mild to severe respiratory illness. In January 2020, the World Health Organization (WHO) declared COVID-19 a global health emergency, and on March 11, 2020, the WHO declared COVID-19 a global pandemic.[1]

In response to tackle the pandemic, countries across the world focused on increasing testing, amplifying PPE (personal protective equipment) supplies, ensuring adequate room and resources in hospitals, implementing health protocols to flatten the curve, and spread of disease, and stringent lockdown policies in some countries.

Hospitals implied a policy that elective and other non-essential surgeries are not done throughout the pandemic as PPE and care units in hospitals became too limited. On April 1, 2020, the American Cleft Palate Craniofacial Association (ACPA) released a statement declaring to delay primary cleft lip surgeries and take into consideration in prioritizing patient and doctor safety when considering whether to do a cleft lip repair[2–4].

The ACPA also recommended to delay any non-urgent intraoral surgeries as such procedures impose risk to virus transmission.

These circumstances have undoubtedly affected cleft lip palate repair surgeries. Cleft lip repairs are typically done when a patient is 3-6 months old, while cleft palate repairs are done when a patient is 1-1.5 years old. This is a critical age to perform repairs because it reduces social stigma on the patients as well as enabling them to eat normally as well as assuring a better speech outcome.

The purpose of this study is to evaluate the early effects of the COVID-19 pandemic on primary cleft surgeries in a single high-volume center. The hypothesis of the study is that the COVID-19 pandemic will cause a delay in primary cleft surgeries.

MATERIAL AND METHODS

The type of study done was an analytic-comparative, categorical, uncoupled with a retrospective cohort design study. This study has been approved by the Faculty of Medicine University of Pelita Harapan ethical committee.

The population group of this study are patients undergoing primary cleft repair and primary cleft palate repair in Siloam Lippo Village Comprehensive Cleft Center, Tangerang, Indonesia. The pre-pandemic cohort included patients who underwent primary cleft lip/palate surgery from 2018-2019. The pandemic cohort included patients who underwent primary cleft lip/palate surgery from 2020-2021. Patients with syndromes and other congenital defects and submucosal cleft palates were excluded from this study.

During the COVID-19 pandemic, all patients admitted went through COVID-19 PCR test screening 2 days before surgery. Patient with positive PCR results is referred to pediatricians to receive further care.

Patient data was obtained from Siloam Hospital Lippo Village, Indonesia electronic medical record database. The data collected included patient demographic data, diagnosis, and type of surgery performed. Surgical delay is defined as the time deviation from standard protocol in the health institution to perform primary lip and primary palate repair surgery. In our health institute, primary lip surgery is done at age 3 months old, and primary palate surgery is done at 1 year old. Any surgical delay not caused by the COVID-19 outbreak is excluded from this study. Demographic data analysis was done using the *Chi-square* method, and patient age group variables during surgical intervention is tested with the *unpaired T*-test using SPSS version 26.0.

RESULTS

A total of 194 patients were involved in this study, of which 100 patients (51.5%) underwent primary cleft surgery before the COVID-19 pandemic, and 94 patients (48.5%) underwent surgery after the COVID-19 pandemic (Table 1). From the 194 patients in this study, 108 samples are male, and 86 samples are female. Based on type of cleft, 29 patients had a cleft lip (27 unilateral cleft lip and 2 bilateral cleft lip), 152 patients with cleft lip and palate (90 patients with unilateral cleft lip palate and 62 patients with bilateral cleft lip palate), and 13 patients with isolated cleft palate.

The 135 patients underwent primary cleft lip surgery, and 59 patients underwent primary cleft palate surgery.

TABLE 1. Patient Demographics.

	Pre-pandemic (n = 100)	Pandemic (n = 94)	*Chi-Square* Test
Gender			
Male	56 (56%)	52 (55.3%)	p = 1.0
Female	44 (44%)	42 (44.7%)	
Diagnosis			
Cleft lip			
Unilateral	17 (17%)	10 (10.6%)	p = 0.335
Bilateral	2 (2%)	0 (0%)	
Cleft lip and palate			
Unilateral	43 (43%)	47 (50%)	
Bilateral	30 (30%)	32 (34.1%)	
Cleft palate	8 (8%)	5 (5.3%)	

Based on gender distinction, there were 56 (56%) male patients and 44 (44%) female patients in the pre-pandemic group, and 52 (55.3%) male patients and 42 (44.7%) female patients in the pandemic group. Demographic data analysis showed no significant difference between gender groups (p = 1.0).

