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Journal of

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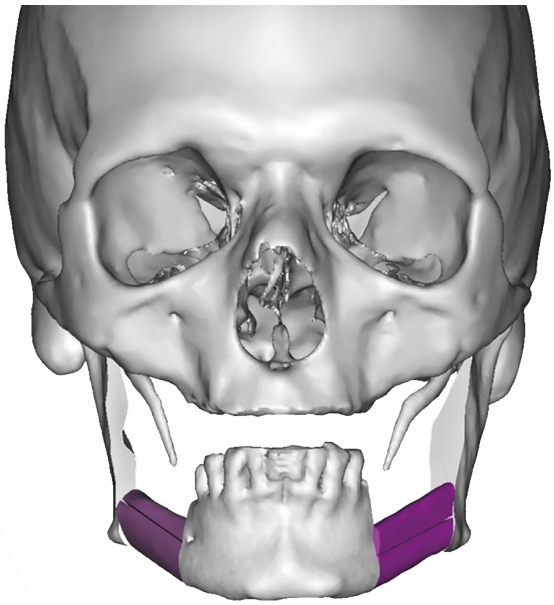
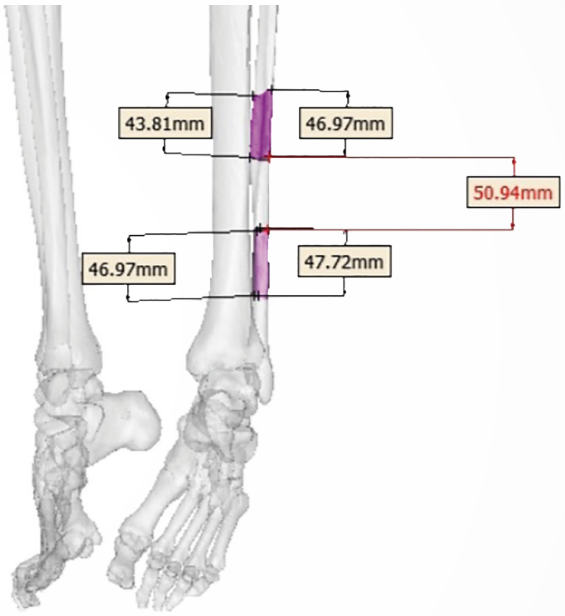
of Oral & Maxillofacial Pathology

1 2019





Section Editor
Head & Neck Oncological Surgery
Todd Hanna (New York, NY, USA)

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Goals & Scope

Journal of Diagnostics & Treatment of Oral & Maxillofacial Pathology goals to publish the cutting-edge and peer-reviewed articles on work in oral and maxillofacial surgery and neighboring specialties. The journal includes the following topics: implants surgery, head and neck imaging, microvascular and reconstructive surgery, oral and maxillofacial pathology, head and neck surgery/oncology, TMJ lesions/disorders, head and neck trauma, plastic surgery, pharmacology/drugs.

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Editorial Board

Continued from page EB A2

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.

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Content

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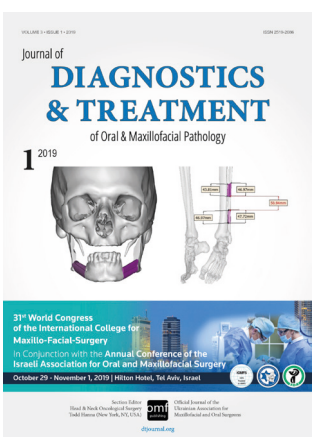

Journal`s cover images
(virtual surgical planning for a bilateral segmental mandibular reconstruction with single fibula segmented transplants) are courtesy of:

Todd Hanna, MD, DDS, FACS (on the *upper image)*

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WELCOME LETTER

Dear Colleagues,

Tradition and progress coming together.

Maxillofacial surgery is one of the most diverse and challenging professions. We operate while influencing on a person's facial appearance, some of the times unintentionally while at other times in order to improve appearance. We treat bony tissue and soft tissue, functional structures and aesthetic structures, healthy people and sick ones, children and adults. Our field includes numerous procedures; from minor oral surgery and implantology up to major head & neck surgery and reconstruction.

Due to the diversity of our field, an increased number of technological developments are introduced constantly, starting from minimal invasive endoscopic instrumentation up to virtual 3D pre planning of operations and personalized surgical guides and implants.

Research is an important part of our field and completes the clinical activity.

All of the above require us to exchange experiences and developments in our field in order to allow the best possible care for our patients.

In light of the importance of these scientific meetings it is my pleasure to invite you to the 31st World Congress of the International College for Maxillo-Facial-Surgery (ICMFS), which will be held in Tel Aviv, Israel between the 29th of October and the 1st of November 2019 (www.icmfs2019.com).

This congress will include keynote lectures from some of the most experienced and well known surgeons of our field.

In addition, we want this congress to act as a platform for all of you to exhibit your experience as well as your research accomplishments while conducting discussions to improve you as a clinician and researcher.

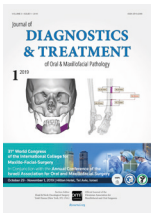
In this congress you will be exposed to keynote lectures, oral presentations, poster presentations, masterclasses, panel discussions, evening receptions and more. You will get the chance to meet new people in your field and form collaborations.

You will have the opportunity to see Israel with all of its historical past and numerous beaches and cultural experience as well as great food and great weather.

We are looking forward to meet you all in the congress and have a wonderful time together in Israel.

Adi Rachmiel, Professor
President, 31st ICMFS World Congress 2019

Dr. Yoav Leiser
President Elect, Israeli Association for Oral and Maxillofacial Surgery



REVIEW *of*
EVENT

Visiting Professorship in Jacksonville—Leo and Hilary Cheng: Life-saving Surgeries on the Waves March, 2018

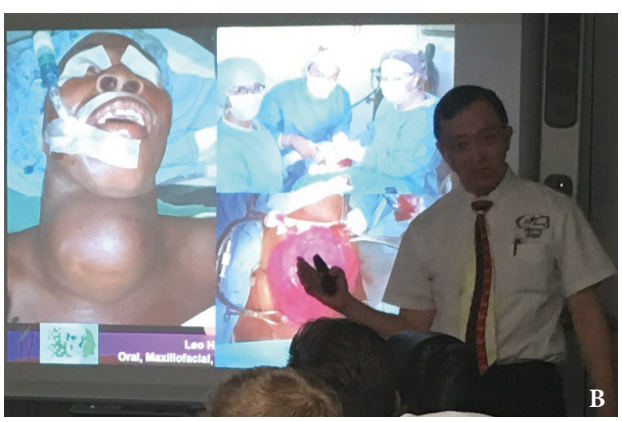


FIGURE. (**A**, **B**) Lecture of Dr. Leo and Hilary Cheng in Oral & Maxillofacial Surgery Department, University of Florida College of Medicine, Jacksonville, FL, USA; March, 2018.

"*The purpose of human life is to serve, and to show compassion and the will to help others.*"
—Albert Schweitzer
Alsatian theologian, organist, writer, humanitarian, philosopher, & physician

Dr. Leo H-H Cheng and his wife Hilary Cheng burned a fire in our hearts. Fire of the great need to help others in any possible way. And we, as the surgeons, can do this not only on the land in our surgical departments and hospitals, but on the waves as well. During the annual trips, Dr. Cheng works on board the world's largest non-governmental hospital ship, the Africa Mercy [1]. Mercy Ships are the places in which the physicians and nurses from different counties are giving their best to the poorest people on the continent [1]. But Mercy Ships doesn't just take doctors and nurses – the ship is a small city, with cooks, teachers, receptionists, mechanics, IT specialists, engineers and cleaners [2]. Dr. Cheng performs a lot of the life-saving surgeries in a head and neck area together with colleagues from neighboring specialties.

The example of Dr. Leo and Hilary Cheng during their lectureship program in Jacksonville (Fig) gave us so many inspiration to support others around the globe with our surgical skills. And no matter how small or big amount of help each of us can bring into that world. Mercy Ships are the precise places in which our help will bring so many happines for needy patients.

"Miraculous work of the Mercy Ships."
—Leo H-H Cheng

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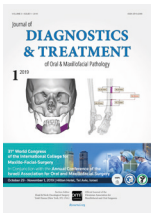

REVIEW *of*
EVENT

1st Kyiv Round Table Dedicated to TMJ Fractures Treatment (1st Kyiv TMJ Round Table) 27, 28 December 2018 – Kyiv – Ukraine

"The aim of argument, or of discussion, should not be victory, but progress."
—Joseph Joubert
French moralist and essayist

1st Kyiv Round Table (RT) dedicated to temporomandibular joint (TMJ) fractures treatment was extremely successful. And it`s symbolic that initiative of Professor Kopchak, Associate Professor Chepurnii, and Professor Ankin to establish TMJ RT was supported by world titan in the diagnostics and treatment of TMJ fractures–Dr. Andreas Neff (Marburg, Germany).

Andreas Neff, MD, DMD, Univ. Prof. is Head and Chairman the Department of Oral and Craniomaxillofacial Surgery, Oral Surgery and Implantology UKGM GmbH, University Hospital of Marburg & Medical Faculty, Philipps University Marburg [1].

Simultaneously Neff serves as:

1. Coordinator TMJ surgery guidelines of the German Society of OMFS Surgeons (DGMKG).
2. TMJ, SORG (Strasbourg Osteoynthesis Research Group).
3. Head of the IBRA Educational Board (International Bone Research Association, Basle-CH).

Also, a huge amount of cutting-edge peer-reviewed articles in the journals like *Journal of Craniomaxillofacial Surgery* [2-4], *Craniomaxillofacial Trauma & Reconstruction* [5], *American Journal of Otolaryngology* [6], *British Journal of Oral and Maxillofacial Surgery* [7], etc. makes Dr. Neff as opinion world leader in area of TMJ fractures treatment. Special attention among numerous publications should be paid to the Chapter *Surgical Treatment of Condylar Head Fractures* in the textbook *Fractures of the Mandibular Condyle: Basic Considerations and Treatment* (editors – Kleinheinz and Meyer, 2009) (Fig 1) [8]. And of course one of the core papers is *The Comprehensive AOCMF Classification System: Condylar Process Fractures – Level 3 Tutorial* (2014) [5].

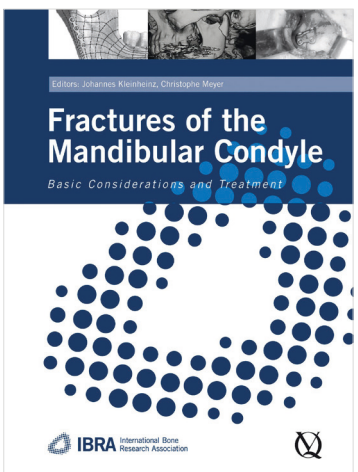

FIGURE 1. Cover page of textbook *Fractures of the Mandibular Condyle: Basic Considerations and Treatment* [8].

Event Presentation

Dr. Neff`s brilliant lecture *Fractures of the Mandibular Condyle: Surgical Approaches, Strategy and Choosing Optimal Fixation Technique* a day before the Round Table, at December 27, gathered a large number of visitors in the Bogomolets National Medical University. At first part of December 28 Dr. Neff performed a state-of-the-art masterclass in the operating room. Perfect timing, technique and academic principles upon TMJ surgery using retroauricular transmeatal approach impressed all the colleagues.

So, finally, the TMJ Round Table (*synonym*: grand rounds [6]) happened in a warm atmosphere in Kyiv Regional Clinical Hospital (Figs 2, 3) uniting the 19 professionals from 3 different universities and 6 different

hospitals (Fig 4). Case reports, questions, hot disputes all that made the 1st Kyiv TMJ Round Table a so much needed event. *"I`m impressed with a big amount of open mind specialists in Kyiv,"* – Professor Neff summarized. But the one question is staying the most intriguing–how soon the 2nd TMJ RT will happen.

Conclusions of Event

The 1st Kyiv TMJ Round Table showed us how a state-of-the-art round table can and should be organized:

1. Launching a new scientific meeting it`s a correct way to build a meeting around opinion leader of the meetings topic.
2. Key lecture and surgical masterclass before the round table increase understanding concepts of invited speakers and educated visitors for the new approaches.
3. It is important to invite professionals of different generations and from different institutions for a versatile discussion.
4. Democratic atmosphere of the meeting helps to uncover the possibility of diverse Round Table.

FIGURE 2. Case presentations (**A-D**) upon Round Table and discussion with an audience.

FIGURE 3. Discussion (Dr. Chepurii *on the left*, Dr. Neff *in the middle*, and Dr. Kopchak *on the right*) about the strategy of coronoid process and hypertonicity of temporal muscles in case of deforming osteoarthrosis and TMJ replacement surgery.

FIGURE 4. Group picture with Andreas Neff, MD, DMD (Marburg, Germany) after Round Table (RT) dedicated to TMJ fractures treatment. December 28, 2018; Kyiv Regional Clinical Hospital, Kyiv, Ukraine. RT has united professionals from 3 different universities and 6 different hospitals.

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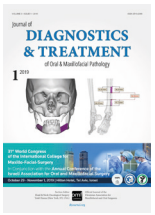

REVIEW *of*
EVENT

2nd International Symposium on Medication Related Osteonecrosis of the Jaws (MRONJ) in Copenhagen 02 November 2018 – Copenhagen – Denmark

"Good directors don't answer questions with their work. They generate debate and create discussion."
—Alejandro Gonzalez Inarritu
Film director who won 5 Oscars

2nd International Symposium on Medication Related Osteonecrosis of the Jaws (MRONJ) in Copenhagen became a much needed continuation of an amazing initiative of the Department of Oral Maxillofacial Surgery of Rigshospitalet (Copenhagen University Hospital) [1]. And it would be completely impossible without those famous scientists like Morten Schiodt (Denmark), Sven Otto (Germany), Alberto Bedogni (Italy), Ourania Nicolatou-Galitis (Greece), Stefano Fedele (England), Roman Guggenberger (Switzerland), Bente Brokstad Herlofson (Norway), Camilla Ottesen (Denmark), Sanne Werner Moller Andersen (Denmark), and Thomas Kofod (Denmark) [2].

