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Journal of Diagnostics and Treatment of Oral and Maxillofacial Pathology

Editors
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(Kyiv, Ukraine • Jacksonville, FL, USA)

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Ukrainian Association for
Maxillofacial and Oral Surgeons

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About the Journal: Aims and Scope

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Official Title

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Aims & Scope

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

Editorial Board (EB) Composition

- EB shows significant geographic diversity representing 26 opinion leaders from 13 countries: Brazil, Canada, Colombia, Greece, Hong Kong (SAR, China), India, Israel, Italy, Slovak Republic, Spain, Ukraine, United Arab Emirates, and United States.
- The majority of the EB Members have a discernible publication history in Scopus, Web of Science, and journals with a high impact factor.
- The publication records of all EB members are consistent with the stated scope and published content of the journal.
- The journal has a several full-time professional editors.

Frequency

12 print/online issues a year (from January 2020)

Publication History

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

Publishing Model

Journal combines a *hybrid* and *delayed open access* publishing models. The articles of all types, except Editorials, are immediately in open access. Editorials became an open access publication too after 3-month embargo period.

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During hard times of Covid-19 pandemic our journal trying to support authors by reducing the APC by 50%. And by the end of December 2020 the APC will be 100 USD and 50 USD (excluding taxes) depending on the article`s type. Details at website: dtjournal.org.

13 Types of Articles Currently Published by the Journal

Editorials/Guest Editorials/Post Scriptum Editorials, Images in Oral & Maxillofacial Surgery, Case Reports/Case Series, Original Articles, Review Articles, Discussions, Paper Scans (*synonyms*: Review of Articles, Literature Scan), Book Scans (*synonym*: Book Reviews), Letters to the Editor (*synonym*: Letters), and Viewpoints.

Registration: Ministry of Justice of Ukraine

Registration: July 28, 2016
Re-Registration: May 21, 2019 (Certificate: КВ # 23999-13839ПР)

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2. Private Higher Educational Establishment "Kyiv Medical University."
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See page A5.

Editorial Board

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TANTUM VERDE®

INFORMATION LEAFLET
for the medicinal product

Composition:
active substance: **benzydamine hydrochloride**;
100 mL of solution contain benzydamine hydrochloride 0.15 g;
excipients: ethanol 96%, glycerol, methyl parahydroxybenzoate (E 218), flavor (menthol), saccharin, sodium hydrocarbonate, Polysorbate 20, Quinoline Yellow (E 104), Patent Blue V (E 131), purified water.

Dosage form. Oromucosal solution.
Basic physical and chemical properties: a clear green liquid with a typical mint flavor.

Pharmacotherapeutic group. Dental preparations. Other agents for local oral treatment.
ATC code: A01A D02.

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

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

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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.
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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.

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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.

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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.

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

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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.

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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.

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

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

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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.

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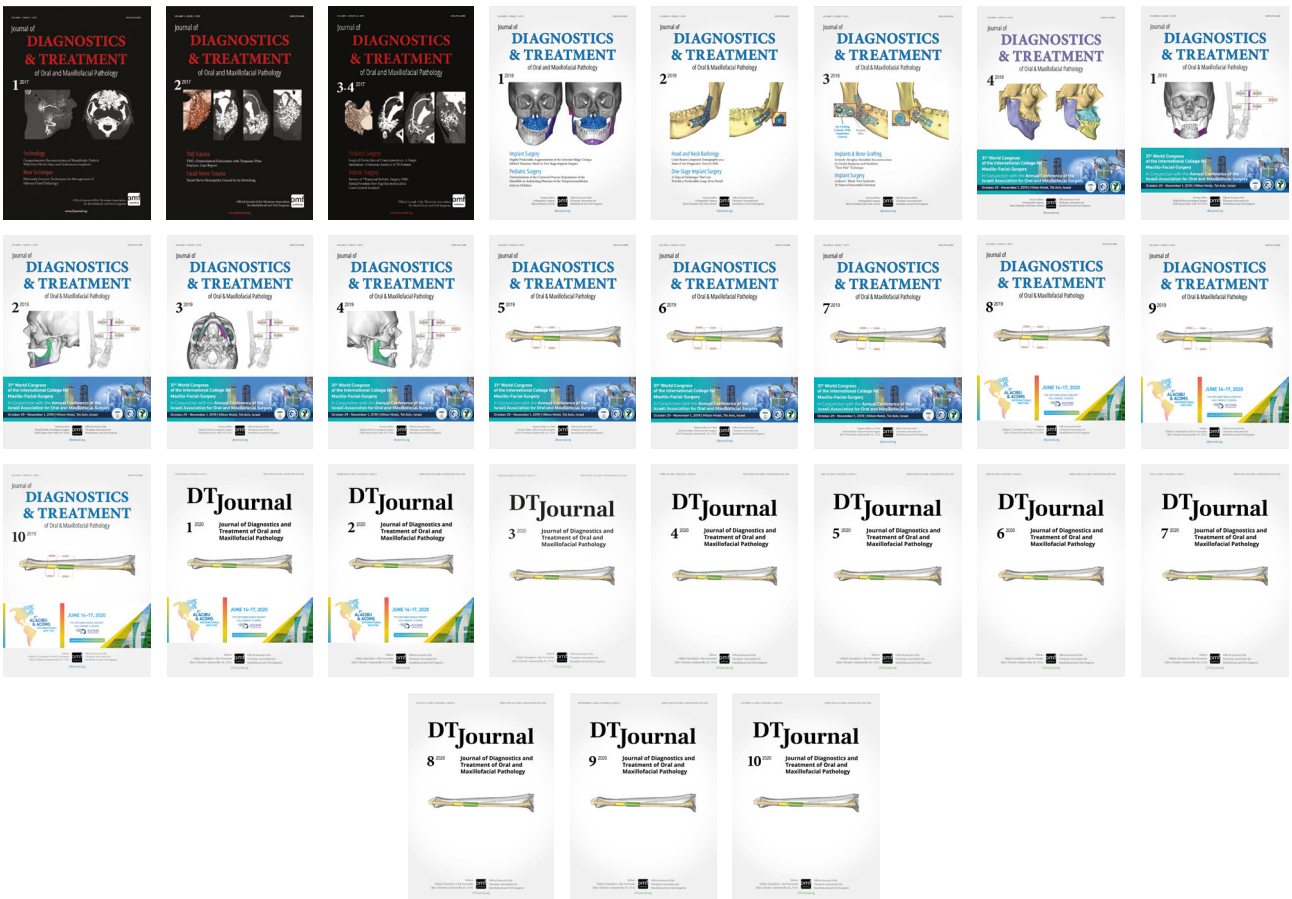

