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ЕЖЕМЕСЯЧНЫЙ НАУЧНЫЙ ЖУРНАЛ

Медицинские новости Грузии
საქართველოს სამედიცინო სიახლენი

GEORGIAN MEDICAL NEWS

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GMN: Georgian Medical News is peer-reviewed, published monthly journal committed to promoting the science and art of medicine and the betterment of public health, published by the GMN Editorial Board since 1994. GMN carries original scientific articles on medicine, biology and pharmacy, which are of experimental, theoretical and practical character; publishes original research, reviews, commentaries, editorials, essays, medical news, and correspondence in English and Russian.

GMN is indexed in MEDLINE, SCOPUS, PubMed and VINITI Russian Academy of Sciences. The full text content is available through EBSCO databases.

GMN: Медицинские новости Грузии - ежемесячный рецензируемый научный журнал, издаётся Редакционной коллегией с 1994 года на русском и английском языках в целях поддержки медицинской науки и улучшения здравоохранения. В журнале публикуются оригинальные научные статьи в области медицины, биологии и фармации, статьи обзорного характера, научные сообщения, новости медицины и здравоохранения. Журнал индексируется в MEDLINE, отражён в базе данных SCOPUS, PubMed и ВИНТИ РАН. Полнотекстовые статьи журнала доступны через БД EBSCO.

GMN: Georgian Medical News – საქართველოს სამედიცინო სიახლენი – არის ყოველთვიური სამეცნიერო სამედიცინო რეცენზირებადი ჟურნალი, გამოიცემა 1994 წლიდან, წარმოადგენს სარედაქციო კოლეგიისა და აშშ-ის მეცნიერების, განათლების, ინდუსტრიის, ხელოვნებისა და ბუნებისმეტყველების საერთაშორისო აკადემიის ერთობლივ გამოცემას. GMN-ში რუსულ და ინგლისურ ენებზე ქვეყნდება ექსპერიმენტული, თეორიული და პრაქტიკული ხასიათის ორიგინალური სამეცნიერო სტატიები მედიცინის, ბიოლოგიისა და ფარმაციის სფეროში, მიმოხილვითი ხასიათის სტატიები.

ჟურნალი ინდექსირებულია MEDLINE-ის საერთაშორისო სისტემაში, ასახულია SCOPUS-ის, PubMed-ის და ВИНТИ РАН-ის მონაცემთა ბაზებში. სტატიების სრული ტექსტი ხელმისაწვდომია EBSCO-ს მონაცემთა ბაზებიდან.

WEBSITE

www.geomednews.com

К СВЕДЕНИЮ АВТОРОВ!

При направлении статьи в редакцию необходимо соблюдать следующие правила:

1. Статья должна быть представлена в двух экземплярах, на русском или английском языках, напечатанная через **полтора интервала на одной стороне стандартного листа с шириной левого поля в три сантиметра**. Используемый компьютерный шрифт для текста на русском и английском языках - **Times New Roman (Кириллица)**, для текста на грузинском языке следует использовать **AcadNusx**. Размер шрифта - **12**. К рукописи, напечатанной на компьютере, должен быть приложен CD со статьей.

2. Размер статьи должен быть не менее десяти и не более двадцати страниц машинописи, включая указатель литературы и резюме на английском, русском и грузинском языках.

3. В статье должны быть освещены актуальность данного материала, методы и результаты исследования и их обсуждение.

При представлении в печать научных экспериментальных работ авторы должны указывать вид и количество экспериментальных животных, применявшиеся методы обезболивания и усыпления (в ходе острых опытов).

4. К статье должны быть приложены краткое (на полстраницы) резюме на английском, русском и грузинском языках (включающее следующие разделы: цель исследования, материал и методы, результаты и заключение) и список ключевых слов (key words).

5. Таблицы необходимо представлять в печатной форме. Фотокопии не принимаются. **Все цифровые, итоговые и процентные данные в таблицах должны соответствовать таковым в тексте статьи**. Таблицы и графики должны быть озаглавлены.