Dr. Sven Otto (editor) and Dr. Stefano Fedele (co-editor of the chapter) made an enormous contribution in the field of diagnostics and treatment of MRONJ by publishing the textbook *Medication-Related Osteonecrosis of the Jaws: Bisphosphonates, Denosumab, and New Agents* (Fig 1) in 2015 [3]. And impact of those specialists on Symposium was terrific.

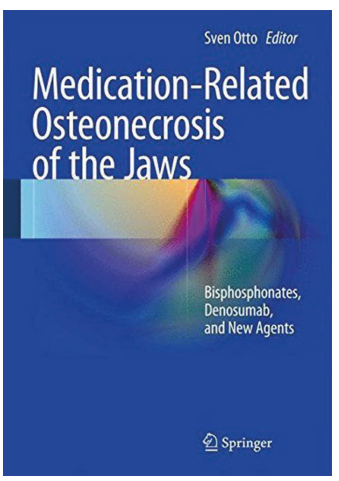

FIGURE 1. Cover page of the textbook *Medication-Related Osteonecrosis of the Jaws: Bisphosphonates, Denosumab, and New Agents* [3].

Event Presentation

Dr. Morten Schiodt, as Chairman of the Symposium (Fig 2) [4], with his team has done a crucial and titanic work in organization the meeting and it`s state of the art performance.

Dr. Schiodt`s CV includes a position of a Chairman of the Department of Oral & Maxillofacial Surgery, Copenhagen University Hospital 2001-2011. He served as President of the Danish Association Oral & Maxillofacial Surgery for 6 years (1984-1986 and 1989-1991), President of the Danish Society of Oral & Maxillofacial Surgery for 6 years (1996-2002), Associate Professor in University of California (San Francisco, USA, 1986-1989). Moreover, Dr. Schiodt is a scientific reviewer of 13 international Journals and director of SICCA-Denmark founded in 2003, part of NIH-funded multicenter project leading to new classification of Sjogren's Syndrome. Dr. Schiodt is author and co-author of 186 publications [5-9].

Present positions of Dr. Schiodt [2]:

- Senior Maxillofacial Consultant at Department of Oral & Maxillofacial Surgery, Copenhagen University Hospital (Rigshospitalet), Denmark.
- 2003 – now: Director of SICCA Denmark. Part of multinational Sjogren project.

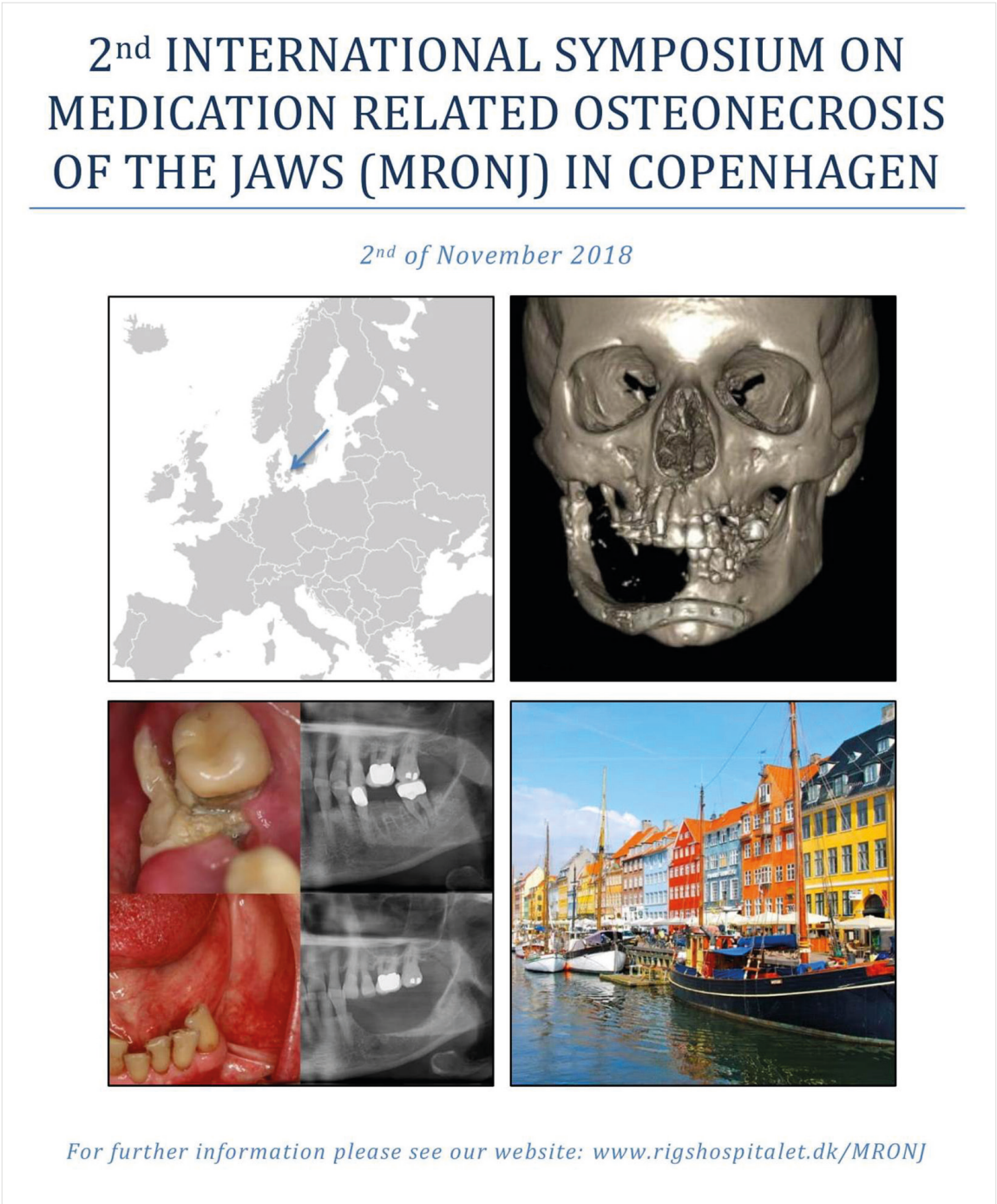

FIGURE 2. Cropped cover page of official materials of the 2nd International Symposium on MRONJ in Copenhagen [2].

- 2010 – now: Director of Osteonecrosis Research at Copenhagen University Hospital, Denmark.
- 2010 – now: Director of Copenhagen ONJ Cohort (288 patients).
- 2011 – now: Scandinavian Coordinator for Scandinavian ONJ Database (Amgen XGEVA-363-study). 1000 patients enrolled.
- 2014 – now: European Lead Investigator for a Global Multicenter Case registry ONJ study (Amgen 2010-1102 study), 64 sites, 275 patients enrolled.

Such a huge academic and organizational experience of the Chairman together with a fantastic work and performance of every speaker continue to make that annual Symposium a new brightly lit road in the darkness of important problems in diagnostics, treatment and preventive measures of MRONJ.

Finally, it`s an extremely important aspect of every scientific meeting – a place and atmosphere of the event. A lot of studies (Porto *et al*, 2014; Dimou *et al*, 2016; Rosenbluth *et al*, 2017) proved that oral and maxillofacial

surgeons are staying in the burnout syndrome group [10-12]. And it`s so helpful for colleagues upon the event to visit and relax in a magnificent Copenhagen (Fig 3) with its history, design, spirit, and amazing people.

Conclusions of Event

The 2nd International Symposium on MRONJ in Copenhagen teaches us the next important things:

1. Perfect location of the Symposium (in the heart of Europe) makes it an extremely comfortable for quick flying from other European countries (2-2.5 hours Kyiv-Copenhagen fly).
2. A 24-hour work of a Copenhagen's metro, its connection with airport and Baltic sea makes a city travel 1) comfortable in any period of the day, 2) saves money.
3. Registration fees for a one-day MRONJ Symposium was not huge (140 euro for dentists/doctors/others and 90 euro for students/trainees), what makes it much more affordable than 4-days meetings.
3. Such a narrow-field Symposium can precisely help you to find a world famous opinion leaders, possible co-authors, advisors, mentors, and friends.
4. When opinion leaders in some field like Dr. Morten Schiodt and Dr. Sven Otto are organizing a scientific meeting, its success is guaranteed.
5. Warm atmosphere of the Symposium and beauty of the Copenhagen helped for medical specialists to decrease the sings of burnout syndrome after a hard work.

And a final opinion is next: the 3rd MRONJ Symposium in 2020 should be definitely visited not only because of extremely beautiful Copenhagen, but according to huge actuality and so much needed cutting-edge MRONJ events.

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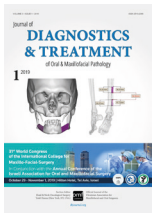
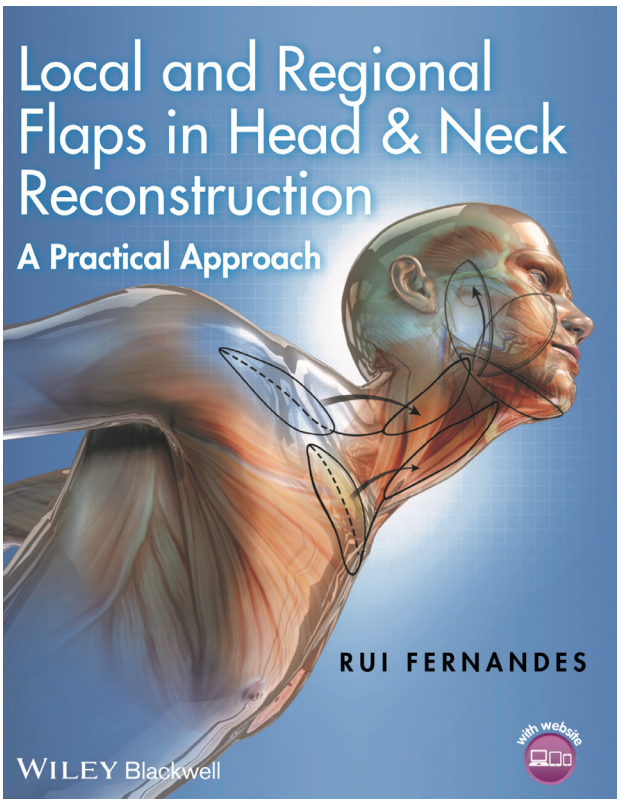


BOOK
SCAN

Local and Regional Flaps in Head & Neck Reconstruction: A Practical Approach

by Rui P. Fernandes

Ames, Iowa, USA: Wiley-Blackwell, 2015, pp. 263, $127.24



"A good surgeon doesn't just concentrate on technical ability, but also on the appropriateness of what you're doing."
— Ben Carson
Politician, author, & former neurosurgeon,
17th and current USA Secretary
of Housing & Urban Development

The advances in reconstructive surgery in recent decades are mainly due to the expansion of the use of free microvascular flaps. However, local and regional flaps still play as important role in the restoration of postoperative head and neck defect as free flaps. The book offers an overview of various local and regional flaps, relevant anatomy, harvesting techniques, the pros and cons. It also addresses surgical complications and methods of the prophylaxis.

The author provides original techniques for plastic reconstruction of defects in the skin and soft tissues of the head and neck, oral cavity, oral pharynx, and laryngeal pharynx. The techniques descriptions are accompanied by excellent case studies. Undoubtedly, the book will broaden the outlook of surgeons involved in treatment of head and neck tumors and will help determine the optimal reconstructive technique to achieve maximum functional rehabilitation, quality of life and cosmetic outcomes.

In conclusion, the book will be a useful guide for oncologists, maxillofacial surgeons, otolaryngologists and other medical professionals.

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Book Preview

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Original Article

Transition from the French-language to the Exclusively English-language Journal Dedicated to Oral and Maxillofacial Surgery: The Transition`s Impact on Journal`s Growth, Internationalization, and Academic Career*

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ABOUT ARTICLE

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SUMMARY

Journal of Stomatology, Oral and Maxillofacial Surgery is a bimonthly peer-reviewed French publication which exists since 1874 [3]. The purposes of this paper are: *1)* to analyze the publication history of the core French journal from its foundation in 1894 till nowadays, *2)* to study a transition period of changing the Journal`s language from French to English, *3)* to understand the arguments for the language transition, and *4)* to analyze the immediate positive results of the transition in a 2-year follow-up period.

There are about 275 million French speakers around the globe [1]. And the population of France is approximately 67.2 million people and it continues to grow [2]. The core French journal dedicated to oral and maxillofacial surgery (OMS) is an English-language publication – *Journal of Stomatology, Oral and Maxillofacial Surgery* (JSOMS) which exists since 1874 [3]. JSOMS is a bimonthly peer-review publication and official publication of the:

1. French Society of Stomatology Maxillofacial Surgery and Oral Surgery (Société Française de Stomatologie Chirurgie Maxillo-Faciale et de Chirurgie Orale – SFSCMFCO).
2. Swiss Society of Oral and Maxillofacial Surgery (Société Suisse de Chirurgie Orale et Maxillo-Faciale – SSOMFS/SSCOMF/SGMKG).

Also, the Journal is affiliated with the Belgian, the Moroccan, Romanian and Tunisian Societies. So what was the historical and lingual way of OMS Journal of one of the most populated and economically developed European country?