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1. At Ukrposhta post offices.
2. At the website www.presa.ua.
3. At the website www.dtjournal.org (from December 1, 2020).

With the care of our readers, the subscription fee in 2021 successfully decreased by 73.81 percent and is $1 for 1 printed Issue.

Issues	Fee in 2020	Fee in 2021
1 Issue	$4[12] (103[08] UAH)	$1 (27 UAH)
3 Issues	$12[36] (309[24] UAH)	$3 (81 UAH)
6 Issues	$24[73] (618[48] UAH)	$6 (162 UAH)
12 Issues	$49[46] (1,236[96] UAH)	$12 (324 UAH)

Content

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COURTESY

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

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

ORIGINAL

Microsurgical Practice and Surgeon Burnout: A Survey from Data of International Microsurgery Club on Facebook

Laurent Ganry[a,*], Claire Guinier[b], Alba Sanjuan[c], Barbara Hersant[d], & Jean Paul Meningaud[e]

ABSTRACT

Background: Microvascular surgeons (*synonym*: microsurgeons) are generally satisfied with their career, but are more prone to burnout than the general population. Demanding training and post-operative microsurgical complications seem to be one of the risk factors. The authors evaluated the relationship between intensive microsurgery practice and physician burnout in the setting of the International Microsurgery Club (IMC) Facebook Group.

Methods: Using the Maslach Burnout Inventory (MBI) Score, an online survey was performed focusing on demographics, habits, as well as working environment. Comparisons were done between reconstructive surgeons with or without intensive practice.

Results: One hundred and eighty-four surgeons were enrolled. In aggregate, 37.7 percent had at least one symptom of burnout based on MBI score. Univariate analysis of burnout status found only one statistically significant result correlated to age ($p = 0.048$). Burnout status was not correlated to the number of microvascular anastomoses performed ($p = 0.466$). A two-way ANOVA analysis found an association between age, relationship status, gender and illicit drugs use independently associated with "Number of Microanastomoses," but never with "Burnout Status" (all $p < 0.05$).

Conclusions: Burnout status of IMC's surgeons was not correlated to any intensive microsurgery practice. Being part of an international group could be a protective factor, especially for young or isolated surgeons worldwide.

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Letters 'SM' and the word 'Flaps' at the upper right icon means that article focused on social media (SM) and flap surgery (Flaps), respectively.

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BACKGROUND

Physicians are generally satisfied with their career but are more prone to burnout and dissatisfaction with their work-life balance than the general population. This becomes a burden and alters their quality of life.[1] Burnout is a psychological syndrome characterized by increased emotional exhaustion, a feeling of detachment, a sense of ineffectiveness and lack of personal accomplishment,[2] and is caused by work related stress. In the medical field, it is associated with increased medical errors, patient dissatisfaction, absenteeism, substance abuse, suicidal thoughts or even suicide.[3–5] Previous studies have demonstrated that amongst physicians, burnout rates are especially high in surgical specialties compared to other medical specialties.[5,6]

On the other hand, it is commonly believed that performing microvascular free flap surgery, related to performing microvascular anastomosis, may lead to a difficult balance between intensive professional stress and personal life. Reconstructive surgery demanding microvascular surgical skills requires indeed special surgical techniques with finer instruments and a microscope. Common postoperative complications such as surgical revision at any moment (day or night) or flap failures remain unfortunately steady around 1 to 5 percent of all cases, even for the most experienced microsurgeons.[7] This leads to the well-known stressful reputation of microvascular surgery.

