REVIEW

by Prof. Tihomir Dobrinov Georgiev, DMD, PhD, DSc, Department of Oral Surgery, Faculty of Dental Medicine, Medical University – city of Varna, Bulgaria, member of the jury by decision of the Faculty Council of the Faculty of Medicine, Medical University – city of Varna, Bulgaria with protocol № 24/08.07.2024 and order P-109-226/26.07.2024 of the Rector of the Medical University – city of Varna, Bulgaria.

The review is about a competition announced in State Gazette № 45/28.05.2024 for the occupation of an academic position "Associate professor" in the field of higher education 7. "Healthcare and sports", professional direction 7.2 Medicine, scientific specialty "Maxillofacial surgery".

One candidate was admitted to participate in the competition - **chief assistant professor Yanko Georgiev Yankov, MD, PhD**.

The documents and materials presented by him meet the normative and legal requirements.

Brief biographical data

Yanko Georgiev Yankov, MD, PhD was born on April 17, 1989 in Shumen, Bulgaria. He graduated as Master of Medicine in 2014 with full honors 6.00. From 2015 until now, he is a doctor in the maxillofacial surgery clinic at the University Hospital St. Marina - city of Varna, Bulgaria. In 2016, he received a master's degree in Health Management. From February to October 2019, he is a part-time assistant, majoring in the Department of Oral and Maxillofacial Surgery. From October 2019 to July 2023, he is a full-time assistant, specialty of Maxillofacial Surgery, Department of General and Operative Surgery at the Medical University "Prof. Dr. Paraskev Stoyanov" - city of Varna, Bulgaria. From July 2023, he holds the academic position of chief assistant, specialty of Maxillofacial Surgery, Department of General and Operative Surgery at the Medical University "Prof. Dr. Paraskev Stoyanov" - city of Varna, Bulgaria.

In 2021, he was enrolled as a doctoral student in an independent form of study with the title of the dissertation: "Procalcitonin and the delta neutrophil index levels in the surgery of the head and neck inflammatory diseases". He successfully obtained the educational and scientific degree "Phd" in 2022.

He speaks fluent Bulgarian and English.

The candidate Yanko Georgiev Yankov, MD, PhD presents the following scientific works for the competition:

1. Dissertation - 1 issue

2. Publications in periodicals - 17 issues, of which 10 issues are in journals referenced and indexed in world-famous databases with scientific information (in 9 of which he is the first author and in one second author), replacing the monographic work; and 7 publications in non-refereed publications;

3. Participation in scientific congresses, conferences and scientific sessions with printed abstracts - 4 copies.

Analyzing the publications of Yanko Georgiev Yankov, MD, PhD - they are diverse and cover the entire aspect of the specialty Face and Jaw Surgery.

Teaching and learning activities:

Yanko Georgiev Yankov, MD, PhD takes an active part in the academic and teaching activities of the Department of General and Operative Surgery and the Department of Oral Surgery and has the average annual workload required by the Regulations for the Development of the Academic Staff. Yanko Georgiev Yankov, MD, PhD participates in both the Bulgarian-language teaching course and the English-language teaching course for students of dental medicine, with the average and academic attendance for the last 5 years being 215.2 hours with a norm of 220 hours. Yanko Georgiev Yankov, MD, PhD has proven qualities of a teacher and one of the most prominent assistants who is happy to pass on his experience to students.

Contributions from the scientific works of Yanko Georgiev Yankov, MD, PhD:

Yankov's scientific interests are focused on the study of procalcitonin (PCT) and delta neutrophil index (DNI) in inflammatory diseases of the head and neck. For a period of one

year (from July 2021 to December 2021) after permission from the Research Ethics Committee at the Medical University "Prof. Dr. Paraskev Stoyanov" - city of Varna, Bulgaria examined the blood of 81 patients with purulent inflammations of the head and neck, who were urgently hospitalized and operated on in the Clinic for Maxillofacial Surgery at the University Hospital St. Marina - city of Varna, Bulgaria.

The results of this study are detailed and analyzed in a doctoral thesis entitled "Procalcitonin and the delta neutrophil index levels in the surgery of the head and neck inflammatory diseases". It was published in 104 pages in 2022 by Medical University "Prof. Dr. Paraskev Stoyanov" - city of Varna, Bulgaria. On the basis of the dissertation, in 2023, the publishing house of the same medical institution published a book "Application of procalcitonin and the delta neutrophil index in maxillofacial surgery" (ISBN: 978-619-221-428-9). Part of the data from the same study was published in 2022 in the form of two original articles for the "Varna Medical Forum", in which he is the first author. In one (Yankov YG, Bocheva YD. Procalcitonin and C-reactive protein in the surgery of inflammatory head and neck diseases - diagnostic significance and correlations. Varna Medical Forum. 2022, 11(1): 218-25. 10.14748/vmf.v0i0.8511) the main characteristics of PCT and CRP, their advantages and disadvantages in the diagnostic and therapeutic process of head and neck purulent infections are compared. The other (Yankov YG, Bocheva YD. The value of the delta neutrophil index in odontogenic and non-odontogenic abscess surgery of the head and the neck. Varna Medical Forum. 2022, 11(1): 211-7. 10.14748/vmf.v0i0.8430) describes the application of DNI in the surgery of inflammatory diseases in the maxillofacial area.