The purposes of this paper are: *1)* to analyze the publication history of the core French journal from its

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foundation in 1894 till nowadays, *2)* to study a transition period of changing the Journal`s language from French to English, *3)* to understand the arguments of editorial team for the language transition, and *4)* to analyze the immediate positive results of the transition in a 2-year follow-up period.

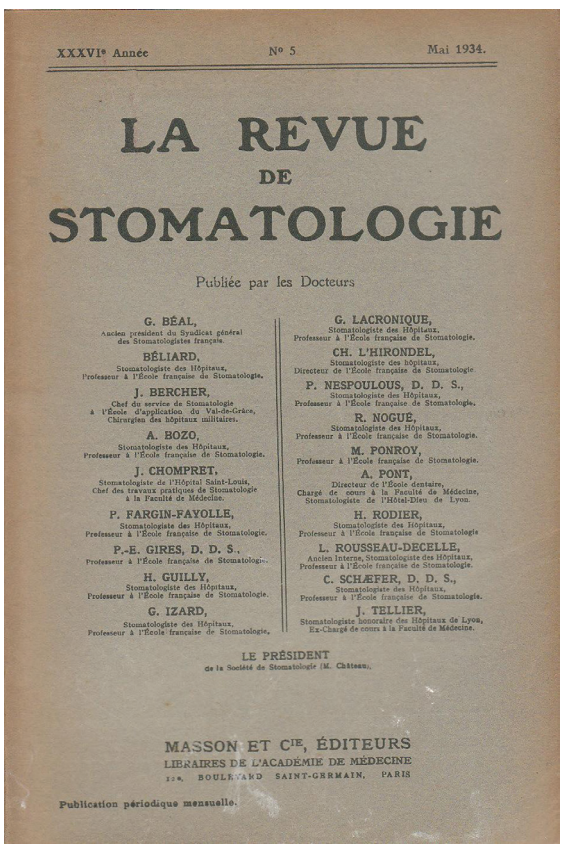
Presentation of the Journal

REVUE MENSUELLE DE STOMATOLOGIE

According to Editorial of Leger (2016), Journal was launched by Eugene Magitot in 1874 [3]. Issues for 1894-1898 had a title: *Revue mensuelle de stomatologie* (Table 1) [4].

LA REVUE DE STOMATOLOGIE

From 1898 to 1968 the Journal was published with a title *La revue de stomatologie* [5]. Journal (Fig 1) was an official organ of Société de Stomatologie de France from 1948 to 1954, and of the Société de Stomatologie et de Chirurgie Maxillo-faciale de France from 1954 to 1968.


XXXVIe Année — N° 5 — Mai 1934.

LA REVUE DE STOMATOLOGIE

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LE PRÉSIDENT de la Société de Stomatologie (M. Château).

MASSON ET Cie, ÉDITEURS
LIBRAIRES DE L'ACADÉMIE DE MÉDECINE
120, BOULEVARD SAINT-GERMAIN, PARIS

Publication périodique mensuelle.

FIGURE 1. Editorial Board page of the monthly publication – *La revue de stomatologie*. Issue 5, 1934.

REVUE DE STOMATOLOGIE ET DE CHIRURGIE MAXILLO-FACIALE

From 1968 the publication *La revue de stomatologie* was renamed into *Revue de Stomatologie et de Chirurgie Maxillo-faciale* (Fig 2B) (Journal's title from 1968 to 2012) [6].

In 2012, the editorial team of *Revue de Stomatologie et de Chirurgie Maxillo-faciale* noted in the Editorial next important points [7]:

1. Despite of being a French Journal, it publishes articles in the English language and for a long time (from 2009).
2. Using online submission, articles from many French-speaking countries (Switzerland, Belgium, Tunisia, Morocco, Algeria, Africa, Canada) are submitted.
3. Impressed that authors from non-French speaking countries (China, Germany, Italy, Brazil, Austria, etc.) are also beginning to submit.
4. Increase in the number of articles published in English will whine the supporters of the "all French", but should allow increasing the Impact Factor of the *Journal*.

REVUE DE STOMATOLOGIE ET DE CHIRURGIE MAXILLO-FACIALE AND *IMPLANTODONTIE*

Other French Journal, *Implantodontie* (Fig 2A), was incorporated into a Journal – *Revue de Stomatologie et de*

Chirurgie Maxillo-faciale at the end of 2005 (Fig 2) after 14 years of publishing (from 1991). And from 2006 *Revue de Stomatologie et de Chirurgie Maxillo-faciale* received a word `*Implantologie*` (Fig 3) below the title as indication of the incorporation.

According to Cantaloube and Bettega (2006), the decision of editorial office about incorporation of the *Implantodontie* based on several reasons [8]. The key of which were:

1. After the incorporation, the Journal and its content will become more competitive.
2. The Journal *Revue de Stomatologie et de Chirurgie Maxillo-faciale* has already expanded its readership to the entire Francophone community.

FIGURE 2. Cover of the *Implantodontie* (**A**) before incorporation in 2005 into a Journal – *Revue de Stomatologie et de Chirurgie Maxillo-faciale* (**B**).

REVUE DE STOMATOLOGIE ET DE CHIRURGIE MAXILLO-FACIALE ET DE CHIRURGIE ORALE

From 2013 to the last Issue of 2016, the Journal had a title *Revue de Stomatologie, de Chirurgie Maxillo-faciale et de Chirurgie Orale* (Fig 4).

In 2011, the French qualification in Oral Surgery was created. This major change in the French healthcare system invigorates the need for a major overhaul of its institutions. Therefore, the French Maxillofacial Society as the National Scientific Maxillofacial Journal changes their names. In France, Oral Surgery's purpose was to replace Stomatology to balance the lack of equivalence within the European Union as Stomatology doesn't exist in the vast majority of European countries as a specialty of the curriculum in medicine. Oral surgery diploma can be obtained in France from dental student (5th grade) as medical students (6th grade). But an oral surgeon will not be able to obtain the qualification in Oral and Maxillofacial surgery, and therefore will not be able to have a practice outside of the oral cavity, as it is a specialty from the medical field with a complete different training program, which is equivalent to any other medical surgical specialty in France.

Motivation criteria for transition from French to exclusively English-language Journal were precisely described by Leger in 2016 [3]:

1. Transition will allow the publication of works by French teams engaged in international competition to be better disseminated (more articles, appearing quickly).
2. The publication in English is a continuation of the stated ambition of a journal serving its discipline and wishing to make a place for itself in France and in the world.
3. In terms of visibility and dissemination, the language change will allow, through the indexing services (including PubMed/Medline), the immediate identification of items in JSOMS, being in English.
4. On the content platforms (e.g., ScienceDirect) and via the social networks, such as the hosting and sharing sites (such as Mendeley), more items will be viewed and downloaded.

JOURNAL OF STOMATOLOGY, ORAL AND MAXILLOFACIAL SURGERY

Editor in Chief of the Journal Prof. Christophe Meyer in Editorial "A new year, a new journal, new ambitions" (2017) reported that: *1)* Journal received new English title (Fig 5), *2)* English has become their official and exclusive language of publication and also noticed next statements [9]:

1. Promotion of *francophonie* does not only mean publishing in French language but also consists in a diffusion of the work French surgical teams produce as large as possible.
2. The transition to English will help the medical students to validate more easily the prerequisites needed for an academic carreer in France.
3. One of these academic prerequisites, according to Meyer, being the publication of a certain number of publications precisely in international indexed English-language journals.
4. This not just a shift to English, this is a shift to English

as the universal scientific language.
5. Strong internationalization of the journal is noted. Since September 2016, manuscripts coming more and more from non-French speaking countries.
6. An 18% increase of submissions in the last 4 months of 2016 compared to 2015 was noted. That fact enables the editorial board to select the best manuscripts to be published.

All these efforts (changing the title, transition to English-language Journal) of the editorial team and a publisher were the price to pay for an increase the Journal's Impact Factor and to establish a new growth for the publication [9].

Generally, with a new title in 2017 only three first issues have a small quantity of French-language articles (Table 2). And officially starting from 4th Issue (Volume 118, 2017) the Journal published only English-language content (Table 2).

In 2018 Meyer noted, that transition from a French-language Journal towards a fully English-language journal brought a lot of positive results [10]:

1. Ensured the optimal worldwide dissemination of our authors' works.
2. After the transition the Editorial Board have recorded a sharp increase in the number of submissions of about 60%.
3. Articles have come from over 20 countries.
4. The quality of the papers has improved markedly.
5. Article downloads have risen significantly.
6. These results strongly suggest an increase in the Impact Factor (IF) of the JSMOS over the next few years.

TABLE 1. Historical Changes of the *Journal`s* Title and a Language of Publication From 1894, the Year of Foundation, to Nowadays, 2019.

#	Years	Evolution of the *Journal`s* Title	*Journal`s* Language
1	1894–1898	*Revue mensuelle de stomatologie*	French
2	1898–1968	*Revue de stomatology (La revue de stomatology)*	French
3	1968–2013	*Revue de Stomatologie et de Chirurgie Maxillo-faciale*	French
4	2013–2016	*Revue de Stomatologie, de Chirurgie Maxillo-faciale et de Chirurgie Orale*	French and English
5	2017–now	*Journal of Stomatology, Oral and Maxillofacial Surgery*	English

TABLE 2. Period 2009-2017: 8-Year Transition From French to English-Language Articles in the *Revue de Stomatologie et de Chirurgie Maxillo-faciale* (*Journal`s* Title From 1968 to 2012), *Revue de Stomatologie, de Chirurgie Maxillo-Faciale et de Chirurgie Orale* (*Journal`s* Title From 2013 to 2016), and *Journal of Stomatology, Oral and Maxillofacial Surgery* (*Journal`s* Title From 2017–Now) [6].
(Table 2 continued on next page)

	Total Amount of Articles in Issue	Articles in French	Articles in English	Bilingual Articles (Simultaneously in French and English)
Revue de Stomatologie et de Chirurgie Maxillo-faciale (*Journal`s* title from 1968 to 2013)				
Volume 110, issue 1, 2009	15	15	-	-
Volume 110, issue 2, 2009	17	17	-	-
Volume 110, issue 3, 2009	13	13	-	-
Volume 110, issue 4, 2009	16	16	-	-
Volume 110, issue 5, 2009	16	16	-	-
Volume 110, issue 6, 2009	18	18	-	-
Volume 111, issue 1, 2010	15	15	-	-
Volume 111, issue 2, 2010	19	16	3	-
Volume 111, issue 3, 2010	19	18	1	-
Volume 111, issue 4, 2010	17	15	2	-
Volume 111, issue 5-6, 2010	20	20	-	-
Volume 112, issue 1, 2011	11	11	-	-
Volume 112, issue 2, 2011	16	15	1	-
Volume 112, issue 3, 2011	19	18	1	-
Volume 112, issue 4, 2011	10	10	-	-
Volume 112, issue 5, 2011	16	16	-	-
Volume 112, issue 6, 2011	16	15	1	-

TABLE 2 (cont'd). Period 2009-2017: 8-Year Transition From French to English-Language Articles in the *Revue de Stomatologie et de Chirurgie Maxillo-faciale* (*Journal`s* Title From 1968 to 2012), *Revue de Stomatologie, de Chirurgie Maxillo-Faciale et de Chirurgie Orale* (*Journal`s* Title From 2013 to 2016), and *Journal of Stomatology, Oral and Maxillofacial Surgery* (*Journal`s* Title From 2017–Now) [6]. **(Table 2 continued on next page)**

	Total Amount of Articles in Issue	Articles in French	Articles in English	Bilingual Articles (Simultaneously in French and English)
Volume 113, issue 1, 2012	20	20	–	–
Volume 113, issue 2, 2012	16	16	–	–
Volume 113, issue 3, 2012	14	13	1	–
Volume 113, issue 4, 2012	15	15	–	–
Volume 113, issue 5, 2012	17	16	1	–
Volume 113, issue 6, 2012	15	14	1	–
Revue de Stomatologie, de Chirurgie Maxillo-faciale et de Chirurgie Orale (*Journal`s* title from 2013 till the end of 2016)				
Volume 114, issue 1, 2013	13	11	2	–
Volume 114, issue 2, 2013	17	16	1	–
Volume 114, issue 3, 2013	20	16	4	–
Volume 114, issue 4, 2013	12	12	–	–
Volume 114, issue 5, 2013	13	9	4	–
Volume 114, issue 6, 2013	11	11	–	–
Volume 115, issue 1, 2014	19	15	4	–
Volume 115, issue 2, 2014	19	17	2	–
Volume 115, issue 3, 2014	13	13	–	–
Volume 115, issue 4, 2014	10	9	1	–
Volume 115, issue 5, 2014	17	15	2	–
Volume 115, issue 6, 2014	16	15	1	–
Volume 116, issue 1, 2015	12	10	2	–
Volume 116, issue 2, 2015	16	16	–	–
Volume 116, issue 3, 2015	13	13	–	–
Volume 116, issue 4, 2015	13	12	1	–
Volume 116, issue 5, 2015	10	8	2	–
Volume 116, issue 6, 2015	14	11	3	–
Volume 117, issue 1, 2016	13	11	2	–
Volume 117, issue 2, 2016	15	13	2	–
Volume 117, issue 3, 2016	19	16	3	–
Volume 117, issue 4, 2016	19	19	–	–
Volume 117, issue 5, 2016	13	6	6	1 (Editorial)
Volume 117, issue 6, 2016	18	17	1	–
Journal of Stomatology, Oral and Maxillofacial Surgery (*Journal`s* title from 2017 till now)				
Volume 118, issue 1, 2017	15	5	10	–
Volume 118, issue 2, 2017	16	8	8	–
Volume 118, issue 3, 2017	14	–	13	–
Volume 118, issue 4, 2017	13	–	13	–
Volume 118, issue 5, 2017	18	–	18	–
Volume 118, issue 6, 2017	17	–	17	–
Volume 119, issue 1, 2018	22	–	22	–
Volume 119, issue 2, 2018	21	–	21	–

FIGURE 3. Cover of the French language Journal – *Revue de Stomatologie et de Chirurgie Maxillo-faciale* (Volume 109, Issue 5, November 2008) with a word Implantologie below the title what is indicated about incorporation of other French Journal, *Implantodontie*, with *Revue de Stomatologie et de Chirurgie Maxillo-faciale*.

