

RECENSION

FROM

PROF. DR. VLADISLAV HRISTOV, DM

Subject: Announced competition for the academic position of "Associate Professor" in the scientific specialty "Surgery" for the needs of the Clinic of Surgery of UMHATUM "N.I. Pirogov" LTD - Sofia.

According to Protocol № HC-02-21/28.04.2021y. and Order № RD-26-1168/05.05.2021 of the Executive Director of UMHATUM "N.I. Pirogov" LTD - Sofia, I have been appointed as a member of the Scientific Jury in a procedure for holding the Academic position of "Associate Professor" in the field of higher education 7. Healthcare and sports, Professional field 7.1. Medicine and Scientific specialty "Surgery" for the needs of the Clinic of Surgery - competition, announced in SN, issue 19/05.03.2021y.. At the first meeting of the Scientific Jury, held on May 17, I was appointed to prepare a review.

One candidate is allowed to participate in the competition

DR. KONSTANTIN IVANOV KOSTOV, DM

who meets the additional condition in the competition and has a diploma for training in highly specialized activities in the field of Emergency Laparoscopic Surgery, certified by the Faculty of Medicine at University of Sofia "St. Kliment Ohridski".

PRESENTATION OF THE CANDIDATE

Dr. Kostov was born on March 19, 1978 y. in the town of Silistra. He graduated from the Medical University in 2002 y. He acquired a degree in Surgery in 2008 y. In 2012 y. he obtained a second master's degree in "Public Health and Health Management". In 2017 y. he take his PhD degree (dissertation) on "Modern trends in the treatment of colon injuries" and obtained an educational and scientific degree "Doctor" in "General Surgery". From 2012 y. to 2016 y. he held the position of "Assoc. Prof. - assistant" at the Department of Emergency and Visceral Surgery.

Dr. Kostov began his professional career in 2003 y. as a doctor at UMHATUM "N.I. Pirogov" LTD and to this day he is part of the team of Surgery Clinics at the Hospital. He also works as a specialist in Surgery in 25 DCCs.

Dr. Kostov actively participates in the teaching activity by leading the practical modules of the specialists and the internships of the medical students.

In addition to having a serious professional qualification, he participates in numerous national and international scientific forums with presentations and as a moderator of sessions.

RESEARCH PRODUCTS AND TEACHING

The candidate submits in the competition 32 scientific papers in full text, of which 12 are published in scientific journals referenced in world databases - Scopus and Web of Science, and the remaining 20 are full-text publications in reference books in the national reference list.

With regard to the place occupied by the candidate as an author, the distribution is as follows:

- I author - 28
- II author - 1
- III author and next – 3

All presented scientific papers presented at congresses, symposia and conferences have printed abstracts in full text.

Scientific contributions and distribution of publications.

1. A thorough review of the current literature on traumatic injuries of the colon, which is a serious surgical problem, to which there is no single opinion on the choice of surgical-therapeutic approach.
2. Data collected, stored and structured for statistical processing in a team of patients with traumatic column injuries. Compared to the prevailing data in the literature, this is a significant number and quality of material characterizing the problem.
3. A general characterizing profile of the victims with traumatic colon injuries has been developed and presented.
4. A detailed analytical study of various signs characterizing the traumatic injuries was performed, and the parameters of their difference and frequency were determined. Based on these studies, the most important groups of signs were identified: prevalence of general trauma to the body; localization of traumatic column injury; time intervals from trauma to hospitalization and from hospitalization to surgery; degree of traumatic injury according to penetration and extent.

5. The significance of the local signs, characterizing the colonic traumatic injuries and the general physiological disintegration, as a consequence of the studied phenomenon, has been studied and analyzed, and groups with grading total severity of the damage have been determined.
6. The dependences on the manifestation of the different signs, characterizing the groups and the choice of operative approach are researched and presented.
7. The frequency of complications and mortality are studied and presented depending on the manifestation of the various signs, combined with the choice of operative approach.
8. A rational, clinically applicable algorithm is proposed, determining the surgical methods for achieving a timely and correct diagnosis. The local and general characteristics and degree of traumatic colon injuries are determined. A standardized and justified choice of surgical approach is presented.