After winning a competition for the academic position of "chief assistant professor" in the specialty "maxillofacial surgery" at the Department of General and Operative Surgery at the Faculty of Medicine of the Medical University "Prof. Dr. Paraskev Stoyanov" - city of Varna, Bulgaria in July 2023 was appointed to this position, which he holds until today.

In the period 2020 - 2023, as a mentor to the Ministry of Education and Science of the Republic of Bulgaria, they conducted internships on European projects for students of medicine and dentistry in the Clinic of Maxillofacial Surgery at the University Hospital St. Marina - city of Varna, Bulgaria.

He participated in two scientific projects in which, after peer review, two abstracts were published, which were then presented as posters. The first (Yankov YG, Bocheva YD, Kolev NY. Evaluation of both procalcitonine and delta neutrophil index in hospitalized patients with

odontogenic and non-odontogenic abscesses. Clinical Chemistry and Laboratory Medicine. 2021, 557(59): S550. 10.1515/cclm-2021-5022) in 2021 in Munich, Germany, and the second (Yankov YG, Bocheva YD. Correlation between the serum levels of procalcitonin and CRP in patients with odontogenic and non-odontogenic abscesses in maxillofacial surgery. Clinica Chimica Acta. 2022, 530: S212-3.10.1016/j.cca.2022.04.128) in 2022 in Seoul, South Korea. In both he is the first author. The first is on the subject of procalcitonin and delta neutrophil index as inflammatory markers in the maxillofacial region, and the second reveals the common and the different between procalcitonin and CRP in urgently hospitalized and operated patients with abscesses and phlegmons at the Clinic of Maxillofacial Surgery at the University Hospital St. Marina - city of Varna, Bulgaria.

Nine of the publications (six in refereed and three in non-refereed journals) were based on retrospective studies that investigated the bacterial and fungal agents of infectious diseases in the maxillofacial region in both adults and children. Studies are based on hospitalized and emergency operated patients with abscesses and phlegmons of odontogenic and non-odontogenic origin of the head and neck and in those with acute purulent cervical lymphadenitis. Their gender and age demographic characteristics, antibacterial and surgical treatment, the most frequently applied antibacterial drugs used in their treatment, and the prognosis for the outcome of the disease were analyzed.

It was established by Yanko Yankov, MD, PhD that resistant bacterial microflora, represented by more than one bacterial species, is the most common cause of this type of purulent infections. An analysis was made of the causative agents of acute purulent lymphadenitis in children of unknown etiology and it was found that Staphylococcus aureus was the most common among them. It was found that odontogenic infections were caused in a higher percentage of lower teeth than upper teeth and that the most common cause of abscesses and phlegmons in the maxillofacial region was the lower right first premolar (tooth 46).

Two of the referenced articles are clinical cases of rare benign diseases in the maxillofacial region, which in terms of differential diagnosis can create difficulties even for the experienced clinician. In one, Yanko Yankov, MD, PhD is the first author, and in the other, the second.

One of them (Yankov YG, Nenova-Nogalcheva AK, Dimanov SN, Stoev LL, Konstantinova DA. Clinically unusual pigmented lesion of the buccal mucosa: a case report.

Cureus. 2023, 15(9):e45050. 10.7759/cureus.45050) describes a case of a pigmented lesion of the buccal mucosa in a woman that could easily be confused with a malignant disease, but the patho-anatomical analysis carried out after its excision within healthy surgical limits showed that it was a rare pigmented lesion of amalgam etiology - the result of a dental intervention in her youth.

The second publication (Dimanov SN, Yankov YG, Stoev LL. Ameloblastoma of the jaw bones: clinical study and case report. J of IMAB. 2023, 29(3):5052-56. 10.5272/jimab.2023293.5052) discloses a case of ameloblastoma of mandible, operated in outpatient conditions under local wire anesthesia. In terms of differential diagnosis, it is assumed to be an odontogenic cyst, but the macroscopic appearance and histological analysis of the specimen show that it is an ameloblastoma. The patient's postoperative period passed smoothly, no recurrence was observed, and dental implants have already been placed at the site of the surgical intervention.

Four are the full-text publications in which rare malignancies of the maxillofacial region are considered, as well as their main clinical manifestations, diagnosis and treatment. Two of them are clinical cases of rare malignant pathologies. Yanko Yankov, MD, PhD is the first author in three of them, and second in one.