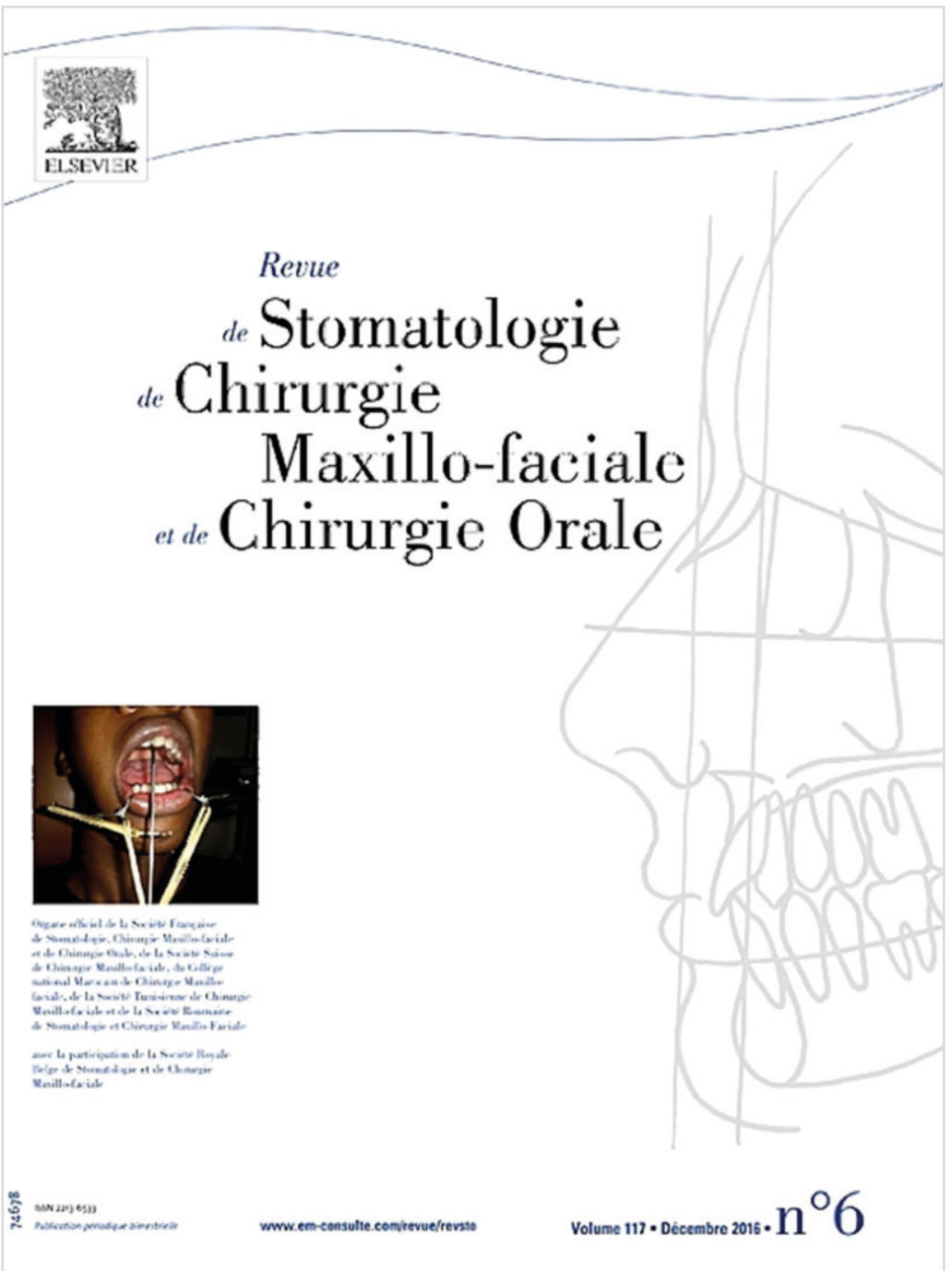

FIGURE 4. Cover of the French language Journal – *Revue de Stomatologie, de Chirurgie Maxillo-faciale et de Chirurgie Orale* (Volume 117, Issue 6, December 2016) at final stage of language transition into completely English version from 2017 (Journal `s title from 2017 – *Journal of Stomatology, Oral and Maxillofacial Surgery*).

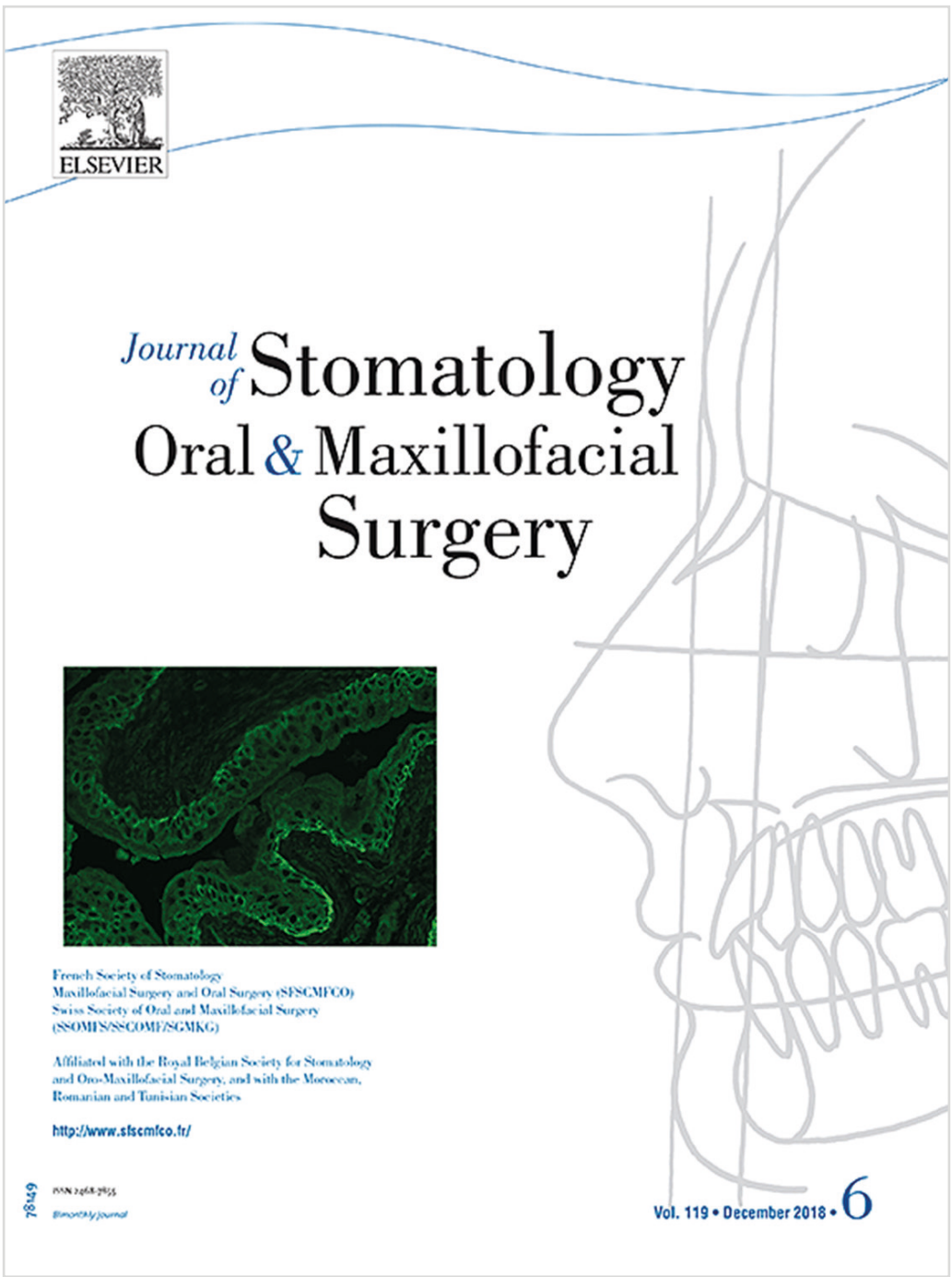

FIGURE 5. Cover of *Journal of Stomatology, Oral and Maxillofacial Surgery* (Volume 119, Issue 6, December 2018) after the language transition into completely English version from 2017 (Journal `s title from 2013 till the end of 2016 was *Revue de Stomatologie, de Chirurgie Maxillo-faciale et de Chirurgie Orale*).

Results

According to our study of the long, majestic, and successful history of the core French Journal dedicated to oral and maxillofacial surgery we received next results:

1. During the Journal`s 125-year history (from 1894) the Journal have 5 different titles (Table 1) and current title is an English-language title.
2. In 2005, another Journal, *Implantodontie*, dedicated to implants and dentistry was incorporated into *Revue de Stomatologie et de Chirurgie Maxillo-faciale* [8].
3. Language transition of the Journal from French to English took place within 8 years, from 2010 to 2017.
4. The language transition of the famous French OMS Journal proved the last world tendency similar to language transition of both South Korean OMS journals in 2012 and 2014 [11, 12].

Conclusions

Disadvantages of transition from national-language journal to fully English-language journal:

1. The transition can be a painful process for the readers and authors of native language.

Advantages of transition from French-language to fully English-language journal:

1. Worldwide dissemination of our authors' works. Downloads of papers can rise significantly.
2. A sharp increase in the number of submissions of about 60% can be achieved taking into account French journal experience.
3. Increased number of submissions enables to select the cutting-edge manusrcripts to be published.
4. The transition is strongly suggesting an increase in the Impact Factor.
5. Strong internationalization of the journal would be achieved.
6. The transition to English can help in prerequisites during OMS residency training programs and academic career.

Role of the Co-authors

All authors are equally contributed to that article. All authors read and approved the final manuscript.

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Original Article

Endovascular Embolization of Facial Artery Pseudoaneurysm following Lancing of a Subperiosteal Abscess: Case Report*

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SUMMARY

Pseudoaneurysms of the facial artery are the rare complications of traumatic injuries and surgical interventions in the area of head and neck. One of the vessels of the external carotid system, which suffers from this pathology most frequently, is the facial artery. The article describes a clinical case of the facial artery pseudoaneurysm, which was formed as a result of subperiosteal abscess lancing (synonym: periosteotomy) performed in the area of a tooth #36. The features of the clinical picture, diagnostic algorithms and the choice of treatment approach in such cases are discussed. The successful experience of angiography application and endovascular embolization of the facial artery in this patient is presented.

Introduction

Aneurysm of the external carotid artery and its branches is rare pathological condition which is a major challenge for the maxillofacial surgeons, either for diagnostics or treatment. In the literature, all vascular aneurysms are classified into true and false types. True aneurysms are localized, abnormal dilations of arteries caused by a weakening of their walls and containing all three layers (tunica intima, media and adventitia). They are usually associated with atherosclerosis, congenital structural weakness, syphilis, and mycotic infections.

Pseudoaneurysm (false aneurysm or pulsating hematoma), on the contrary, is a traumatic vascular injury resulting from a laceration/rupture of the arterial wall with blood extravasation into surrounding tissues. The wall of the pseudoaneurysm consists of perivascular fibrous tissue, which forms the blood-filled or clot-filled sac into which arterial blood continues to flow. After the blunt or penetrating trauma with partial arterial wall injury the extravasation into the surrounding tissues continues until the pressure inside the hematoma equals the arterial pressure, followed by tamponade and clot formation. The lesion which occurs may be bounded by outer layers of a partially disrupted artery, muscle, fascia or skin surfaces, or by a fibrous, well-organized wall, depending on the location of the pseudoaneurysm and duration of the process [1]. Within weeks, the hematoma inside the sac begins to liquefy, producing a cavity lined by endothelium. A communication between the artery and the aneurysmal cavity develops, the mass begins to pulsate, and progressively enlarge. Pseudoaneurysm may gradually expand and rupture, leading to life threatening hemorrhage [2]. If a developing aneurysm is covered by a strong fascial layer, it tends to develop slowly. However, if it is covered with the lax tissues covering, it tends to grow more rapidly [3].

Pseudoaneurysms are relatively rare in the

* This manuscript has not been presented

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maxillofacial area, because trauma to external carotid artery branches usually results in total transection rather than in partial laceration of blood vessel due to their small caliber [4]. Most affected vessels are the superficial temporal artery, internal maxillary artery and facial artery, usually where the vessels approach the surface to cross bone structures (zygomatic bone or mandible). In these areas they become especially vulnerable to the blunt trauma. The false aneurysms arise most frequently in the superficial temporal artery [5, 6]. Of the 386 cases of facial aneurysm reported in the world literature, 327 involve the superficial temporal artery. However the other branches of the external carotid artery are sometimes involved, including the facial artery. The injury of the facial artery is determined by its anatomic location and lack of dense fascial spaces in the area, where it cross the inferior border of the mandible, immediately in front of the masseter and passes upward toward the angle of the mouth. Due to that the distal segments of facial artery give rise to pseudoaneurysms in most of the patients and only a few cases of proximal parts affection (from external carotid artery up to the lower border of the mandible) are reported in the literature.