Nowadays, an increasing number of online platforms such as independent websites, Facebook, Twitter, Instagram and LinkedIn have become popular for continuous medical education,[8] especially in a high expertise field such as microsurgery during pandemic times. Information exchange such as surgical technic is being revolutionized by internet in an easier and faster way. An example of successful social media used for microvascular professional learning is the "International Microsurgery Club" (IMC) Facebook group, starting in Taiwan, May 2016 (Fig 1). It quickly has expanded to gather at the time of this study around 11,500 surgeons from around the world.[9,10] Given no previous studies

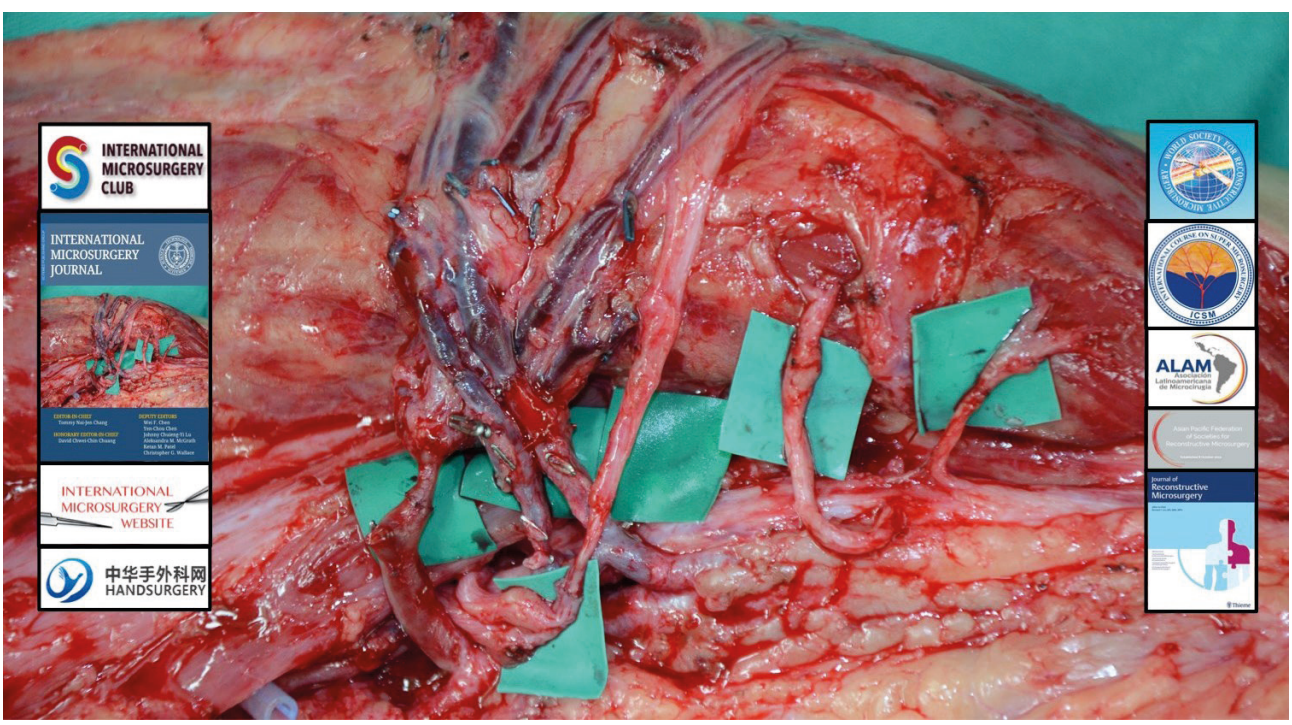

FIGURE 1. Logo of the International Microsurgery Club (IMC) Facebook Group. This logo own by IMC includes: Intraoperative image depicting a free neuro-muscular transfer with multiple microvascular and neural anastomosis (gracilis), also used for the front covers of the *International Microsurgery Journal* (*IMJ*). It is associated with multiple other logos supporting IMC: *The Journal of Reconstructive Microsurgery* (*JRMS*), Handsurgery, Asociación Latinoamericana de Microcirugia (ALAM), International Course on SuperMicrosurgery (ICSM), World Society for Reconstructive Microsurgery (WSRM) and Asian Pacific Federation of Societies for Reconstructive Microsurgery (APFSRM). Courtesy of Dr. Tommy Nai-Jen Chang (Taipei, Taiwan) and the IMC Facebook Group (https://www.facebook.com/groups/1702063276733451/) which counts 14.5K participants (as of October 27, 2020).

were conducted on the topic on the association between intensive microvascular surgery (*synonym*: microsurgery) practice and surgeon's burnout using online platforms, this study aimed to investigate this issue using IMC social media platform.

The purpose of this prospective multicentric online survey study is to identify whether members of the IMC Facebook group have a higher burnout status in the group with intensive microvascular practice (defined by a number of anastomosis per month of 2 and more), compared to the group with less intensive practice.

METHODS

STUDY VARIABLES

The primary outcome variables of the study were the number of anastomoses performed by surgeons and the evaluation of the Maslach Burnout Inventory (MBI) Score. Number of anastomosis was recorded as less than two, or two and more performed per month, defining our 2 groups. The MBI score analysis was identified via three dimensions of burnout split in three categories each (low, medium and high)[11]: emotional exhaustion, depersonalization, and personal accomplishment. Average working hours was evaluated in five categories of 10 hours scoring below 40 hours per week to over 80 hours per week.