6. Фотографии должны быть контрастными, фотокопии с рентгенограмм - в позитивном изображении. Рисунки, чертежи и диаграммы следует озаглавить, пронумеровать и вставить в соответствующее место текста **в tiff формате**.

В подписях к микрофотографиям следует указывать степень увеличения через окуляр или объектив и метод окраски или импрегнации срезов.

7. Фамилии отечественных авторов приводятся в оригинальной транскрипции.

8. При оформлении и направлении статей в журнал МНГ просим авторов соблюдать правила, изложенные в «Единых требованиях к рукописям, представляемым в биомедицинские журналы», принятых Международным комитетом редакторов медицинских журналов - <http://www.spinesurgery.ru/files/publish.pdf> и http://www.nlm.nih.gov/bsd/uniform_requirements.html В конце каждой оригинальной статьи приводится библиографический список. В список литературы включаются все материалы, на которые имеются ссылки в тексте. Список составляется в алфавитном порядке и нумеруется. Литературный источник приводится на языке оригинала. В списке литературы сначала приводятся работы, написанные знаками грузинского алфавита, затем кириллицей и латиницей. Ссылки на цитируемые работы в тексте статьи даются в квадратных скобках в виде номера, соответствующего номеру данной работы в списке литературы. Большинство цитированных источников должны быть за последние 5-7 лет.

9. Для получения права на публикацию статья должна иметь от руководителя работы или учреждения визу и сопроводительное отношение, написанные или напечатанные на бланке и заверенные подписью и печатью.

10. В конце статьи должны быть подписи всех авторов, полностью приведены их фамилии, имена и отчества, указаны служебный и домашний номера телефонов и адреса или иные координаты. Количество авторов (соавторов) не должно превышать пяти человек.

11. Редакция оставляет за собой право сокращать и исправлять статьи. Корректур авторам не высылаются, вся работа и сверка проводится по авторскому оригиналу.

12. Недопустимо направление в редакцию работ, представленных к печати в иных издательствах или опубликованных в других изданиях.

При нарушении указанных правил статьи не рассматриваются.

REQUIREMENTS

Please note, materials submitted to the Editorial Office Staff are supposed to meet the following requirements:

1. Articles must be provided with a double copy, in English or Russian languages and typed or computer-printed on a single side of standard typing paper, with the left margin of 3 centimeters width, and 1.5 spacing between the lines, typeface - **Times New Roman (Cyrillic)**, print size - 12 (referring to Georgian and Russian materials). With computer-printed texts please enclose a CD carrying the same file titled with Latin symbols.

2. Size of the article, including index and resume in English, Russian and Georgian languages must be at least 10 pages and not exceed the limit of 20 pages of typed or computer-printed text.

3. Submitted material must include a coverage of a topical subject, research methods, results, and review.

Authors of the scientific-research works must indicate the number of experimental biological species drawn in, list the employed methods of anesthetization and soporific means used during acute tests.

4. Articles must have a short (half page) abstract in English, Russian and Georgian (including the following sections: aim of study, material and methods, results and conclusions) and a list of key words.

5. Tables must be presented in an original typed or computer-printed form, instead of a photocopied version. **Numbers, totals, percentile data on the tables must coincide with those in the texts of the articles.** Tables and graphs must be headed.

6. Photographs are required to be contrasted and must be submitted with doubles. Please number each photograph with a pencil on its back, indicate author's name, title of the article (short version), and mark out its top and bottom parts. Drawings must be accurate, drafts and diagrams drawn in Indian ink (or black ink). Photocopies of the X-ray photographs must be presented in a positive image in **tiff format**.

Accurately numbered subtitles for each illustration must be listed on a separate sheet of paper. In the subtitles for the microphotographs please indicate the ocular and objective lens magnification power, method of coloring or impregnation of the microscopic sections (preparations).

7. Please indicate last names, first and middle initials of the native authors, present names and initials of the foreign authors in the transcription of the original language, enclose in parenthesis corresponding number under which the author is listed in the reference materials.