Facial pseudoaneurysms are usually caused by blunt trauma [7-9] or high-velocity penetrating injuries [10-15], gunshot or knife wounds [16]. However iatrogenic injuries have been also reported as causes of facial pseudoaneurysms. The authors observed pseudoaneurysms development after tonsillectomy [17], surgical removal of molar teeth [18], reduction and osteosynthesis of fractured facial bones [19, 20], circummandibular wiring [21], neck dissection [22-24], orthognathic surgery [Le Fort I osteotomies [25], bilateral sagittal split osteotomies (BSSO), mandibular vertical ramus osteotomy, and temporomandibular joint surgery] [27, 15, 28]. Infection, radiotherapy, poor nutrition, and malignancy are considered as predisposing factors for the lesion development [29, 30].

Diagnosis of a pseudoaneurysm is mainly based on clinical examination. Physical findings are pulsating mass, pain, associated palpable thrill, systolic bruit during auscultation or unexplained neurological deficits [19]. A superficial aneurysm is typically detected from few weeks to 4 months after trauma. In the traumatized area a painful mass can be noted, resulting in adjacent soft-tissue deformity. The overlying skin is often discolored. Due to the delayed appearance of the aneurysm, patients may not associate trauma with the lesion. With liquefaction of the lesion content, a systolic bruit and pulsation may develop, and signs of fluctuation may be find out in some cases. This would depend on the anatomic location of the injured artery as well as the nature of the covering tissues. In clinical examination digital pressure proximal to the lesion may stop the pulsation.

Imaging is important to define the localization and extent of the lesion. Color Doppler ultrasonography has been suggested as a screening method by Nadig *et al* (2009) [24] and contrast CT or angiography confirms the diagnosis.

The diagnosis of pseudoaneurysm on color Doppler ultrasound is made by demonstration of a sac with turbulent flow outside the lumen of the associated vessel [32]. Contrast enhanced CT defines the actual dimensions of the lesion, its relation to surrounding structures as well as a degree of a possible thrombosis [33], but may not clearly show the vascular abnormalities in partially developed pseudoaneurysms. Thus, angiography becomes an essential tool to confirm the diagnosis [18]. However, the final diagnosis of pseudoaneurysm is made by the pathologist, who can microscopically distinguish true from false aneurysm, depending on the layers of the vessel wall involved [34].

Treatment of false aneurysms is generally considered mandatory because of the unstable wall and possibility of spontaneous expansion and rupture. Many different methods for treating pseudoaneurysms have been described in the literature. They include observation, compression, anticoagulation, ligation and surgical removal or endovascular embolization/stenting [23].

Many authors consider that pseudoaneurysms of the external carotid artery and its branches are best treated with surgical isolation and ligation of vessels supplying the false aneurysm, with or without excision of the mass. Reconstruction of the vessel is usually not necessary in the head and neck where the multiple collaterals and anastomoses are present [28]. Due to that, there are no consequences to tissue perfusion with ligation of the external carotid artery brunches and the risk of perioperative complications is minimal.

More recently, however, advances in interventional radiology allowed successful treatment of false aneurysms using endovascular embolization performed in conjunction with angiography [35]. Method utilizes materials that occlude the vessel, either temporarily or permanently, resulting in conversion of the pseudoaneurysm into a hematoma, which then resorbs over time. Metallic coils, polyvinyl alcohol particles, and absorbable gelatin sponge are the most common embolic agents. Iso-cyanoacrylate and bovine thrombin are used less frequently [27, 36, 37]. These techniques are particularly useful for aneurysms for which surgical accessibility is difficult.

The present article gives an evidence of successful diagnostics and treatment of iatrogenic pseudoaneurysm of the facial artery with endovascular embolization, performed under control of digital subtraction angiography.

Case Report

A 32-years-old male patient complaining on swelling at the left buccal area and periodical bleeding from the oral cavity up to 2 ml was examined in the Center of Maxillofacial Surgery, Kyiv Regional Clinical Hospital. 2 months ago patient underwent the extraction of tooth 36

for periapical lesion. In the postextraction period infection developed with the signs of alveolitis and subperiosteal abscess in the area of extracted tooth. In 5 days the abscess was incised intraoraly and drained in oral surgery outpatient clinic. After 7 days of antibiotic treatment the patient was better and the swelling subsided, but did not totally disappear. From anamnesis it was find out that the swelling periodically increased in size with some episodes of intensive bleeding to the oral cavity after long-time articulation or mastication of the hard food. The bleeding stopped spontaneously or by application of hydrogen peroxide soaked gauze. Clinical examination revealed a movable painless swelling, located in the lower part of the left buccal area. The overlying skin was intact with no signs of hyperemia. The size of the lesion was about 3 × 2 cm. No signs of pulsation or systolic bruit were observed. Intraoral examination revealed periosteotomy area.

As the tumor was initially suspected, patient was referred for an ultrasound of the left submandibular and cheek areas and angiography before the definite diagnosis. The ultrasound revealed the oval shape anechoic vascular mass with distinct boundaries, equal contours and the blood flow in the central area of the lesion (determined by Color Doppler ultrasound).

FIGURE 1. (**A**) Angiography of the left external carotid artery (letters *ECA*), presenting the vascular lesion–pseudoaneurysm (*arrow*) connected to the left facial artery (*curved arrow*) **(Fig 1 continued on next page.).**

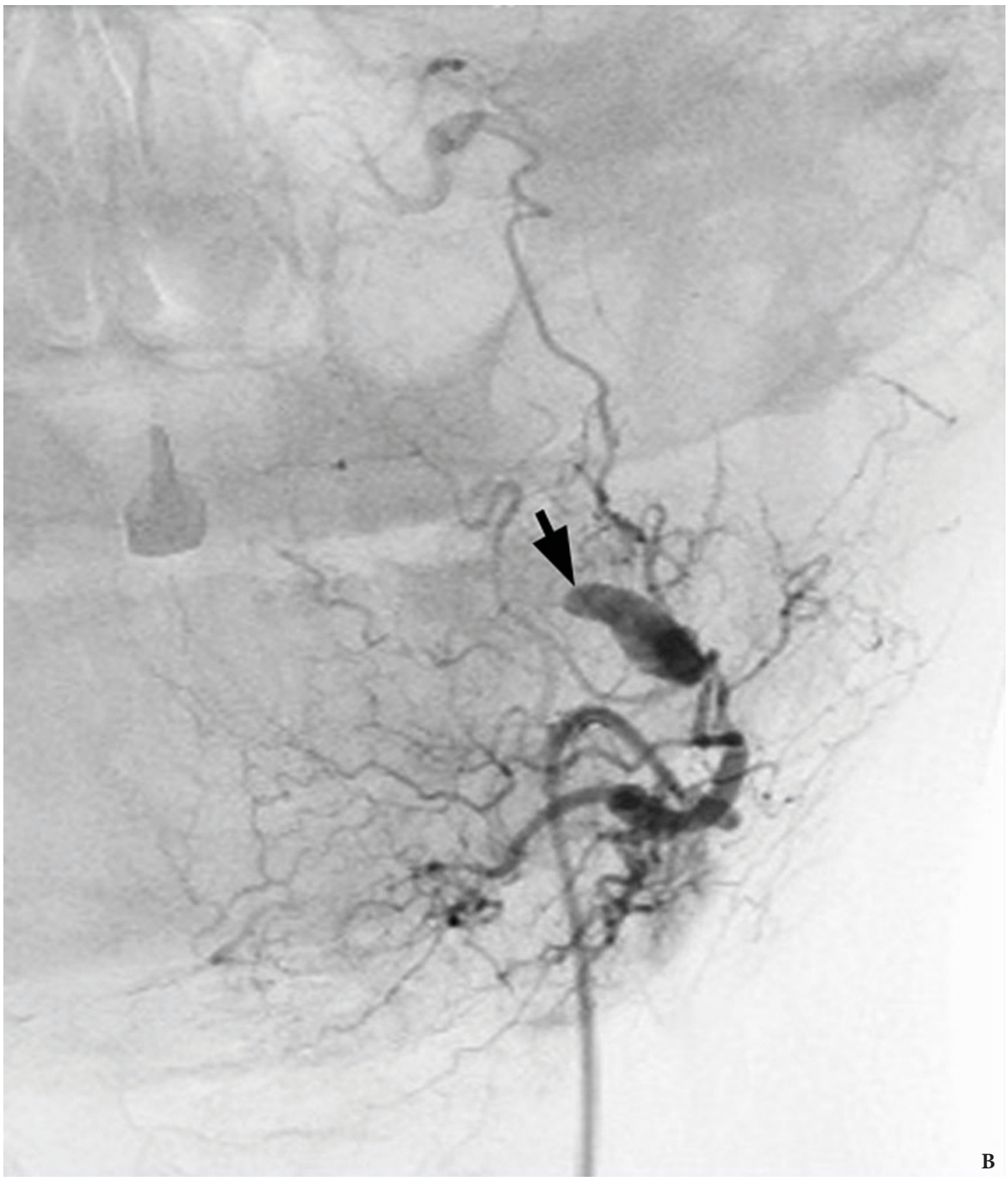

FIGURE 1 (cont'd). (**B**) Angiography of the left external carotid artery, presenting the vascular lesion–pseudoaneurysm (*arrow*) connected to the left facial artery.

The present findings supported the diagnosis of aneurism or pseudoaneurysm of the left facial artery or one of its branches. Laboratory tests of the patient were within the normal limits.

After consulting a vascular surgeon it was decided to perform a selective arteriography (Fig 1) of the external carotid artery with immediate endovascular embolization/stenting of the left facial artery. Under the local anesthesia, by Seldinger approach, through the right femoral artery (6f introducer), a 5f catheter (headhunter type) was inserted to the left external carotid artery. The angiography revealed an oval lesion 13 × 5 mm. Most of it intensively accumulated the contrast only some peripheral areas were filled with thrombotic masses. This lesion was connected to the left facial artery with visible continuity of the contrast inside the vessel and inside the lesion. Such findings confirmed the diagnosis of facial artery pseudoaneurysm. A catheter was further moved to the facial artery and embolization was performed using polyurethane foam d 200μm + spiral "Tornado" (cook) d ¾ mm (Fig 2A, B).

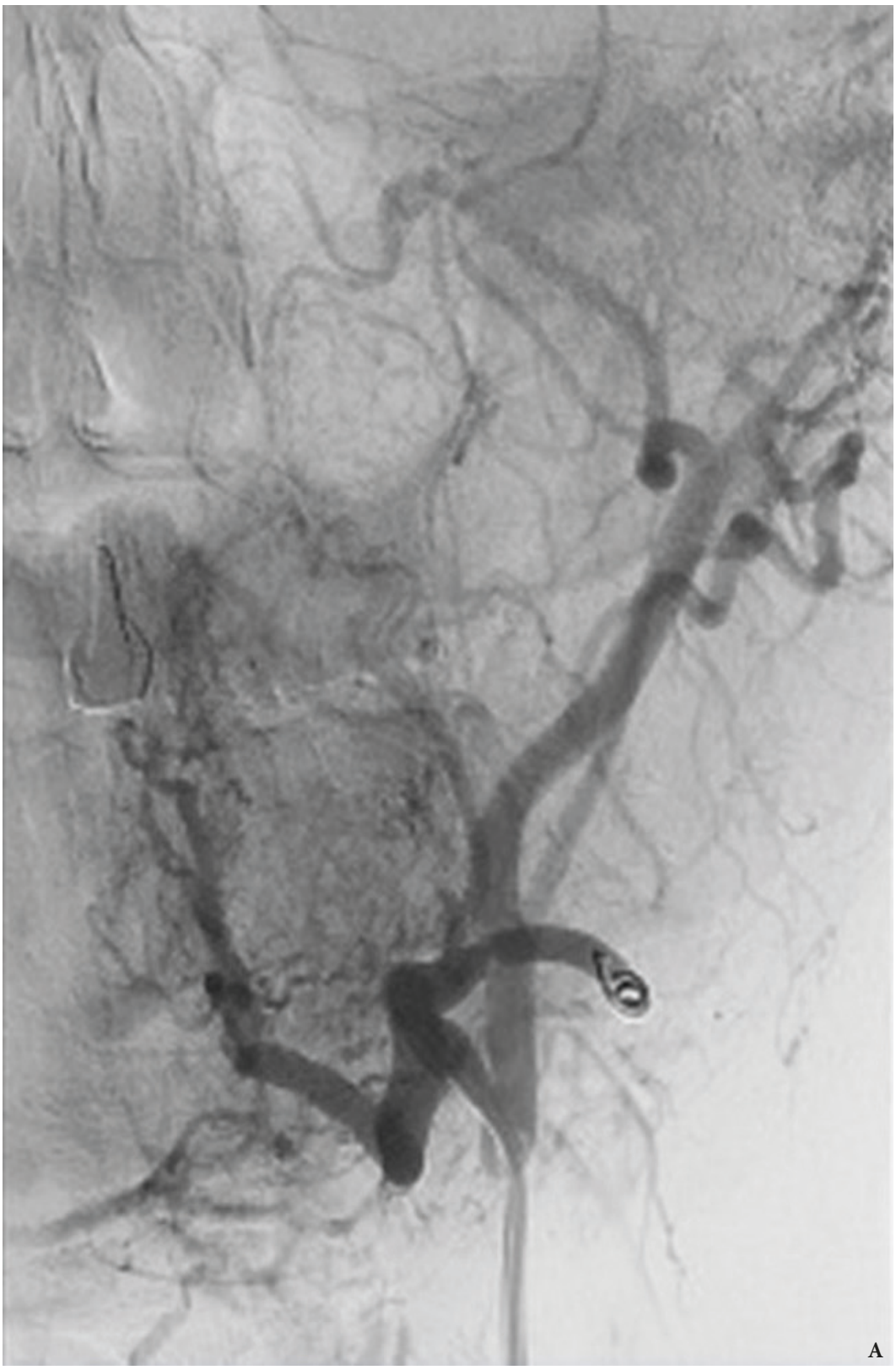

FIGURE 2. Embolization of the left facial artery. The control scans (**A**, **B**) shows that facial artery is blocked with no signs of contrast accumulation inside the aneurysm **(Fig 2 continued on next page.).**