Covariates included demographics, sports practice, smoking, illegal drug and alcohol use status as night shift rotation. Demographics included sex, age, marital status, number of children, country, surgical specialty and surgeon's type of practice (private practice, academic, mixed).[12]

BURNOUT EVALUATION

Burnout among physicians was measured using the MBI, a validated 22-item questionnaire considering as the criterion standard tool for measuring burnout.[13–15] Consistent with convention,[16–18] we considered physicians with a high score on the depersonalization and/or emotional exhaustion subscales of the MBI as having at least one manifestation of professional burnout.[13] MBI was designed to detect physicians with burnout syndrome (corresponding to high score on the depersonalization and/or emotional exhaustion combined with low score on personal accomplishment). Reverse score shows a physical, emotional and intellectual wellness and satisfaction with work-life balance.[13]

DATA COLLECTION AND MANAGEMENT

Three months electronic anonymized survey records meeting the study criteria were retrospectively reviewed through Monkey Survey website (www.surveymonkey.com) for collection of study variables. Invitation to participate to our 5 minutes online survey was sent through the IMC Facebook Group each month during 3 months between February and April 2019. The collected data was stored in our University Hospital – sponsored Research Electronic Database designed specifically for the research project. Half of the data on demographics, smoking, illegal drug and alcohol use was recorded as binary data (present or not present).

DATA ANAYLYSIS

Descriptive summaries were recorded as frequencies and percentages for categorical variables and medians and quartiles for numeric variables. Comparisons among groups of microsurgeons and non-microsurgeons were done using the Pearson's Chi-square test and Fisher's exact test as appropriate, as there was only categorical data and not continuous ones. A two-way ANOVA analysis was performed to identify factors associated with the "Number of Microanastomoses" and/or "Burnout Status". A post-hoc test (*synonym*: Tukey`s test) or odds ratio (OR) was used as appropriated to determine in the two-way ANOVA analysis which group for each significant independent variables significantly differ from each other. *P*-values less than 0.05 were considered statistically significant. All analyses were done using IBM SPSS Statistics® for Windows, Version 25.0 (IBM Corp, Armonk, NY, United States).

RESULTS

Out of the 11,476 physicians of the IMC Facebook Group who received an invitation to participate at the time of our study, 184 (1.6 percent) fully completed the survey.

The demographic characteristics of participants relative to all 184 physicians were summarized in the left part of Table 1. The vast majority were

male physicians (male: 89.13 percent; female: 10.87 percent), coming from all over the world, with a large tendency towards Europe and Asia (73.91 percent). Approximately 89 percent of participants were age 49 or younger. Over 80 percent of responders were married or had a partner. Approximately only 2 percent indicated that they had previously gone through a divorce, and 72.8 percent had children. Most of responders had been working as plastic surgeons (84.8 percent), around 60 hours per week, were on call approximately 1 night per week and exercised once or twice a week. The average number of microanastomoses performed per month was a minimum of two for 76.1 percent of the participants (group 1). Over half of the responders were in academic practice only, with 13 percent in private practice, and approximately 37 percent in both. A low percentage of the participants were concerned with the use of illicit drugs (2.2 percent), smoking (13 percent) and alcohol abuse (6.5 percent).

TABLE 1. Univariate Analysis Comparison of Burnout versus Independent Variables. **(Table 1 continued on next page.)**

Factor	N	% MBI Burnout (n = 56)	% Non-MBI Burnout (n = 128)	P-value
Univariate analysis				
Gender				0.718
Male	164	31.7	68.3	
Female	20	20	80	
Age				0.048*
<30	8	75	25	
[30–39]	104	21.2	78.8	
[40–49]	52	34.6	65.4	
[50–59]	20	50	50	
≥60	0	0	0	
Region				0.898
Europe	63	25	75	
Asia	73	33.3	66.7	
America	36	50	50	
Oceania	4	25	75	
Africa	8	30.4	69.6	
Relationship status				0.793
Single	31	26.7	73.3	
Married	149	30.7	69.3	
Divorced	4	50	50	
Children				0.646
0	52	26.9	73.1	
1	49	33.3	66.7	
2	57	25	75	
≥3	28	42.9	57.1	
Microanastomoses (/month)				0.466
<2	44	27.3	72.7	
≥2	140	31.4	68.6	

TABLE 1 (continued). Univariate Analysis Comparison of Burnout versus Independent Variables.

Factor	N	% MBI Burnout (n = 56)	% Non-MBI Burnout (n = 128)	P-value
Surgical specialty				0.362
Plastic	156	28.8	71.2	
Head and neck	20	30	70	
Orthopedic	12	50	50	
Pediatric	2	100	0	
Other	4	0	100	
Practice Setting				0.123
Private	24	50	50	
Academic	93	21.7	78.3	
Both	67	35.3	64.7	
Working hours (h/week)				0.292
<40	6	33.3	66.7	
[40–49]	30	46.7	53.3	
[50–59]	67	18.2	81.8	
[60–79]	57	34.5	65.5	
≥80	24	33.3	66.7	
Nightshift (/week)				0.292
0	69	35.3	64.7	
<2	77	33.3	66.7	
≥2	38	15.8	84.2	
Illicit drugs use				0.518
No	173	31.4	68.6	
Yes	11	16.7	83.3	
Smoking (any)				0.815
No	160	30	70	
Yes	24	33.3	66.7	
Alcohol abuse				0.172
No	172	32.6	67.4	
Yes	12	0	100	
Sports				0.716
No	53	38.5	61.5	
Once a week	47	30.4	69.6	
Twice a week	21	18.2	81.8	
≥3 a week	43	31.8	68.2	
Once a month	20	20	80	