8. Please follow guidance offered to authors by The International Committee of Medical Journal Editors guidance in its Uniform Requirements for Manuscripts Submitted to Biomedical Journals publication available online at: http://www.nlm.nih.gov/bsd/uniform_requirements.html
http://www.icmje.org/urm_full.pdf

In GMN style for each work cited in the text, a bibliographic reference is given, and this is located at the end of the article under the title "References". All references cited in the text must be listed. The list of references should be arranged alphabetically and then numbered. References are numbered in the text [numbers in square brackets] and in the reference list and numbers are repeated throughout the text as needed. The bibliographic description is given in the language of publication (citations in Georgian script are followed by Cyrillic and Latin).

9. To obtain the rights of publication articles must be accompanied by a visa from the project instructor or the establishment, where the work has been performed, and a reference letter, both written or typed on a special signed form, certified by a stamp or a seal.

10. Articles must be signed by all of the authors at the end, and they must be provided with a list of full names, office and home phone numbers and addresses or other non-office locations where the authors could be reached. The number of the authors (co-authors) must not exceed the limit of 5 people.

11. Editorial Staff reserves the rights to cut down in size and correct the articles. Proof-sheets are not sent out to the authors. The entire editorial and collation work is performed according to the author's original text.

12. Sending in the works that have already been assigned to the press by other Editorial Staffs or have been printed by other publishers is not permissible.

**Articles that Fail to Meet the Aforementioned
Requirements are not Assigned to be Reviewed.**

ავტორთა საქურაღებოლ!

რედაქციაში სტატიის წარმოდგენისას საჭიროა დაიცვათ შემდეგი წესები:

1. სტატია უნდა წარმოადგინოთ 2 ცალად, რუსულ ან ინგლისურ ენებზე დაბეჭდილი სტანდარტული ფურცლის 1 გვერდზე, 3 სმ სიგანის მარცხენა ველისა და სტრიქონებს შორის 1,5 ინტერვალის დაცვით. გამოყენებული კომპიუტერული შრიფტი რუსულ და ინგლისურენოვან ტექსტებში - **Times New Roman (Кириллица)**, ხოლო ქართულენოვან ტექსტში საჭიროა გამოვიყენოთ **AcadNusx**. შრიფტის ზომა – 12. სტატიას თან უნდა ახლდეს CD სტატიით.

2. სტატიის მოცულობა არ უნდა შეადგენდეს 10 გვერდზე ნაკლებს და 20 გვერდზე მეტს ლიტერატურის სიის და რეზიუმეების (ინგლისურ, რუსულ და ქართულ ენებზე) ჩათვლით.

3. სტატიაში საჭიროა გაშუქდეს: საკითხის აქტუალობა; კვლევის მიზანი; საკვლევი მასალა და გამოყენებული მეთოდები; მიღებული შედეგები და მათი განსჯა. ექსპერიმენტული ხასიათის სტატიების წარმოდგენისას ავტორებმა უნდა მიუთითონ საექსპერიმენტო ცხოველების სახეობა და რაოდენობა; გაუტკივარებისა და დაძინების მეთოდები (მწვავე ცდების პირობებში).

4. სტატიას თან უნდა ახლდეს რეზიუმე ინგლისურ, რუსულ და ქართულ ენებზე არანაკლებ ნახევარი გვერდის მოცულობისა (სათაურის, ავტორების, დაწესებულების მითითებით და უნდა შეიცავდეს შემდეგ განყოფილებებს: მიზანი, მასალა და მეთოდები, შედეგები და დასკვნები; ტექსტუალური ნაწილი არ უნდა იყოს 15 სტრიქონზე ნაკლები) და საკვანძო სიტყვების ჩამონათვალი (key words).

5. ცხრილები საჭიროა წარმოადგინოთ ნაბეჭდი სახით. ყველა ციფრული, შემაჯამებელი და პროცენტული მონაცემები უნდა შეესაბამებოდეს ტექსტში მოყვანილს.