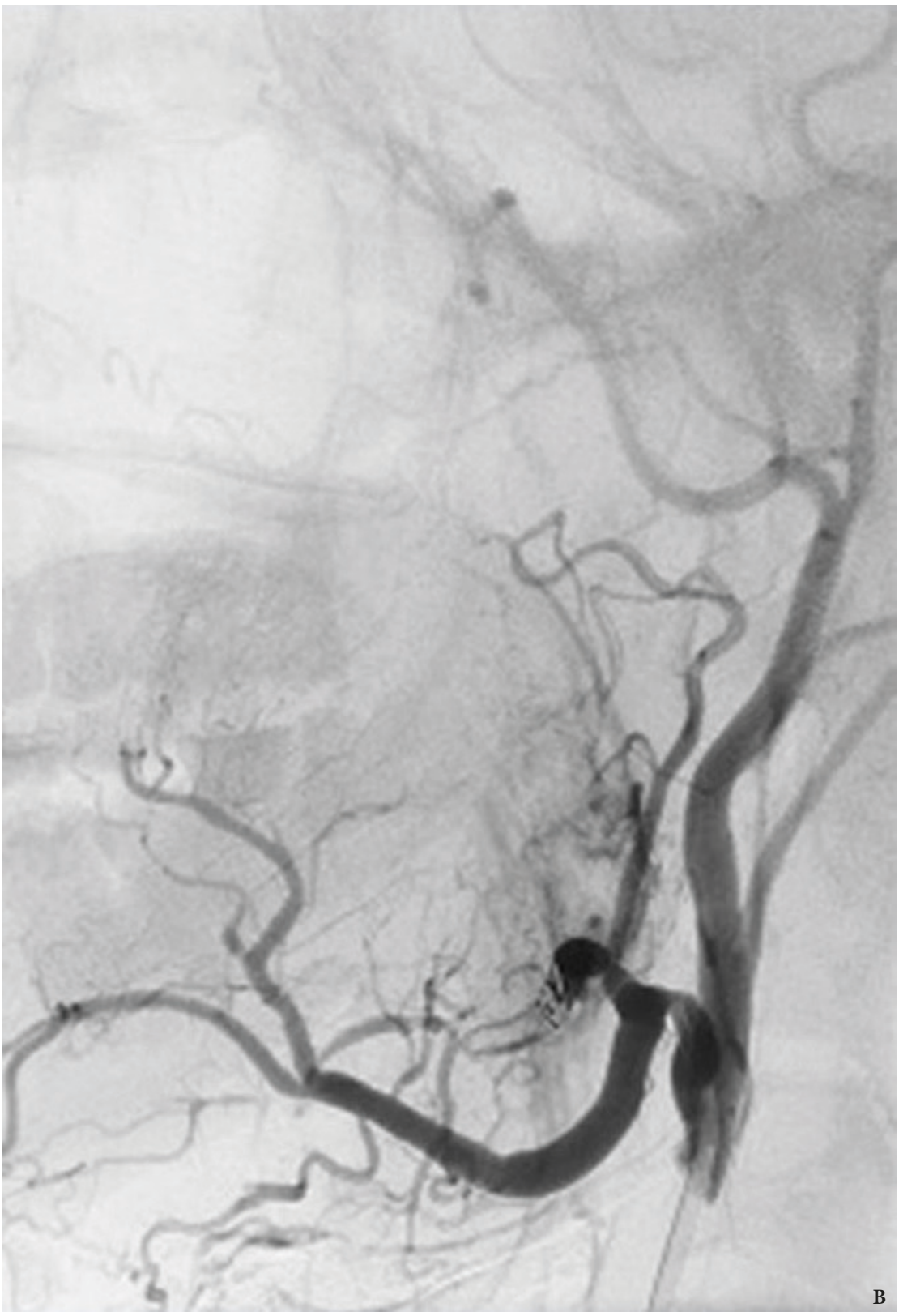

FIGURE 2 (cont'd). Embolization of the left facial artery. The control scans (**A**, **B**) shows that facial artery is blocked with no signs of contrast accumulation inside the aneurysm.

The control scan showed that facial artery was blocked and no signs of contrast accumulation inside the aneurysm were found. Introducer and catheter were removed. Pressing bandage was applied after hemostasis.

No complications were observed in postoperative period, and the patient was discharged home on the third day after procedure. In 10 days follow up were observed.

Discussion

The present clinical case demonstrates the rare form of the vascular pathology with maxillofacial localization – pseudoaneurysm of the facial artery, with only 26 cases documented in open literary sources [11]. In our case the pseudoaneurysm resulted from arterial wall injury after incision and draining of the subperiosteal abscess in the molar area of the mandible. Such iatrogenic cause of the lesion is quite uncommon, although reported the case a facial aneurism resulted from mandibular vertical ramus osteotomy. Another case was presented by Rayati *et al* (2010) where pseudoaneurysm of the facial artery developed after tooth extraction [18].

Authors reported that the posttraumatic pseudoaneurysm usually presents several days or weeks after the injury [38] as it was in the present case where the final diagnosis and definite treatment were performed after 2 months from injury and first clinical manifestations. The case was hard for diagnostics, but the clinical signs of the pseudoaneurysm and periodic bleeding suppose the presence of the vascular lesion, confirmed by the ultrasonic and radiological examination. Clinical findings such as bruit and pulsations which suggest a vascular nature of the lesion and its association with arterial vessels are not always seen in cases of the pseudoaneurysms of the external carotid branches as it was in present case. It complicates the differential diagnosis and determines the necessity of additional diagnostic procedures, such as ultrasound or angiography.

The present case support the evidence that color Doppler ultrasound is an adequate quick and cost-effective method which make it possible to confirm the diagnosis of pseudoaneurysm and to choose an appropriate therapeutic approach. However it provides less detail and may be limited by bone structures; sometimes it may be also associated with clot displacement and rapture of the lesion during the examination [15].

To confirm the diagnosis and to get more detailed information about the location and trough dimensions of lesion, its topography, relation to surrounding structures and association with certain artery the contrast CT or digital subtractive angiography should be used.

The indications for the surgical treatment it the present case were quite obvious. The presence of bleeding and its intensity as well as the possibility of expansion and rupture of the aneurysm wall indicated that such lesion should be removed or obliterated obligatory, and conservative approach (observation of the process dynamics or sclerotherapy) could not be considered as adequate. In our case the endovascular treatment was successfully applied for the treatment of the facial artery pseudoaneurysm with following benefits: the improved diagnostics and precise determination of the injured artery, the possibility to block the vessel by embolization under the visual control and to check the effectiveness of the procedure afterwards. In the similar case Dediol *et al* (2011) advocated the surgical management as a treatment of choice for facial pseudoaneurysm [34]. His concept is mainly based on the evidence that there are no consequences to tissue perfusion with ligation of external carotid artery branches and the risk of perioperative complications is minimal. De Vogelaere (2004) studied his case of pseudoaneurysm involving superficial temporal artery and considered surgical resection as definitive management as it eliminates the risk of spontaneous rupture and hemorrhage [39]. However the decision making depends on the location and accessibility of the area.

In our case the endovascular technique used for the facial pseudoaneurysm management had significant benefits compared to the open surgery. It make it possible to avoid the extraoral excisions and the scars on the face, decrease the risk of facial nerve (marginal branch) injury, and was important for definite diagnostics as the injured branch of the external carotid artery was not detected clearly by the ultrasonic examination. Risks of embolization include cerebrovascular accidents secondary to embolization from the great vessels and autolysis of the embolization material over time but such complications are very rare in clinical practice [15].

The endovascular approach at the same time limits the possibilities of the pathohystologic examination which is necessary to distinguish the true aneurism and pseudo aneurysm depending on the layers of the vessel wall involved. However, in our case with young patient, no signs of systemic vascular pathology and atherosclerosis and presence of the surgical trauma in anamnesis such differential diagnosis was not mandatory and it did not influence the treatment strategy.

Thus pseudoaneurysm of the facial area is a rare condition that should be always considered in the differential diagnosis of the soft tissue lesions in the areas adjacent to the artery location. As it may arise after surgical manipulations, such possibility should be also taken into consideration by oral surgeons. Aneurysms may be injured accidentally and easily ruptured, with the possibility of the patient hemorrhaging, and it makes the proper diagnostics and adequate management essentially important however it could be quite complicated and require the additional diagnostics procedures. Color Doppler ultrasound and carotid angiography are the main procedures used for definite diagnostics and treatment planning. There are a lot of treatment options discussed in the literature which include excision, ligation, and arterial embolization; all of them provided pretty good results in

cases reported. Our observation give an evidence of the successful treatment of facial artery pseudoaneurysm with endovascular embolization, performed under control of digital subtraction angiography. The main benefits of the technique were high precision and minimal invasiveness of the technique.

Role of the Co-authors

The authors are equally contributed to that article. All authors read and approved the final manuscript.

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Original Article

Immunocorrective Therapy in Patients with Limited and Diffuse Purulent-inflammatory Diseases of the Soft Tissues of the Maxillofacial Area and Neck: Research in 132 Patients*

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ABSTRACT

Purpose.
Determine the effectiveness of using the drug Biotroph on the state of local and general nonspecific resistance of the organism in patients with purulent-inflammatory diseases of the soft tissues of the maxillofacial area and neck.
Methods.
Clinical and immunological examination of 132 patients with limited and diffuse purulent-inflammatory maxillofacial and neck area soft tissues diseases identified during hospitalization was carried out.
Results.
Our studies have shown that the using of food supplements Biotroph-4 in the complex treatment of the patients with limited and diffuse purulent-inflammatory maxillofacial and neck area soft tissues diseases allowed eliminate the temporary immunodeficiency completely in the short period of time in all examined patients.
Conclusions.
The complex drug on a natural basis Biotroph-4 is recommended to maxillofacial surgeons and dental surgeons for the treatment of patients with purulent-inflammatory diseases of periomaxillary soft tissues.

Introduction

Purulent-inflammatory diseases of the soft tissues of the maxillofacial area and neck occupy one of the leading places in the clinic of maxillofacial surgery. In recent years, the number of patients with these diseases has increased significantly, the severity of their course has worsened, which can often lead to the development of such severe complications as sepsis, mediastinitis, meningitis, etc. [1, 2]. Held in the Department of Maxillofacial Surgery (Shupyk National Medical Academy of Postgraduate Education, Kyiv, Ukraine) studies have shown that in patients with purulent-inflammatory diseases of soft tissues there is a significant decrease in both local and general nonspecific resistance of the organism, not only during the preoperative period (if there are clinical symptoms of the disease), but also during the first two months after surgical intervention, i.e. in the period of clinical recovery. During the period of rehabilitation of patients with purulent-inflammatory processes of soft tissues, the body of these patients is most susceptible to some forms of inflammatory diseases (acute respiratory viral infection, carbuncles, rhinitis, angina, etc.). The work capacity of these patients is restored only during

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this period of time (two months). For the complete recovery of the patient's body in the postoperative period, it is important to provide him with a full supply of food products that contain not only vitamins, but also the necessary macro- and microelements. In modern conditions it is very difficult to find a full-fledged "set" of everything that a person needs for a quick and complete rehabilitation.

Our attention was attracted by the new series of dietary supplements "Biotroph" (Firma Interpom, LLC, Kyiv, Ukraine). As a preservative in this preparation is one of the most ancient and time-tested, safe and effective preservatives of natural origin – high-quality honey. It is known that honey is an ideal natural preservative, which allows the activity of enzymes to be maintained even during long-term storage. For the manufacture of this drug are used the various organs of healthy, pre-tested animals. A homogenate is prepared from these organs, followed by its magnetic-laser processing, which makes possible to preserve the integrity and activity of natural complexes as much as possible. The source of biologically active substances and enzymes are various internal organs of young healthy animals (calves). The preparations of the Biotroph series contain a unique composition of bioregulators consisting of enzymes, cytomedines, regulatory peptides, amino acids, neurotransmitters, phospholipids, polyunsaturated fatty acids, macronutrient vitamins and microelements. In accordance with the animal organs used for the manufacture of Biotroph preparations, they have a composition that ensures the normal physiological vital activity of the body, and also allows the human body to adapt more effectively to stress.

Regulatory peptides and cytomedines, isolated from immunocompetent organs (lymphatic system, thymus, bone marrow, spleen), contribute to the production of interferon, increase the activity of macrophages, thereby providing antiviral and antibacterial action, form a common and local immunocorrective effect. Cytomedines regulate physiological metabolic processes in organs and tissues, have anti-inflammatory and regenerative effects. Peptides regenerate tissues, normalize blood fibrinolytic properties. Amino acids are a necessary component of metabolism, the normal functioning of cells, organs and systems, play a leading role in the life of the organism. Monosaccharides provide energy to the cells, are an important plastic material, and in complexes with proteins and lipids, they form numerous biologically active compounds. Phospholipids and polyunsaturated fatty acids normalize liver function, regulate lipid metabolism, reduce cholesterol levels, have a cleansing effect on blood vessels, restore elasticity and strength of blood vessel walls, improve blood circulation and metabolism between cells and blood. Vitamins ensure the normal functioning of all body systems, because are accelerators of exchange reactions in the body. Trace elements that make up the composition of these dietary supplements are a necessary condition for maintaining the existence of a living organism; regulate the constancy of its internal environment (homeostasis). Trace elements are part of enzymes, hormones, greatly enhancing their activity, as well as phospholipids and vitamins.