Colon traumatic injuries

Follow-up, analysis and precision of the diagnosis in patients with colon damage were performed. A selective approach and an optimized algorithm for the treatment of various types of colon injuries have been made. Non-destructive lesions should be treated with primary recovery. The treatment of destructive injuries is more complicated, but it is believed that one-stage recovery is nowadays the preferred method instead of interrupting the passage. Another treatment strategy is DCT, which pays attention to surgical hemostasis and the temporary closure "on deaf" of the damaged intestinal segment until acidosis and coagulopathy are overcome. The decision to interrupt the passage is made by verifying destructive lesions, significant hypotension, multiple combined injuries, severe comorbidities. Specific endoscopic lesions (iatrogenic lesions), including colonoscopy for therapeutic interventions - biopsy, polypectomy, etc. are about 7.35% of the patients. Most of them are indicated for primary recovery.

In articles 1 to 5 on indicator B4; 6 according to G7; 2,3,6 and 7 according to indicator G8;

Penetrating abdominal injuries.

The interrelations between etiology, clinical signs, diagnostic methods, intraoperative finding, therapeutic approaches and results in selected patients with penetrating puncture-cut abdominal injuries in the Department of General, Visceral and Emergency Surgery at *UMHATUM* "N.I.Pirogov". Clinical and epidemiological studies were conducted by presenting systematized data on frequency, age groups, differentiation by sex, type and location of injuries, combined traumatism, complications, duration of hospitalization and choice of surgical approach.

An optimized diagnostic algorithm for timely identification of the lesion is proposed. This is a prerequisite for a fast and adequate choice of the operative procedure, systematized in a consistent analysis.

In Article 12 on indicator G8;

Laparoscopic treatment of perforated peptic ulcer

A comparative analysis of postoperative results was performed in selected patients with perforated peptic ulcer. Indicated for indications and contraindications for laparoscopy in perforated ulcer. It is concluded that the predominant advantages of mini-invasive techniques over conventional methods - namely - a minimal percentage of complications and postoperative pain.

In Article 7 on indicator B4;

Possibilities of emergency laparoscopy in the acute non-traumatic abdomen.

Clinical and epidemiological studies have been conducted on the role of emergency laparoscopy in the acute non-traumatic abdomen - a large patient team (756 patients) was examined at UMHATUM " N.I. Pirogov " for 2 years (2014-2016 y.). A differentiated analysis of patients was performed by groups depending on the type of pathological lesion - inflammatory disease, inflammation with perforation of a hollow abdominal organ, as well as acute mesenteric obstruction and mesenteric ischemia. The advantages of diagnostic laparoscopy and its immediate transformation into a therapeutic procedure in case of unclear clinical signs of the acute abdomen are indicated.

In Article 8 on indicator B4;

Laparoscopic treatment of acute appendicitis.

The indications for laparoscopy in patients with clinical symptoms of different time intervals were studied. The most common causes of conversion - haemorrhage from the mesoappendix, phlegmonous typhlitis, variable anatomical location and lesion of another intra-abdominal organ - have been studied in details.

An analysis of the postoperative results and the advantages of the mini-invasive procedure was performed.

The purulent-septic complications after the laparoscopic appendectomy and the main reasons for this complicated intraoperative finding and the technical application of the procedure are indicated and followed-up.

In Article 9 on indicator B4; 13 and 14 according to indicator G8;

Choice of therapeutic approach for intra-abdominal abscesses

A retrospective study was made at UMHATUM "N.I. Pirogov" - University Hospital from 2015 to 2017 y. of patients with intra-abdominal abscesses. Key symptoms of the clinical picture of the patient were followed-up - temperature, abdominal pain and discomfort, as well as weight reduction. Analysis and differentiation of the types of intra-abdominal abscesses according to their location in the abdominal cavity were performed. The broad indications for mini-invasive treatment by percutaneous drainage under ultrasound control are indicated. An important conclusion is the decision for surgical intervention in case of failure of the percutaneous technique or contraindications for its use. After a discussion between radiologists and surgeons, the final choice of approach belongs to the surgeons.

In Article 10 on indicator B4;

Small bowel and mesenteric injuries from impenetrable abdominal trauma

The manifested clinical signs, diagnostic methods, intraoperative finding, therapeutic approaches and the results in patients with small intestinal and mesenteric injuries from non-penetrating abdominal trauma for a period of two years were analyzed. It is proposed to optimize the early diagnosis of lesions and reduce the interval from hospitalization to surgery. The aim is to reduce the complications and mortality from this type of injury.

In Article 2 on indicator D7; 1 on G8;

Clinical and pathologo-anatomical signs in colonic ileus. Staging.