6. ფოტოსურათები უნდა იყოს კონტრასტული; სურათები, ნახაზები, დიაგრამები - დასათაურებული, დანომრილი და სათანადო ადგილას ჩასმული. რენტგენოგრაფიების ფოტოასლები წარმოადგინეთ პოზიტიური გამოსახულებით **tiff** ფორმატში. მიკროფოტოსურათების წარწერებში საჭიროა მიუთითოთ ოკულარის ან ობიექტივის საშუალებით გადიდების ხარისხი, ანათალების შედეგის ან იმპრეგნაციის მეთოდი და აღნიშნოთ სურათის ზედა და ქვედა ნაწილები.

7. სამამულო ავტორების გვარები სტატიაში აღინიშნება ინიციალების თანდართვით, უცხოურისა – უცხოური ტრანსკრიპციით.

8. სტატიას თან უნდა ახლდეს ავტორის მიერ გამოყენებული სამამულო და უცხოური შრომების ბიბლიოგრაფიული სია (ბოლო 5-8 წლის სიღრმით). ანბანური წყობით წარმოდგენილ ბიბლიოგრაფიულ სიაში მიუთითეთ ჯერ სამამულო, შემდეგ უცხოელი ავტორები (გვარი, ინიციალები, სტატიის სათაური, ჟურნალის დასახელება, გამოცემის ადგილი, წელი, ჟურნალის №, პირველი და ბოლო გვერდები). მონოგრაფიის შემთხვევაში მიუთითეთ გამოცემის წელი, ადგილი და გვერდების საერთო რაოდენობა. ტექსტში კვადრატულ ფხიხლებში უნდა მიუთითოთ ავტორის შესაბამისი N ლიტერატურის სიის მიხედვით. მიზანშეწონილია, რომ ციტირებული წყაროების უმეტესი ნაწილი იყოს 5-6 წლის სიღრმის.

9. სტატიას თან უნდა ახლდეს: ა) დაწესებულების ან სამეცნიერო ხელმძღვანელის წარდგინება, დამოწმებული ხელმოწერითა და ბეჭდით; ბ) დარგის სპეციალისტის დამოწმებული რეცენზია, რომელშიც მითითებული იქნება საკითხის აქტუალობა, მასალის საკმაობა, მეთოდის სანდოობა, შედეგების სამეცნიერო-პრაქტიკული მნიშვნელობა.

10. სტატიის ბოლოს საჭიროა ყველა ავტორის ხელმოწერა, რომელთა რაოდენობა არ უნდა აღემატებოდეს 5-ს.

11. რედაქცია იტოვებს უფლებას შეასწოროს სტატია. ტექსტზე მუშაობა და შეჯერება ხდება საავტორო ორიგინალის მიხედვით.

12. დაუშვებელია რედაქციაში ისეთი სტატიის წარდგენა, რომელიც დასაბეჭდად წარდგენილი იყო სხვა რედაქციაში ან გამოქვეყნებული იყო სხვა გამოცემებში.

აღნიშნული წესების დარღვევის შემთხვევაში სტატიები არ განიხილება.

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MORPHEAFORM BCC OF ALA NASI: A SUCCESSFUL DERMATOSURGICAL APPROACH BY TRANSPOSITION FLAP FROM THE ADJACENT AREA. CONTAMINATION OF VENLAFAXINE, BISOPROLOL AND OLANZAPINE WITH NITROSAMINES/NDSRIS: THE MOST LIKELY CAUSE OF SKIN CANCER DEVELOPMENT AND PROGRESSION

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Abstract.

Two steps are able to lead to a significant decrease in the incidence of skin cancer overall and/or to its parallel and successful surgical treatment.

The first step concerns its non-occurrence or less frequent clinical manifestation and is largely related to the modern concept known as prevention, but not the one mainly related to solar radiation, but : 1) informing patients about the possible contamination of certain drugs with carcinogens/nitrosamines/NDSRIs and 2) making clinicians aware of the modern concept of limited to completely eliminated intake of nitrosamines/NDSRIs in medications. The ineffectiveness of either of these entities could in all likelihood be seen as one of the major causes of the headline growth in the incidence of skin cancer and keratinocytic cancer in particular. It is also because of this fact that the sun protection so recommended and advertised has been shown to be ineffective, yet it remains universally advertised.