Rates of burnout, symptoms of emotional exhaustion, depersonalization, and personal accomplishment were summarized in Table 2. When assessed using the full MBI categories, 34.67 percent of microvascular surgeons had high emotional exhaustion, 49.16 percent high depersonalization, and 31.69 percent a low sense of personal accomplishment in our study. In aggregate, 37.7 percent of the surgeons had at least one symptom of burnout based on a high emotional exhaustion score and/or a high depersonalization score.

TABLE 2. Physician Burnout using the full Maslach Burnout Inventory Scale (MBI*)

Burnout indices	
Emotional exhaustion	
Median	20.31
% low Score	786 (21.02 percent)
% intermediate Score	1,656 (44.30 percent)
% high Score	1,296 (34.67 percent)
Depersonalization	
Median	7.12
% low Score	180 (13.74 percent)
% intermediate Score	486 (37.10 percent)
% high Score	644 (49.16 percent)
Personal accomplishment	
Median	34.96
% low Score	2,038 (31.69 percent)
% intermediate Score	1,994 (31.00 percent)
% high Score	2,400 (37.31 percent)
Burnout**	4,328 (37.7 percent)

* As assessed using the full Maslach Burnout Inventory. Per the standard scoring of the MBI for health care workers, physicians with scores of 27 on the Emotional Exhaustion subscale, 10 on the Depersonalization subscale, or 33 on the Personal Accomplishment subscale are considered to have a high degree of burnout in that dimension.

** High score on Emotional Exhaustion and/or Depersonalization subscales of the Maslach Burnout Inventory.

Univariate analysis of burnout status was summarized in the middle and right part of Table 1. It was compared to all independent variables of the study, and only one statistically significant set of results correlated to the age (p = 0.048) was found. However, burnout status was not correlated to the number of microanastomoses performed per month (p = 0.466) neither other variables we tested.

We next conducted a two-way ANOVA analysis presented in Table 3 to control for Type one error to remain at 5 percent with the identification of factors associated with "Number of Microanastomoses performed per month" and/or "Burnout Status." Age, relationship status, gender and illicit drug use were independently associated with "Number of microanastomoses performed per month" only, but never with "Burnout Status" (p < 0.05). Therefore, when analyzing "Number of Microanastomoses performed per month" to "Age," post-hoc test (ie, a Tukey`s test) found a superiority by means for all age groups compared to the group of age 30 and below, with a superiority of the group [50–59] (higher mean at 1.900). However, there were no difference between age groups [30–39] compared to [40–49] (p = 0.748) or age groups [40–49] compared to [50–59] (p = 0.632). For relationship status, we found that married microsurgeons were doing more microanastomoses compared to single microsurgeons (mean was 1.813 versus 1.467). Related to gender and illicit drug use, performing two or more microanastomoses per month was correlated with gender (p = 0.036) and illicit drugs use (p = 0.004). The odds of male to perform two and more microvascular anastomoses per month were about 4 times higher than those of woman (OR = 0.262, IC95% [0.068–1.009]), and there were no conclusion for illicit drug use odds (OR = 0.909, IC95% [0.797–1.038] close to 1).

DISCUSSION

Burnout is a troublesome situation among physicians, especially surgeons. Our findings suggest no relation between intensive microsurgery practice and higher burnout status among IMC Facebook group surgeons.

This international educative group allows

TABLE 3. Two-Ways ANOVA Comparison with Burnout and Microanastomoses.

Two-Ways ANOVA	ANOVA P-Value	Post-Hoc Tukey Test P-Value (Mean)
Significant effect of:		
"Microanastomosis" on "Age"	0.006*	
<30 (compared to [30–39])		0.003* (1.000 versus 1.750)
<30 (compared to [40–49])		0.001* (1.000 versus 1.846)
<30 (compared to [50–59])		0.001* (1.000 versus 1.900)
[30–39] (compared to [40–49])		0.748
[40–49] (compared to [50–59])		0.632
"Burnout" on "Age"	0.796	
"Microanastomosis" and "Burnout" on "Age"	0.373	
"Microanastomosis" and "Relatioship status"	0.036*	
Single (compared to married)		0.010* (1.467 versus 1.813)
Two-Ways ANOVA	**ANOVA P-Value**	**Odds Ratio (95% CI)**
"Microanastomosis" on "Gender"	0.036*	0.262 (0.068–1.009)
"Microanastomosis" on "Illicit drugs use"	0.004*	0.909 (0.797–1.038)

microsurgeons to exchange ideas about clinical cases and collaborate on research. We used this group for our study population, as it is the biggest active group on microsurgery. Membership is quickly expanding, reaching over 7,000 members within the first 18 months after the group's creation, and at the time of our survey it gathered over 11,500 members.[9,10] In our study, participants may not be a representative study population to generalize conclusions as we were only able to gather 184 participants.