In the choice of postoperative rehabilitation of maxillofacial patients with limited and diffuse purulent-inflammatory diseases, we stopped on the preparation Biotroph-4. The components of the preparation Biotroph-4 increase the immune status of the body (cellular and humoral immunity); regulate the system of homeostasis, blood formation; improve blood supply in organs and tissues; promote removal of toxic metabolic products and radionuclides from the body; stabilize metabolic-dystrophic and metabolic processes in organs and tissues; normalize metabolism; increase adaptation mechanisms under stressful conditions.

Purpose of the research is to study the effect of biologically active dietary supplement Biotroph-4 on the state of local and general nonspecific resistance of the organism in patients with purulent-inflammatory diseases of the soft tissues of the maxillofacial area and neck during the rehabilitation period.

Materials and Methods

The 132 patients with limited and diffuse purulent-inflammatory diseases of the soft tissues of the maxillofacial area and neck (purulent lymphadenitis [7], fununcles, carbuncles [8, 9], odontogenic and non-odontogenic abscesses and phlegmons [10-13]) were examined. All patients were divided into two groups. The first observation group consisted of 62 patients with purulent-inflammatory diseases of the soft tissues, which were treated with traditional (conventional) methods only during the hospitalization of patients. The second group of observation is 70 patients with purulent-inflammatory processes, in the complex of therapeutic measures were additionally included Biotroph-4. Treatment with this drug was started from the first days after the patient was hospitalized. The duration of the use of biologically active additives was 40-45 days. There are no contraindications for taking this drug. 34 practically healthy people served as controls for laboratory tests.

Patients of the first observation group (62 persons) after their hospitalization in the hospital carried out the removal of the causative tooth (with odontogenic processes) and opened abscesses or cellulitis. In the postoperative period, we applied the traditional drug treatment to these patients: intramuscular administration of conventional antibiotics in recommended dosages, sulfanilamide drugs, and also carried out detoxification treatment (as indicated), non-specific hyposensitization therapy (dimedrol, diazolin, suprastin, fenkarol, tavegil, etc.) symptomatic and physiotherapeutic treatment. In the complex treatment of patients of the II group

of observation (70 people), except for the previously listed surgical and drug treatment, the biological dietary supplement Biotroph-4 was used for immunocorrection (from the first days after the patients were hospitalized). For general treatment, Biotroph-4 was applied orally one teaspoon (30 minutes before meals) 3 times a day for 40-45 days. After discharge of patients from the hospital (9-15 days after hospitalization), they continued to take this drug until the end of the recommended period.

All patients during hospitalization and in the process of treatment general clinical examination (clarification of complaints, collecting history of the disease, examination, palpation, percussion of teeth, X-ray, complete blood count, etc.) was carried out, and also determined the local and general non-specific resistance of the organism.

To study the local non-specific resistance of the organism, the functional activity of neutrophils emigrated to the oral cavity through the buccal mucosa was determined. The selection of material was carried out in accordance with the methodology proposed by Dyshlov, and stained the prints for the identification of cationic proteins in neutrophilic leukocytes, who emigrated to the oral cavity through the buccal mucosa according to the method of Pigarevsky [3]. To identify alkaline phosphatase of neutrophilic leukocytes, the azo-combination method was used (modification of Shubich, 1980). The number of emigrated leukocytes and the activity of alkaline phosphatase in them were also determined in prints obtained from the buccal mucosa. To assess the cytochemical reaction, we applied the Kaplow method [4]. Depending on the enzymatic activity of neutrophils, they were divided into 5 types: zero (unstained), the first (with a weak cytoplasm stain), the second (with a moderate cytoplasm stain), the third (with a strong cytoplasm stain) and the fourth (with a very strong cytoplasm stain and diffusion dye to the core region). In a smear, 100 neutrophils were counted and the number of cells belonging to each type was determined. This quantity was multiplied by the type number, the numbers obtained were summed up. The amount was expressed in arbitrary units (standard units).

The study of general nonspecific resistance of the organism [5] was performed using the NBT test according to the Vicksman and Mayansky method. The average neutrophil activation index (mean cytochemical activity index of cationic proteins), the number of activated neutrophils (unstimulated and stimulated), the reserve of neutrophil activation were calculated. Phagocytic activity of blood leukocytes was determined by the method of Chernushenko and Kogosova [6]. The examination was carried out at the hospitalization of patients in the hospital, in the dynamics of treatment, at discharge of the examined from the hospital and in the period of convalescence.

All the numerical data obtained in the course of the study were processed by a mathematical method with the calculation of Student's criterion. Indicators were considered reliable at $P < 0.05$.

Results

The results of the examination of patients with I and II observation groups, showed that the local non-specific resistance of the organism was significantly changed during the hospitalization of the patients (Tables 1-3).

From Table 1 it can be seen that the number of neutrophils that emigrated through the buccal mucosa in patients of group I during hospitalization significantly (<0.001) increased compared to healthy people to 25.9 ± 1.4, and the activity of alkaline phosphatase in them was 64.4 ± 2.3 conventional units (CU) (<0.001). The number of neutrophils that emigrated through the mucous membrane of the cheek in patients of group II observation during hospitalization also significantly (<0.001) increased compared with healthy people to 26.7 ± 1.5, and the activity of alkaline phosphatase in them was 63.6 ± 2.5 CU (< 0.001).

From Table 2 it can be seen that the number of neutrophils that migrated through the buccal mucosa in patients of group I at discharge remained significantly

TABLE 1. Cytological and Cytochemical Indicators in Prints, Taken from the Buccal Mucosa, of Surveyed I and II Observation Groups during Hospitalization.

Observation Group	Number of Persons	Number of Neutrophils (per 100 cells) that Migrated through the Buccal Mucosa	Alkaline Phosphatase Activity in Neutrophils that Migrated through the Buccal Mucosa (CU, conventional units)
		M ± m	M ± m
I observation group	31	25.9 ± 1.4 p < 0.001	64.4 ± 2.3 p < 0.001
II observation group	34	26.7 ± 1.5 p < 0.001	63.6 ± 2.5 p < 0.001
Control group (healthy people)	34	16.9 ± 1.4	40.9 ± 2.1

P (P value) – significance of differences compared with the control group (healthy people).

increased compared with healthy people to 21.1 ± 1.0 (<0.02), and the activity of alkaline phosphatase in them was 54.6 ± 1.2 CU (<0.001). The number of neutrophils that migrated through the buccal mucosa in patients of group II observation at discharge from the hospital was also significantly increased compared with healthy people to 22.0 ± 1.1 (<0.02), and the activity of alkaline phosphatase in them was 55.1 ± 1.8 CU (<0.001).

TABLE 2. Cytological and Cytochemical Indicators in Prints, Taken from the Buccal Mucosa of Surveyed I and II Observation Groups at Discharge from Hospital.

Observation Group	Number of Persons	Number of Neutrophils (per 100 cells) that Migrated through the Buccal Mucosa	Alkaline Phosphatase Activity in Neutrophils that Migrated through the Buccal Mucosa (CU, conventional units)
		M ± m	M ± m
I observation group	31	21.1 ± 1.0 P < 0.02	54.6 ± 1.2 P < 0.001
II observation group	34	22.0 ± 1.1 P < 0.02	55.1 ± 1.8 P < 0.001
Control group (healthy people)	34	16.9 ± 1.4	40.9 ± 2.1

P (P value) – significance of differences compared with the control group (healthy people).

From Table 3 it can be seen that the activity of cationic proteins during hospitalization of patients of group I was significantly reduced to 0.42 ± 0.02 CU (<0.001), and in patients of group II – up to 0.43 ± 0.03 CU (<0.001). At discharge of the examined group I from the hospital, the activity of cationic proteins of neutrophils remained at significantly low numbers – 0.47 ± 0.02 CU (<0.001), as in group II of observation – 0.48 ± 0.03 CU (<0.001).

TABLE 3. The Activity of Cationic Proteins in Prints, Taken from the Mucous Membrane of the Cheek of Surveyed I and II Groups of Observation.

Observation Group	Number of Persons	Activity of Cationic Proteins (CTP) in Neutrophils that Migrated through the Buccal Mucosa (CU, conventional units)	
		At Hospitalization	On Discharge
I observation group	29	0.42 ± 0.02 P < 0.001	0.47 ± 0.02 P < 0.001
II observation group	31	0.43 ± 0.03 P < 0.001	0.48 ± 0.03 P < 0.001
Control group (healthy people)	28	0.67 ± 0.02	

P (P value) – significance of differences compared with the control group (healthy people).

Thus, the number of neutrophilic leukocytes that emigrated through the buccal mucosa in patients with purulent-inflammatory diseases of the soft tissues in both observation groups significantly increased and the activity of alkaline phosphatase in them also significantly increased compared with healthy people. This indicated the presence of inflammations in the oral cavity of the subjects when they were discharged from the hospital. The activity of cationic proteins in neutrophilic leukocytes in patients of both observation groups significantly decreased at all stages of inpatient treatment, which indicated a low local nonspecific resistance of the organism. Based on the indicators we obtained, we can conclude that patients with purulent-inflammatory diseases of soft tissues had low local nonspecific resistance of the organism both during their hospitalization and during their discharge from the hospital (for 9-15 days).

The indicators of general nonspecific resistance of the organism were studied in patients with purulent-inflammatory diseases (Tables 4 and 5). Indicators of phagocytic activity of peripheral blood neutrophils (percentage of phagocytic activity and phagocytic number) in patients of group I of the observation during hospitalization were significantly reduced compared with healthy people and, accordingly, were: 66.1 ± 1.2% (P < 0.001); 4.7 ± 0.2 (P < 0.001), and at discharge from the hospital: 68.2 ± 1.0% (P < 0.001); 5.2 ± 0.2% (P < 0.001).

Phagocytic activity of peripheral blood neutrophils in patients of group II observation with hospitalization were also significantly reduced compared with healthy people and, respectively, equal: 65.4 ± 1.4% (P < 0.001); 4.6 ± 0.2 (P < 0.001), and at discharge from the hospital: 69.3 ± 1.3% (P < 0.01); 5.5 ± 0.3 (P < 0.05).

TABLE 4. Indicators of Changes in the Phagocytic Activity of Peripheral Blood Leukocytes in Patients with Purulent-Inflammatory Diseases in the Dynamics of the Treatment.

Observation Group	Number of Persons	Indicators of Phagocytic Activity of Blood Leukocytes			
		At Hospitalization		On Discharge	
		Percentage of Phagocytosis (M ± m)	Phagocytic Number (M ± m)	Percentage of Phagocytosis (M ± m)	Phagocytic Number (M ± m)
I group	30	66.1 ± 1.2 P < 0.001	4.7 ± 0.2 P < 0.001	68.2 ± 1.0 P < 0.001	5.2 ± 0.2 P < 0.001
II group	30	65.4 ± 1.4 P < 0.001	4.6 ± 0.2 P < 0.001	69.3 ± 1.3 P < 0.01	5.5 ± 0.3 P < 0.05
healthy people	27	74.5 ± 1.6	6.4 ± 0.3	74.5 ± 1.6	6.4 ± 0.3

P (P value) – significance of differences compared with the control group (healthy people).

Indicators of general nonspecific resistance of the organism in patients of the first group of observations according to the nitroblue tetrazolium test (NBT-Test) (Table 5) during hospitalization differed significantly from the norm and were as follows: Non-active neutrophils (NAN) (unstimulated) – 18.1 ± 0.7 (P < 0.001), at discharge – 16.2 ± 0.8 (P < 0.001), 1 month after discharge – 19.8 ± 0.9 (P < 0.001), 2 months after discharge – 24.4 ± 0.4 (P > 0.05), with a norm of 25.4 ± 0.9. Non-active neutrophils (NAN) indicators (stimulated) at hospitalization – 29.3 ± 0.8 (P < 0.001), at discharge – 27.6 ± 0.8 (P < 0.001), 1 month after discharge – 34.2 ± 0.9 (P < 0.001), 2 months after discharge – 40.3 ± 1.2 (P < 0.05), with a norm of 40.7 ± 1.2. The average cytochemical indicator of the activity of neutrophil cationic proteins (INA) during hospitalization was 0.23 ± 0.01 CU (P < 0.001), at discharge – 0.22 ± 0.01 CU (P < 0.001), after I month after discharge – 0.26 ± 0.01 CU (P < 0.001), 2 months after discharge – 0.29 ± 0.01 CU (P > 0.05), with a norm – 0.31 ± 0.01 CU. The activation reserve was at hospitalization of 20.1 ± 0.3 CU (P < 0.001), at discharge from the hospital – 17.2 ± 0.4 CU (P < 0.001), 1 month after discharge – 27.2 ± 0.5 CU (P < 0.001), 2 months after discharge – 36.6 ± 0.5 CU (P > 0.05), with a norm of 37.0 ± 2.1 CU (Table 5).