Polycontamination with Nitrosamines/ NDSRIs within multimедication in polymorbid patients is the most serious obstacle (at the moment) for the current concept of skin cancer prevention to become a reality.

The announced official "hypothetical contamination" of more than 250 drugs worldwide by the FDA in April 2023, and the establishment of permissive concentrations for 5 classes of carcinogenic activity of the nitrosamines/NDSRIs - effectively make any preventive step more than impossible or meaningless. The open question remains, how were the 5 subgroups for hypothetical carcinogenic potency of the carcinogens contained in the drugs created? On the basis of what data? What tumors occurred when these concentrations were exceeded? Data that remains hidden from the public and end users , but also data that guarantees the development of real (not hypothetical) skin tumours.

The new FDA regulations also do not comment on the issues concerning the use of "hypothetical carcinogens" in the context of polycontamination and polymедication in polymorbid patients. Because of this fact, the follow-up of actual carcinomas after the intake of multiple "hypothetical carcinogens" would also seem to be not unimportant. And it turns out to be quite real and sobering to say the least.

The second step, which concerns the successful treatment of skin cancer , is its early surgical treatment. This is the most promising approach, regardless of whether patients are exposed to permanent intake of carcinogens/nitrosamines/NDSRIs in the drugs.

We report an 86-year-old patient , who, as part of his polymедication and polymorbidity, takes 3 drugs that,

according to the official FDA list of 2023, have strictly defined reference limits for potentially available "hypothetical carcinogens": bisoprolol/ carcinogenic potency class 4, olanzapine/ carcinogenic potency class 5 and venlafaxine/ carcinogenic potency class 1. The described patient developed "real carcinoma" after combined long-term intake of the "hypothetical carcinogens" announced in the official FDA lists from April 2023.

Proceeding from common sense, regulators in the face of the FDA should have already long observed the development of a heterogeneous type of tumors to be able to determine 1) the potency of the 5 subclasses of carcinogens in the drugs and 2) their reference values. Moreover- they should also have the exact information why which carcinogen in which drug causes which type of tumor. Otherwise, the FDA should not announce its detailed recommendations to drug manufacturers.

The present patient was successfully treated surgically by a transposition adjacent flap. The optimal dermatosurgical and reconstructive methodologies for the treatment of tumors in the ala nasi area are discussed.

Key words. NDSRIs, Nitrosamines, skin cancer, transpositional flap, bisoprolol, venlafaxine, contamination, FDA, olanzapine.

Introduction.

Basal cell carcinoma is a benign cutaneous tumor with local destructive potential [1]. These lesions, especially in difficult anatomical areas, such as the nasal, paranasal and nasolabial regions, are a reconstructive challenge to every dermatologic surgeon and require a serious basic practical training in dermatologic surgery, anatomy or reconstructive surgical skills [2]. Interdisciplinary collaboration in these cases often guarantees better postoperative outcomes.

In addition to the correction of postoperative defects that occur after surgical removal of tumors in the facial area , preventive steps that could be taken to reduce the intake of possible, albeit "hypothetical" according to the FDA, carcinogens in drugs known as nitrosamines or NDSRIs are also relevant [3].

Case report.

We present an 86-year-old polymorbid patient who came to the dermatology department with primary complaints of a non-healing growing wound in the right nasal area dating from six years (Figure 1). A biopsy was taken prior to the consultation with a histological verification of morphea form basal cell carcinoma. Comorbidities are known depression, arterial



Figure 1. An ulcerative pigmented lesion measured 2.5 cm, with irregular borders and crusts, located above the right nasal ala.

hypertension, gastritis, chronic congestive heart failure, mitral insufficiency, permanent atrial fibrillation, chronic insomnia.