A study was conducted on the dynamic changes in the clinical and pathological-anatomical features in colorectal ileus from colorectal cancer in UMHATUM " N.I. Pirogov " for two separate periods of two years. The stages of intestinal obstruction and tumour localization were followed-up. The established differences are due to relatively early diagnosis in the peripheral network and faster referral for surgical treatment than to a chronological change in the features and development of the neoplastic process.

Methods for improving of early diagnosis have been identified, leading to referral for surgical treatment in a more favourable ileal and tumour stage.

In Article 6 on indicator B4;

Treatment of acute mesenteric venous thrombosis

A retrospective study was performed with data on this complicated disease of a patient team from UMHATUM " N. I. Pirogov " for a period of three years. Clinical features, the influence of complicated comorbidity and age in 29 patients were analyzed. Prominent predisposing factors are thrombophilia and all other hypercoagulable conditions (congenital and acquired). The opinion is that the key to timely identification is the persistent suspicion of MVT, especially for people with complicated comorbidity. It is recommended the immediate use of contrast-enhanced Computed tomography and the inclusion of anticoagulant therapy.

16 on G8;

Coloproctology

An overview systematization of the different algorithms of treatment for colorectal cancer has been performed, in accordance with the epidemiological features - gender, geographical location, localization of the disease, survival. All etiological and risk factors are taken into account - environment, diet, inflammatory diseases, heredity and precancerous lesions. The importance of precise staging and extensiveness of colorectal resection has been noted.

9 on G8;

Acute peritonitis

A large-scale clinical study was conducted with 288 patients for 2 years (1.1.2012-31.12.2013 y.) operated on for acute peritonitis. A multi-stage approach (by laparostomy) was used in all operations. The indications and methods for conducting multi-stage treatment are analyzed. The results are presented and as a conclusion, the factors for complications and lethality are differentiated. The criteria for staging of acute peritonitis are defined.

8 on G8;

Based on the above, I consider that Dr. Konstantin Kostov, MD fully covers the mandatory quantitative scientometric indicators and criteria set out in the LDASRB and its Regulations on its implementation, as Art. 2, para. 6 and Art. 68 of the Regulations for the development of the

academic staff of UMHATUM “N.I. Pirogov” Hospital LTD, c. Sofia. The table below analyzes the output with which the candidate participates based on the system of points, required by the Scientific Council of the Hospital:

Group of indicators	Contents	Associate Professor Required according to the scientific-metric criteria of UMHATUM “N.I. Pirogov”	Associate Professor Available
A	Indicator 1	50	50
B	Indicator 2	-	
C	Sum of the indicators 2, 3 and 4	300	390
D	Sum of the indicators from 5 to 9 ** - each publication brings 30 points to the candidate without being divided among the co-authors	750 incl. 300 p. from indicator B4* **	1020
	*- number of publications as a first or independent author	10	28
E	Sum of the indicators from 10 to 12	50	50
F	Sum of the indicators from 13 to the end	Not applicable for Associate Professor	Not applicable for Associate Professor

J	Indicator 23 or IF	5	5

CONCLUSION

After analysis and acquaintance with the documents presented in the competition, I believe that they prove beyond doubt that **Dr. Konstantin Ivanov Kostov** meets the requirements of ZDASRB, its Regulations on its implementation, and the Regulations for the development of the academic staff of UMHATUM "N.I. Pirogov" Hospital LTD – c. Sofi. He applies with a proven scientific contribution, supported by publications and reports that not only cover but also exceed the scientific metrics adopted by the Scientific Council of the Hospital. Apart from the fact that the scientific production of Dr. Kostov provides significant information, he has a stated teaching interest, which will be develop in the future, and which corresponds to the profiling of the surgical specialty in the Hospital to emergency laparoscopic surgery.

In conclusion, I find it reasonable to give my **positive assessment** and suggest to the esteemed members of the Scientific Jury to vote **positively** for the election of Dr. Konstantin Ivanov Kostov, MD to the academic position of "Associate Professor" in Higher Education 7.3 Health and Sports, Professional field 7.1. Medicine and the scientific specialty "Surgery" for the needs of the Clinic of Surgery of UMHATUM "NI Pirogov" LTD – c. Sofia, competition, announced in SN, issue. №19/05.03.2021 y.

REVIEWER:

PROF. DR. VLADISLAV HRISTOV, DM

The translation was made by Dr. P.V. Ivanova

29.05.2021 y.