Indicators of general nonspecific resistance of the organism in patients of group II observation by the NBT-test (Table 5) during hospitalization also differed significantly from the norm and were as follows: NAN (unstimulated) – 17.6 ± 0.6 (P < 0.001), at discharge – 17.8 ± 0.9 (P < 0.001), 1 month after discharge – 25.1 ± 0.9 (P > 0.05), 2 months after discharge – 25.5 ± 0.9 (P > 0.05), with a norm of 25.4 ± 0.9. NAN indicators (stimulated) at hospitalization – 28.8 ± 0.7 (P < 0.001), at discharge – 31.6 ± 0.9 (P < 0.001), 1 month after discharge – 38.9 ± 0.9 (P > 0.05), 2 months after discharge – 40.8 ± 1.0 (P > 0.05), with a norm of 40.7 ± 1.2. The average cytochemical indicator of the activity of neutrophil cationic proteins (INA, indicator of neutrophils` activity) during hospitalization was 0.22 ± 0.01 CU (P < 0.001), with discharge – 0.24 ± 0.01 CU (P < 0.001), after 1 month after discharge – 0.29 ± 0.01 CU (P > 0.05), 2 months after discharge – 0.32 ± 0.01 CU (P > 0.05), with a norm – 0.31 ± 0.01 CU. The activation reserve was at hospitalization of 20.0 ± 0.4 CU (P < 0.001), at discharge from the hospital – 25.2 ± 0.3 CU (P < 0.001), 1 month after discharge – 35.9 ± 0.5 CU (P > 0.05), 2 months after discharge – 38.6 ± 0.9 CU (P > 0.05), with a norm of 37.0 ± 2.1 CU (Table 5).

When comparing the obtained immunological parameters of patients with limited and diffuse purulent-inflammatory processes (groups I and II), it was found that when they were hospitalized and when they were discharged from the hospital, these figures practically did not differ, but were significantly lower than in healthy people. When the drug Biotroph-4 was included in the medical treatment, the immunological indices of general nonspecific resistance of the organism were normalized 1 month after discharge from the hospital in group II, and in group I, the observations remained significantly reduced and normalized only 2 months after discharge hospital.

Conclusions

Studies have shown that the inclusion in the complex treatment of the biological food additive Biotroph-4 allowed in a short time completely eliminate the temporary immunodeficiency identified during hospitalization in all examined patients with limited and diffuse purulent-inflammatory processes of the soft tissues of the maxillofacial area and neck.

TABLE 5. Dynamics of Changes in the General Nonspecific Resistance of the Organism According to the Nitroblue Tetrazolium Test (NBT-Test) in Patients with Purulent-Inflammatory Diseases of Soft Tissues Before and After Their Clinical Recovery.

Observation Group	Studied Blood Parameters	Time of Examination			
		During Hospitalization	On Discharge	1 Month After Discharge	2 Months After Discharge
I group (46 patients)	NAN (unstimulated)	18.1 ± 0.7 P > 0.001	16.2 ± 0.8 P > 0.001	19.8 ± 0.9 P > 0.001	24.4 ± 0.4 P > 0.05
	NAN (stimulated)	29,3 ± 0,8 P > 0,001	27,6 ± 0,8 P > 0,001	34,2 ± 0,9 P > 0,001	40,3 ± 1,2 P > 0,05
	INA	0,23 ± 0,01 P > 0,001	0,22 ± 0,01 P > 0,001	0,26 ± 0,01 P > 0,001	0,29 ± 0,01 P > 0,05
	Activation reserve	20.1 ± 0.3 P > 0.001	17.2 ± 0.4 P > 0.001	27.2 ± 0.5 P > 0.001	36.6 ± 0.5 P > 0.05
II group (53 patients)	NAN (unstimulated)	17.6 ± 0.6 P > 0.001	17.8 ± 0.9 P > 0.001	25.1 ± 0.9 P > 0.05	25.5 ± 0.9 P > 0.05
	NAN (stimulated)	28.8 ± 0.7 P > 0.001	31.6 ± 0.9 P > 0.001	38.9 ± 0.9 P > 0.05	40.8 ± 1.0 P > 0.05
	INA	0.22 ± 0.01 P > 0.001	0.23 ± 0.01 P > 0.001	0.29 ± 0.01 P > 0.05	0.32 ± 0.01 P > 0.05
	Activation reserve	20.0 ± 0.4 P > 0.001	25.2 ± 0.3 P > 0.001	35.9 ± 0.5 P > 0.05	38.6 ± 0.9 P > 0.05
Healthy people (27 persons)	NAN (unstimulated)	25.4 ± 0.9			
	NAN (stimulated)	40.7 ± 1.2			
	INA	0.31 ± 0.01			
	Activation reserve	37.0 ± 2.1			

P (P value) – significance of differences compared with the healthy people.
NAN – non-active neutrophils.
INA – indicator of neutrophils` activity.

Thus, the complex drug on a natural basis Biotroph-4 should be recommended to maxillofacial surgeons and dental surgeons for the treatment of patients with purulent-inflammatory diseases of soft tissues around jaws.

Conflict of Interest

The authors declare no conflict of interest.

Role of the Co-authors

All authors are equally contribute to that paper.

Ethical Approval

Approval was obtained from the Medical Ethics Committee of the Shupyk National Medical Academy of Postgraduate Education, Kyiv, Ukraine.

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Surgical Technique

Reducing Tissue Loss by using Submucosal Position of the Healing Abutment upon Immediate Implant Placement with 2.0-mm Gap Technique, and during the Whole Period of the Osseointergration: Case Report*

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SUMMARY

Tissue loss stills the main challenge in rehabilitation with dental implants at the anterior maxilla [1]. One of the fundamental options to preserve buccal plate is to use a 2-mm gap technique [2]. The 2-mm gap (*synonyms*: bone gap, jumping distance) between the implant surface and surrounding bone upon the immediate implant placement is allowed to leave according the proved spontaneous bone healing [2, 3]. Cover screw is used for sealing the implant during the submucosal healing. Healing abutment (*synonym*: Gingival former, healing cap) is commonly used in the next, the transgingival healing stage, and it`s mandatory to create an optimum gingival architecture [4, 5].

Our case and technique are clearly demonstrating a possibility to use a healing abutment instead of cover screw under the mucosa during the whole period of osseointegration in two-stage implant surgery.

Introduction

Tissue loss stills the main challenge in rehabilitation with dental implants at the anterior maxilla [1]. One of the fundamental options to preserve buccal plate is to use a 2-mm gap technique [2]. The 2-mm gap (*synonyms*: bone gap, jumping distance) between the implant surface and surrounding bone upon the immediate implant placement is allowed to leave according the proved spontaneous bone healing [2, 3]. Cover screw is used for sealing the implant during the submucosal healing. Healing abutment (*synonyms*: gingival former, healing cap) is commonly used in next, the transgingival healing stage, and it`s mandatory to create an optimum gingival architecture [4, 5].

Our case and technique are clearly demonstrating a possibility to use a healing abutment instead of cover screw under the mucosa during the whole period of osseointegration in two-stage implant surgery.

A 36-year-old white gentleman referred to our clinic with complaints for symptoms of chronic periapical lesion of a tooth #11. A surgery was performed under local anesthesia (1.4 ml Ultracain D-S forte, Frankfurt, Aventis Pharma Deutschland GmbH). After atraumatic removal of tooth #11 (Fig 1A) the implant (U-Impl, Biel, Switzerland; 13 × 3.5 mm) was placed more palatally and distally related to the extraction socket (Fig 1). A 2-mm gap was achieved between implant surface and the buccal plate (Fig 1B). A 13-mm length implant was chosen for a possibility to change for a longer one in case of re-implantation. The healing abutment (W2, U-Impl, Biel, Switzerland; 5.5 × 2.0 mm) was placed submucosally without using a cover screw. Sutures (VICRYL, Ethicon, USA; 4-0 coated) helps completely isolate the implant and the healing abutment from the oral cavity. The postoperative period was smooth

* This manuscript has not been presented

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with no dehiscence of the wound.

At 7 months` follow up the complete coverage of the healing abutment with mucous membrane (Fig 1C) and maintenance of the stable high of the mucosal profile were noted. And patient has been very pleased with the final result of a final prosthetic restoration.

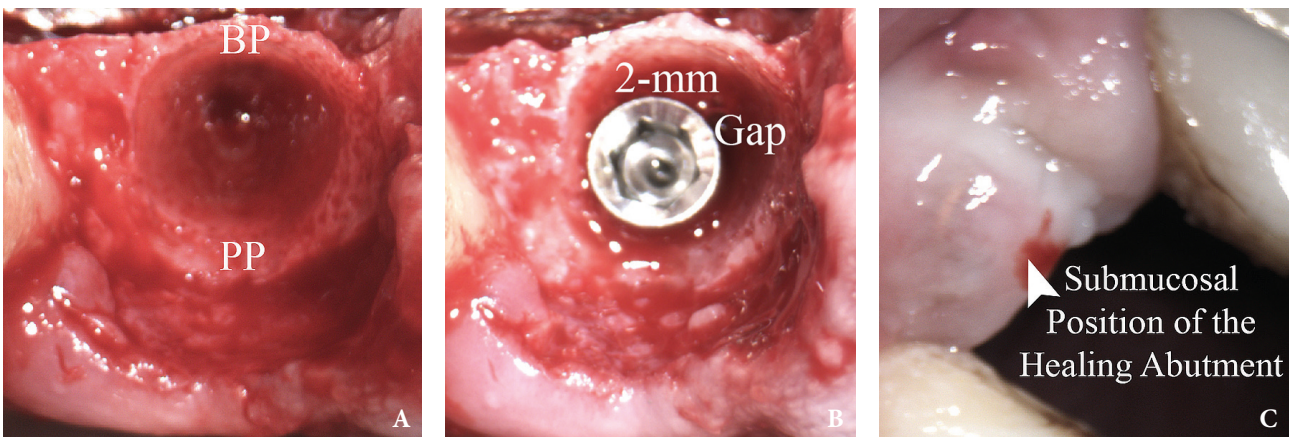

FIGURE 1. (**A**) A view after the minimally invasive removal of tooth #11. Preserved buccal plate is indicated by the letters *BP*, palatal plate – by the letters *PP*. (**B**) after an implant placement notes a *2-mm Gap* between surface of the implant and buccal plate. View at 7 months ` follow up (**C**) before opening the healing abutment. Its ` position is indicated by *arrowhead*.

Role of the Co-authors

Ivan V. Nagorniak (concept and design of the paper, material collection, and editing)
Kateryna Y. Nagorniak (writing)

Ethical Approval

None.

Term of Consent

Written patient consent was obtained from parents to publish the clinical photographs.

Fundings

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J Diagn Treat Oral Maxillofac Pathol **2019**;3(1):34–5.
http://dx.doi.org/10.23999/j.dtomp.2019.1.8.

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Future Events

for 2019-2021

2019

BSCOSO Spring Course 2019
April 14 – 18, 2019
Vilnius, Lithuania
www.bscoso.com

24rd International Conference on Oral and Maxillofacial Surgery (Fig 1)
May 21 – 24, 2019
Rio de Janeiro, Brazil
www.icoms2019.com.br

18th Meeting of the International Society of Craniofacial Surgery
September 16 – 19, 2019
Paris, France
www.iscfs.org

31st World Congress of the International College for Maxillo-Facial-Surgery (ICMFS)
October 29 – November 01, 2019
Tel Aviv, Israel
www.icmfs2019.com

21st International Congress of the Latin American Association of Bucomaxillofacial Surgery and the Mexican Association of Oral and Maxillofacial Surgery
December 01 – December 04, 2019
Cancun, Mexico
www.cialacibu2019.com/en/welcome/

2020

25th Congress of the European Association for Cranio-Maxillo-Facial Surgery
September 15 – 18, 2020
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2021

14th Quadrennial International Facial Nerve Symposium
August, 2021
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FIGURE 1. Screenshot from a website www.icoms2019.com.br.

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Submission of Articles

Papers for the Publication

- original papers
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The abstract should include full title of the article, full names and surnames of the co-authors, affiliation, scien¬tific degree, specialty. Also the abstract should include short information about article content: purpose, material and methods, results, conclusions. Example how the Abstract should be looked like the authors can get from the published articles in current issue.

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Photographs, CT and MRI images, sonograms should be submitted in original with resolution of at least 300 dpi and saved in JPEG or TIFF file format.

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At the end of the article the authors should specify about conflicts of interest (e.g., no conflict of interest).

Role of Co-authors in Writing

After specifying conflicts of interest the role of co-authors in writing of the article (concept and design of the study; material collection, mate¬rial processing, statistical data processing, writing text, editing, etc.) should be designated.

Patient Consent

Written patient consent should be obtained to publish the clinical images of the patients.

Acknowledgments

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Adult improving access to psychological therapies programme. NHS England. Available from URL:
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Questions?

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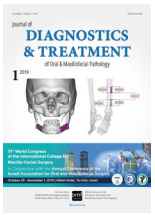

JOURNAL`S
AWARD

Journal`s Award in 2018: Salam O. Salman, MD, DDS, FACS

FIGURE. *Journal`s* Award dedicated to Assistant Professor Salam O. Salman. Jacksonville, FL, USA; March, 2018.

"*A great man is different from an eminent one in that he is ready to be the servant of the society.*"
—Bhimrao Ramji Ambedkar
Indian jurist, economist, politician,
and social reformer

Salam O. Salman, MD, DDS, FACS serves in the University of Florida, College of Medicine – Jacksonville as:

- Assistant Professor, Department of Oral and Maxillofacial Surgery.
- Program Director, Oral and Maxillofacial Surgery Residency.
- Clerkship Director.

And we cannot even estimated a huge contribution to the *Journal* that Dr. Salman (Fig) does not only with the cutting-edge articles (co-authors: Quimby and Fernandes) [1, 2], but also in his work at a position of Section Editor – Robotic Surgery from 2nd Issue of 2017 [3].

So, we have no other words to say to a great editor and a role model Dr. Salman, giving that humble award, as next: "*To a Spiritual Co-founder of the Journal, for the Outstanding Leadership in the field of Robotic Surgery around the Globe Sincere Thanks and Appreciation.*"

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