The patient's systemic medication within the hospitalization included: 1) bisoprolol fumarate 5 mg: 2 times half a tablet from 10 years, 2) digoxin: 1 time daily half a tablet, 3) apixaban 5 mg: 2 times half a tablet from 2/3 years, 4) esomeprazole 40 mg :once daily half a tablet / from 2 years, 5) olanzapine 5 mg : half a tablet daily from 6 years, 6) venlafaxine 75 mg / SNRIs: 2 times one tablet daily / from 6 years, 7) pregabalin 75 mg: one tablet daily / from 6 years, 8) bromazepam 3 mg: in the evening one or half a tablet, every 2 days / from 30 years, 9) quetiapine 25 mg: in the evening , one to 2 tablets, every 2 days / from 5-6years, 10) zopiclone 7.5 mg: one half to one tablet every two days / from 1 year.

No family history for malignancy in any family member. A surgical excision was performed 16 years ago for another basal cell carcinoma lesion located on the right forearm.

The patient requested physical examination of the lesion and further therapeutic approach to be established.

The dermatological examination showed an ulcerative pigmented lesion, measured 2.5 cm, with irregular borders and crusts, located above the right nasal ala suspected clinically for a pigmented basal cell carcinoma (Figure 1).

Routine blood tests were performed without abnormalities. An MRI of the brain showed evidence of vascular-induced gliosis, a small vessel disease. Cartilage and bone structures were not affected.

The patient was recommended a two-staged surgical procedure using a transpositional rotation flap from the adjacent area. Under local anesthesia with lidocaine 1% diluted with NaCl and additional 4 drops of adrenaline, an excision of the primary tumour was made with a surgical safety margin of 5 mm (Figure 2a). Given the possible remaining defect after the initial surgical removal of the tumour it was decided to perform a reconstruction using a transposition flap form the cheek with a preserved feeding arterial perfusion (Figures 2b and 2c).

A skin flap was dissected from the cheekbone area, ensuring its mobility to the nasal area in parallel (Figures 2a and 2b). The transposition flap, rotated at 70 degrees, was formed laterally from the resulting defect, with preserved arterial blood supply (Figures 2a and 2b).

The transposition of the skin flap was ensured by its staged and gradual undermining in depth, thus preserving the balance between the feeding arterial circulation and the possibility of its translocation or mobility in the ala nasi direction (Figures 2a-2c).

The skin edges were adapted in stages using Donati sutures and single interrupted sutures (Figure 2d). Histopathology showed morpheaform basal cell carcinoma, with superficial ulceration, measured 25/3 mm, with clean resection lines. The patient was staged according to the TNM classification as T2N0M0. The postoperative period was without complications.

Discussion.

When performing surgical excision of a cutaneous tumor, especially in delicate anatomical areas like the nose, often the remaining defect cannot be closed alone with single sutures and reconstructive techniques are required [4]. Insufficient reconstruction can lead to future asymmetry and poor functional outcome. A preferred and effective approach used in the restoration of the ala nasi, is the two-staged reconstruction technique with a nasolabial flap [4]. It is a great option because the remaining scar will be completely concealed in the nasolabial sulcus. However, if we aim for a single step procedure without



Figure 2. 2a: Surgical excision with a surgical safety margin of 5 mm.

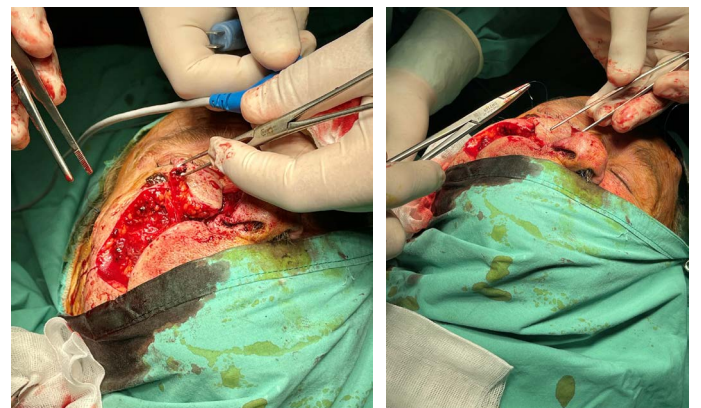


Figure 2. 2b,c: After hemostasis, a nasolabial transposition flap rotated at 70 degrees, was formed laterally from the resulting defect, with preserved arterial blood supply.