In our study, roughly one-third of the participants (37.7 percent) have symptoms of burnout, which is lower than what can be found in literature on surgical population (45.5 percent).[11,19] This could be explained by our very low response rate under 2 percent, meaning that despite our best efforts to avoid this bias, we have probably selected the most active and passionate members of the group. One of the difficulties for many surgeons to identify burnout is that they love what they do, and passion makes an individual more resistant to burnout.[20] Another explanation of this lower burnout proportion is about the IMC Facebook group itself: being in an active microsurgical international community where clinical cases can be easily discussed with worldwide experts could generates a sense of belonging and reassurance when a physician is in doubt and/or exposed to complications.

However, one-third of our participants have a "low score" regarding "Personal Accomplishment" (31.69 percent) in the MBI score, which is double than what can be seen in the literature (ranges between 11 to 17 percent).[11] Personal Accomplishment measures feelings of competence and successful achievement in one's work with people, and lower scores correspond to greater experienced burnouts. Nguyen et al[21] found that microvascular surgeons have one of the highest rates of gratification from their work compared to non-microvascular surgeons of the same specialty. Therefore, to explain our lower personal accomplishment ratio, it seems that being part of an international group using social media and focusing on microsurgical education allows its members to seek advice and special expertise in reconstructive surgery, and therefore attracts young or isolated surgeons. This particular subgroup of surgeons may have encountered previous complications in free flap surgery, motivating their participation on the IMC Facebook group.

Chaput et al[22] demonstrated that amongst North American plastic surgeons, risk factors for burnout are excessive work (>70 hours of work per week, >2 nights of call per week), having a primarily reconstructive practice, a microsurgical or aesthetic subspecialty. Junior doctors and residents are also more likely to have burnout.[22,23] Nevertheless, all our participants have a microsurgical and reconstructive practice; there is a vast majority of male and they are younger than in other studies.[19,24] Participants are coming mostly from Europe and Asia, and

they worked by mean less compared to Chaput et al's burnout risk factors.[22] Our univariate and multivariate analysis shows only a relationship between the younger age category and being a single surgeon to perform fewer microanastomoses per month than other age categories or marital status. Indeed, participants under 30 years old are mainly still in training and not married.

Burnout often coexists with alcohol and substance abuse.[23] Surgeons with depression are more than seven times as likely to abuse alcohol.[25] In our study, neither alcohol nor substance abuses are linked to burnout. Our participants are obviously looking to improve their physical health. The majority are exercising at least once or twice a week. Shanafelt et al[26] found that those who exercised regularly had significantly higher overall and physical well-being score, and a lower prevalence of burnout (25 percent versus 30 percent). Therefore, our finding about not using illicit drugs seems rational in a group practicing physical activities on a regular basis, as it is in relationship with a higher number of microanastomoses performed per month.

The vast majority of the population of young surgeons in our study was male, which could be explained by the fact that this study was conducted in multiple countries where women still do not have the same access as men in surgical specialties. Indeed, this gender ratio is not comparable to other North American plastic surgeon group studies.[11,24] Microsurgery's "bad" reputation on impacting the surgeon's quality of life, which motivated our work, could also be discussed as a reason for this gender discrepancy. However, we did not find any relationship between intensive practice of microsurgery and burnout, even stratified by gender. Indeed, Bennion and al[27] found that maintenance of numerous microsurgical free flap caseloads is a protective factor for high levels of burnout among microvascular surgeons. We also find a lower proportion of divorced participants than in the general population (around 2 percent), with a majority of surgeons having children, which could indicate an important balance between family support and microsurgery practice.

Finally, our study shows that surgeons still in training especially need to be protected from burnout,[24] as three quarters of our physicians under 30 have already experienced it. Maslach and Goldberg emphasized twenty years ago that responsibility for burnout prevention lays with the individual worker, and not the organization.[28] Nevertheless, practice reorganization for residents such as weekly rounds with a senior surgeon and regular staff meetings are helping to prevent burnout.[22,29,30] It is of importance when burnout rates among surgeons are expected to rise further over the next few years, as the demands of the surgical profession are only expected to increase. Indeed, supply of surgeons is stagnant worldwide, whereas the demand for surgery is increasing.[31] Therefore, actively treating burnout by teaching young physicians how to avoid and recognize the first signs should be a requirement in all surgical programs.

CONCLUSIONS

Burnout status in IMC Facebook group surgeons was not correlated to the practice of microsurgery. As there is no counterpart group for a comparative study, no conclusion could be obtained from this work yet. However, we believe that being part of an international social media successful group could be a possible protective factor, especially for young or isolated surgeons worldwide, and an active participation could possibly improve education and protect microvascular surgeons by helping them to avoid and recognize burnout signs.

CONFLICT OF INTEREST

None.

DISCLOSURES

The authors have no financial interests in any of the products or techniques mentioned and have received no external support related to this study.