Based on type of cleft, there were 17 (17%) patients with unilateral cleft lip, 2 (2%) patients with bilateral cleft lip, 43 (43%) patients with unilateral cleft lip palate, 30 (30%) patients with bilateral cleft lip palate, and 8 (8%) with isolated cleft palate in the pre-COVID 19-pandemic group. In the COVID-19 pandemic group, there were 10 (10.6%) patients with unilateral cleft lip, zero patients with bilateral cleft lip, 47 (50%) patients with unilateral cleft lip palate, 32 (34.1%) patients with bilateral cleft lip palate, and 5 (5.3%) patients with isolated cleft palate (Table 2). Data analysis using the Chi-square method showed no significant difference between the demographic data (p = 0.035).

TABLE 2. Comparison of Age at Surgical Intervention.

	Mean Pre-pandemic Age, Mo ± SD (n)	Mean Pandemic Age, Mo ± SD (n)	*Unpaired T*-test
Labioplasty	6.1 ± 2.9 (66)	6.9 ± 4.9 (69)	p = 0.229
Palatoplasty	22.3 ± 13.5 (34)	23.6 ± 10.7 (25)	p = 0.7

The mean age of primary cleft repair surgery was 6.1 ± 2.9 in the pre-pandemic (n = 66), and 6.9 ± 4.9 (n = 69) in the pandemic cohort (p = 0.229). The mean age of primary cleft palate repair surgery was 22.3 ± 13.5 (n = 34) in the pre-pandemic and 23.6 ± 10.7 (n = 25) in the pandemic cohort (p = 07). Six patients had surgery postponed due to COVID-19 infection.

DISCUSSION

The COVID-19 pandemic resulted in many elective and other non-essential surgical procedures to be deferred. This is mainly due to limited supply of masks and other personal protective equipment, as well as hospital in-patient care units. Despite a high demand, intraoral surgeries were particularly associated with a high virus transmission risk and therefore not recommended[2,4].

Cleft lip palate repair surgeries were greatly affected by the COVID-19 pandemic in many countries around the world. The ACPA and other professional organizations strictly urged delaying all cleft surgeries. Primary cleft repairs are typically done when a patient is 3 months old if they met the standards of a minimal body weight of 5 kg and hemoglobin (Hb) level of 10. There is currently

limited data on the negative implications of delaying primary cleft repairs.

Palatoplasty procedures should typically be done when a child is 1 year old in the *bubbling phase*. An intact palate can prevent regurgitation during feeding and allow velopharyngeal competence for better speech outcome. Delay closure of cleft palate will result in speech problem and hypernasality.

The results of this study were comparable with the results of similar studies conducted in other parts of the world: deferred primary cleft lip and primary cleft palate repair surgeries during the pandemic. Although there was no significant outcome, the psychological impacts to patients and their families must be considered, especially without knowing when the pandemic would end, and patients under the age of 5 not eligible to receive a COVID-19 vaccine.[5–8]

Other studies, such as the study done by Vander Burg and colleagues (2021) showed that in the period of January to December 2020, the number of cleft repair surgeries declined to as much as 25,444 cases.[6] Patients are predominantly children and added to the number of 60,000 people left with untreated cleft lip palate. January to April 2020 showed the most significant decline in surgeries, while numbers then started to increase over May to December 2020.[6]

Managing cases of postponed cleft lip and palate became challenging for surgeons and hospitals. The psychosocial effects to patients and their families due to this delay requires close monitoring.

CONCLUSION

The COVID-19 pandemic noticeably impacted elective surgical procedures in hospitals. Although the number of surgeries plummeted during the beginning of the pandemic, numbers slowly started rising through the upcoming months as hospitals became more well equipped, personal protective equipment (PPE) became more readily available, and hospital staff adapted to the circumstances of the pandemic.

Further research is needed to better understand what factors affect surgeries during a pandemic, so that the healthcare system may be well equipped and prepared in the event of future disruption such as pandemics, wars, and/or natural disaster.

ETHICS APPROVAL

This study was conducted under the approval of Ethic Committee (No. 094/K-LKJ/ETIK/II/2022) Faculty of Medicine, University of Pelita Harapan, Tangerang, Indonesia.

CONFLICT OF INTEREST

The authors declare that there is no potential conflict of interest relevant to this article.

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