2d: The skin edges were adapted in stages using Donati sutures and single interrupted sutures.

restricting mobilization, a reconstruction with a lateral nasal artery perforator flap can be used [5].

According to Krishnan et al. [6] deep alar defects are one of the most difficult types of alar defects for reconstruction due to the need of preservation of the architecture of the alar crease, rim, and nasolabial fold. Tunneled transposition flap, a one-stage reconstructive technique with a great cosmetic outcome, can be used when the defect is located entirely on the ala [6].

When the defect includes the nasolabial fold, the malar turnover island pedicle flap can be also considered [7].

The nasal ala is an anatomical complex structure formed by skin, mucosa, and cartilage [8]. When the cartilage is already affected by the tumor, a chondrocutaneous graft can be used in a single-step reconstructive procedure [8].

There are other rare flaps through which reconstruction in the ala nasi area could be carried out. One of them is the so-called shark flap. This technique was first described by Cvancara and Wentzell in 2006 and is basically a myocutaneous island flap to cover defects after tumor removal in the alar and peri-alar nasal area [9].

The classic form of this flap provides blood flow/preserved circulation from the levator labii superioris muscle by requiring careful separation and preservation of the vascular bundle [10].

The advantage of this technique is that the surgery is a one-stage procedure, without the need to be combined with another technique, and the final results are aesthetically satisfying [11]. The following circumstances could be identified as disadvantages: 1) limited application in larger defects and 2) inability to apply the technique in cartilage involvement [11].

In the patient we described, the cartilage was not affected, which provided a stable base for the transposed flap to adhere to, as well as uneventful postoperative healing. The adaptation of the sutures at the periphery of the flap was carried out by applying minimal pressure during their tightening to prevent possible ischemia of the feeding pedicle.

Viewed comprehensively, the case should not be viewed as just another patient with basal cell carcinoma in the ala nasi area successfully operated on by a multidisciplinary team.

The FDA published in 2023 the list of permissible levels of nitrosamines in drugs, as well as the categorization of contained carcinogens according to their hypothetical carcinogenic activity [12].

According to these recommendations, the intake of carcinogens within the monomedication of a particular drug should not be considered as hypothetically carcinogenic [12] and dangerous for patients.

However, to our great disappointment, the shared data do not comment in any way on what the outcomes would be after receiving contaminated polymedication within the framework of multimедication in polymorbid patients, similar to the one we presented, which is also already published in a separate scientific paper thematizing this issue [3].

According to the FDA lists of potential hypothetical carcinogens in drugs as of 2023, concomitant administration of 1) bisoprolol/carcinogenic potency of 4, in combination with 2) olanzapine/carcinogenic potency class 5, as well as with 3) venlafaxine/ carcinogenic potency class 1, constitutes in effect a long-term intake of a "cocktail of carcinogens" leading to the clinical manifestation of keratinocytic tumors in the patient described [3].

At the very least, long-term intake of these carcinogens could be viewed as a cofactor in the generation of keratinocytic cancer [3,13].

The concept of global cancer incidence is more than frightening and predicts a dramatic increase in the number of newly diagnosed cases by 2040 of approximately 50% [14]. Non-melanocytic skin cancers and their incidence are also rising at a breakneck pace, with this increase corresponding or increasing exponentially with the number of nitrosamine-contaminated concomitant drugs taken (according to official FDA lists) [12].

Concurrent intake of drugs of heterogeneous class declared as "hypothetically contaminated with carcinogens" (according to FDA 2023) could hardly be limited even within the limits recommended by regulators [12]. It is the contamination of polymedication taken by patients within polymorbidity that appears to be the most likely cause of cancer in general.

The thesis presented so far, that polymorbidity is the cause of cancer, is gradually but more than surely losing its supporters. The reason lies precisely in the fact that "hypothetical carcinogens" are forcibly introduced and lead to real carcinomas.

Polycontamination of multimедication (with nitrosamines/ NDSRIs/ carcinogens) within polymorbidity seems a much more logical explanation than the hypotheses presented worldwide so far.

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