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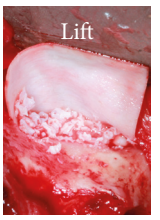

VIEWPOINT

Sinus Lift: Analysis of Schneiderian Membrane Perforations

Sir:

Complications appeared during or after the sinus membrane elevation are under meticulous investigation of different specialists.[1] Among peroperative ones are: sinus membrane perforation, hemorrhage/bleeding, buccal bone fracture, nonachievement of primary stability, and infraorbital nerve injury.[1] Postoperative complications are usually divided into acute and chronic:[2] bleeding, graft leak, wound opening, infections, endosinus extrusion of the implant, and modification of the mucosa.[1]

According to Barone et al[3] a Schneiderian membrane (*synonym*: mucoperiosteal lining of the maxillary sinus) perforation is the most common complication (noted in the 25 percent of performed sinus lifts). Some studies reported even 56 percent of perforation accidents.[1]

Two different classifications of sinus membrane perforations are applied according to a *1)* lateral or *2)* transcrestal sinus floor elevation. In cases of lateral (*synonyms*: direct, open)[4] lift the perforations are divided into IV Classes[5] proposed by Fugazzotto and Vlassis in 2003 which became a simplified version of the 1999`s V Classes Classification[6] developed by the same authors.

The 2003's Classification by Fugazzotto and Vlassis includes Class I, II, III (which can be IIIA [along the lateral or cranial wall of the created window, when a cavity to be augmented extends a minimum of 4–5 mm beyond the perforation with additional space for performance of a further osteotomy] and IIIB [the same as upon IIIA but without the additional space for osteotomy]), and IV.[5]

In cases of transcrestal lift the perforations are classified by Tavelli et al[7] into three types:

- Type I_s – small perforation caused by an implant drill.
  Type I_l – large perforation caused by a drill.
- Type II – perforation caused by uncontrolled forces applied during Schneiderian membrane elevation or resulting from membrane collapse during grafting, with the consequent graft migration into the sinus.
- Type III – can occur during dental implant placement and be hidden by the implant body.

HOW TO AVOID PERFORATION?

Becker et al[8] and Tourbah with Maarek[1] described the factors that can increase the risk of sinus membrane perforation: *1)* previous entrance into the sinus (ie, scarring), *2)* septa, *3)* thin membrane, *4)* soft tissue adhesion, *5)* cyst/sinus pathology, *6)* operator error, and *7)* overfilling with the graft material

Kendrick insisted[9] – to reducing risk of perforation can be achieved by the ultra-careful evaluation of

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The word 'Lift' at the upper right icon means that article focused on sinus floor elevation.

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preoperative CT for assessment of:

1. The thickness of the sinus bone wall.
2. Location of septa.
3. Membrane thickness: the incidence of perforation is higher when the thickness is less than 1.5 mm.[1]

MANAGEMENT

Hernández-Alfaro et al[10] in 2008, presented six solutions for the perforations: suturing (in 11 percent of cases), resorbable collagen membrane (42.30 percent), lamellar bone + resorbable collagen membrane (26.92 percent), lamellar bone (3.84 percent), lamellar bone + buccal fat pad (9.61 percent), and bone block graft (5.76 percent).

Barbu et al[11] in 2019 published their two management techniques for tearing: suturing (in 51 percent of cases) and sealing using a low-resorption collagen membrane (in 49 percent).

Beck-Broichsitter et al[12] in 2020 reported their six ways of perforations` management: no treatment, suture, fibrin glue, collagen membrane, suture + fibrin glue, and suture + collagen membrane. In 56 percent of cases the perforation was covered by membrane and in 20 percent a suture with membrane was applied.

Thus, the results of all three groups of surgeons demonstrate a strong position (42.30, 49, and 56 percent) of resorbable collagen membrane application among other perforation restorative techniques.

In my practice the resorbable collagen membrane is a preventive measure used in all cases of the direct lift, regardless of whether there is a perforation or not (Fig 1). But we should remember the thesis highlighted by Younes and Boukaram: when the perforation reparation is impossible, the lift is aborted and reentry is planned after 3 months.[13]