One (Yankov YG, Stoev LL, Dimanov SN, Stoeva MG, Stanislavova K. A rare case of papillary thyroid carcinoma in the thyroglossal duct cyst of a 14-year-old female patient with left thyroid hemiagenesis. Cureus. 2023, 15(11):e49712. 10.7759/cureus.49712) is about a 14-year-old girl in whom radical excision of the median cyst was performed along with resection of the adjacent median part of the hyoid bone, but unexpectedly the pathological analysis shows that it is a papillary carcinoma of the thyroid tissue inside the cystic cavity. This pathology together with the thyroid hemigenesis in this patient make it only the third such case described in the world medical literature.

The other (Yankov YG, Stoev LL, Stanislavova K, Dimanov SN. An unusual case of metachronous tumors of prostate and parotid gland: a diagnostic dilemma. Cureus. 2023, 15(11):e48477. 10.7759/cureus.48477) article is about a rare phenomenon – synchronous malignant process of the parotid and prostate gland in an adult man. The discovery of the two oncological diseases creates a diagnostic dilemma, which is solved by making two whole-body positron emission tomography (PET/CT) scans using different isotopes and conducting

an immunohistochemical (IHC) examination of the material resected within healthy surgical margins from left parotid gland.

Two of the full-text non-refereed publications (Nikolaev NN, Yankov YG. Lymph nodes of the head and neck: in normal and pathological conditions. Varna Medical Forum. 2023, 12(1):69-74. 10.14748/vmf.v12i1.9034 and Yankov YG, Stoev LL, Stanislavova K. Papillary thyroid carcinoma in thyroglossal duct – a review article. 2023, 12(2):39-45. 10.14748/vmf.v12i2.9333) are about the papillary carcinoma in thyroglossal cysts and the secondary lymph node involvement in head and neck malignancies. In the first, the anatomy of the lymph nodes in the maxillofacial region, the areas of lymphoedema, the diagnostic methods of examining the lymph nodes in this anatomical region, as well as the latest radiological classification of secondary involved lymph nodes of the head and neck [15, 16]. The high number of citations of the article - 18 since its publication so far - testifies to the important clinical importance of this important topic. I am the second author on this article.

Yankov's knowledge in the field of dental implantology led to the writing and publication of an overview refereed article in the American medical journal "Cureus" - Yankov YG. Socket preservation and guided bone regeneration: prerequisites for successful implant dentistry. Cureus. 2023, 15(11):e48785. 10.7759/cureus.48785.

The present refereed review article aims to summarize and discuss the procedures used for implant site preparation, preservation of existing tissues and their augmentation in cases of deficiency. It summarizes current knowledge regarding alveolar preservation and guided bone regeneration as prerequisites for future implant placement. Their indications, advantages and limitations are thoroughly analyzed and some recommendations for further research are proposed.

He is the independent author of two peer-reviewed full-text review articles on two rare syndromes in the maxillofacial region - on their nature, etiology, diagnosis, differential-diagnostic difficulties, treatment and prognosis.

One (Yankov YG. Auriculotemporal nerve and Frey's syndrome. J of IMAB. 2023, 29(4):5240-4. 10.5272/jimab.2023294.5240) describes in detail the anatomy of the auriculotemporal nerve and the causes of the associated Frey's syndrome - a condition in which the parasympathetic innervation from the interrupted auriculotemporal nerve, by

aberrant connection of the nerve branches with the skin in the area it innervates, is transferred to it and the sweat glands and blood vessels containing it.

The other (Yankov YG. Eagle syndrome (stylohyoid syndrome, styloid syndrome, styloid-carotid syndrome). Int J Med Sci Clin Invent. 2023, 10(5):6711-5. 10.18535/ijmsci/v10i5.03) looks at Eagle syndrome and describes the most important points of the nature and treatment of this rare disease. It examines in detail the two varieties of the course of the syndrome - classical, in which the symptoms are due to the compression of the neighboring proc. styloideus nerves, and type of the carotid (carotid) artery, in which the clinical manifestation is due to the compression of the latter.

Therapeutic-diagnostic activity:

Yanko Yankov, MD, PhD, has been working since 2015 as a medical doctor in the Clinic of Maxillofacial Surgery at the University Hospital St. Marina - city of Varna, Bulgaria, being an irreplaceable part of the clinic's team. A lecturer with such clinical experience is a valuable asset to the academic staff of the Department of General and Operative Surgery and would comfortably fit the academic title of associate professor.

Conclusion:

After a detailed examination of the documents and scientific developments provided to me, which prove the scientific and professional development of Yanko Yankov, MD, PhD, I can confirm that he fully meets the modern requirements for occupying the academic position of "associate professor" in the field of higher education 7. "Health care and sports", professional direction 7.2 Medicine, scientific specialty "Maxillofacial surgery".

This gives me reason **to vote positively** and I recommend to the honorable scientific jury that **the academic position of "associate professor" be awarded to Yanko Yankov, MD, PhD**.

Заличено на основание чл. 5, §1, б. „В“ от Регламент (ЕС) 2016/679

City of Varna, Bulgaria

Prof. Tihomir Georgiev, DMD, PhD, DSc

30.09.2024

Заличено на основание чл. 5, §1, б. „В“ от Регламент (ЕС) 2016/679