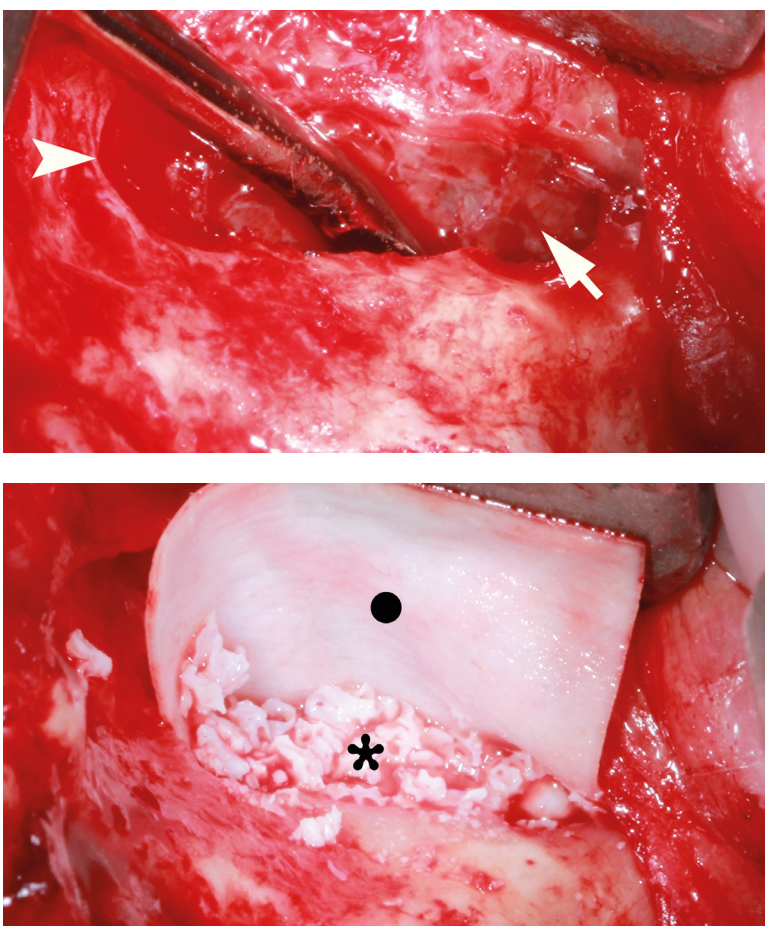

FIGURE 1. Uncomplicated lateral (*arrowhead*) sinus floor elevation (using a complete osteotomy design)[4] in a 37-year-old male. No evidence of Schneiderian membrane (*arrow*) perforations (**A**) is noted. Bone grafting using spongious bovine bone material (1–2 mm granules) (*asterisk*) simultaneously with a 25 × 25-mm resorbable collagen membrane (*dot*) was used as a preventive measure (**B**).

PIEZOSURGERY

Considering the data that piezosurgery offers a 75 percent reduction in the expected Schneiderian membrane perforation rate, piezosurgery becomes a must have equipment for all clinics focused on sinus grafting.[13] As for me, a prolonged transoperative time[14] and a cost of piezosurgical equipment are only two minor disadvantages of that technology.

Summarizing the data, it's important to emphasize the importance of resorbable collagen membrane usage in cases of small (<5 mm), large (5–10 mm), and even complete sinus membrane tears (large dilacerations).[1] Collagen membrane usage even in non-perforated cases is highly recommended taking into account my own experience.

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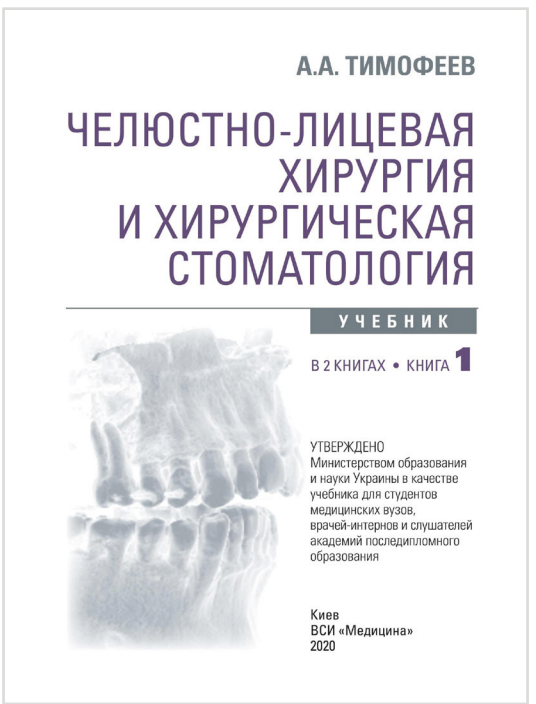
BOOK

Maxillofacial Surgery and Surgical Dentistry: In Two Volumes: Volume 1

by Oleksii O. Tymofieiev
[In Russian] Kyiv, Ukraine: Medicine, 2020, pp. 992, $52.00 (1,480.00 UAH)



Books are the quietest and most constant of friends; they are the most accessible and wisest of counselors, and the most patient of teachers.
—Charles W. Eliot
President of Harvard University for 40 years

October 2020 became a month when the world saw a new powerful edition focused on oral and maxillofacial surgery (OMS) and imaging. *Maxillofacial Surgery and Surgical Dentistry* by Professor Tymofieiev started a new era in the cutting-edge OMS science. Moreover, this beautiful, two-volume masterpiece was awarded the highest recognition in the country being approved by Ministry of Education and Science of Ukraine as a textbook for students of medical universities, interns, and listeners of academies for postgraduate education.

The Table of Contents lists 22 well-written chapters that cover the major topics of OMS. A very special attention of the Volume 1 is dedicated to all types of anesthesia (50 pages) and the inflammatory diseases (406 pages) of the jaws, soft tissues, and the paranasal sinuses. Such a fundamental anesthesia`s and infection`s sections of the first volume make it completely indispensable for oral and maxillofacial surgeons involved into the treatment of purulent-inflammatory processes in out- and in-patient clinics.

Every physician knows how important, especially during COVID-19 pandemic, to use every possibility in increasing own professional level. And that 992-page elegantly written professional guide will be tremendously useful for surgeons of all generations and even for otorhinolaryngologists and thoracic surgeons.

Mark P. Komskyi, ScD, Professor
Dnipro, Ukraine
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- **WOUNDS OF ORAL CAVITY[5]**

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LOCAL ANESTHETIC AND ANTI-INFLAMMATORY EFFECT[1]

SUMMARY OF PRODUCT CHARACTERISTICS

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

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

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