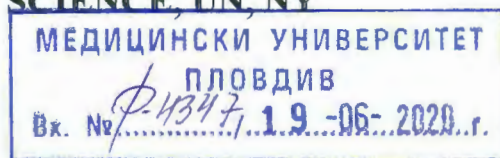


# PREVIEW

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Emanuil Mihaylov Yordanov's dissertation work with topic

***Contemporary surgical treatment of complicated colorectal carcinoma.***

The work was submitted for acquiring the academic degree **Doctor in Surgery.**

/code 03.01.37/.

Dr. Emanuil Yordanov's dissertation work is Contemporary treatment of complicated colorectal carcinoma. The work consists of 150 pages, 256 literature sources and has illustrations of 21 pictures, 15 tables, 13 figures and 4 schemes. The dissertation focuses on the diagnostic methods, techniques and surgical treatment of complicated colorectal carcinoma.

The frequency of the colorectal carcinoma is high (2<sup>nd</sup> place in Europe) and the mortality is high (2<sup>nd</sup> place in Bulgaria). The ongoing discussion concerns the surgery techniques and methods.

The complicated colorectal cancer has 40% frequency in all of the cases with this disease and is often presented with a locally advanced tumor or metastatic disease. Therefore the surgical treatment has a high frequency of post operative complications and mortality, poor prognosis, low 5 year survival rate and increased number of relapses. Urgent surgeries are of high risk and the focus of the surgical dissection and radical surgery is completely different from that of the planned surgeries in colorectal cancer. The dissertation work consists of 9 summarized problems.

The literature review is properly structured in 46 pages. It is a critical analysis of the most important features of the epidemiology, anatomy, oncology, diagnostics and types of surgical treatment of colorectal carcinoma complications in the past and now. The section preoperative assessment and analysis of the colorectal cancer in the different groups and the analysis of the risk factors are very important. The most essential section is the treatment principles as well as the other complications– perforation, ileus and bleeding. Also the applicant reviews the difference in the approaches of treatment of right and left colon cancer. Different types of treatment were presented- total mesocolic excision, peritoneal dissection, proximal vessel ligation which is recommended in urgent resections.

The aim of the dissertation work is realistic and well structured.

165 patients were enrolled, all of them with complicated colorectal carcinoma. The patients underwent an urgent surgery in the Department of Chest and Abdominal Surgery in University Hospital Sveti Georgi and Medical University Plovdiv for 5 year period (2014-2018).

The clinical material is divided in two groups. Main group- 145 patients hospitalized in the clinic and 20 patients in severe and critical condition. The applicant made an accurate and detailed analysis of the course of the disease, the specific complications and the reasons for the mortality. The comparative analysis shows the significant difference in the treatment, the course of the complications in the final results.

Dr. Yordanov uses biostatistical analysis with the following criteria for the variables- relevancy and accuracy. Qualitative and quantitative indicators were analyzed via contemporary statistical methods.

The Results section presents the preoperative features of the patients, types of complications and the localization of the colorectal cancer and their manifestations in the different time periods, performed surgeries, postoperative complications and the mortality. Very interesting is the analysis of the complications in terms of daytime, weekdays and seasons. There are good quality pictures to each surgery.

The applicant studies the most severe postoperative complications which are the leading reason for mortality. Also he examines the frequency and manifestations of the main types of complications- perforation and obstruction in daytime, weekdays and different seasons. This kind of analysis is very useful in optimizing the final results.

Dr. Yordanov presents a comparative analysis of the technique in complicated left side colorectal cancer. It is the primary anastomosis or Hartmann's surgical resection. There is a summarized scheme for the operative risk and the clinical outcome in patients with complicated colorectal cancer.

Conclusions clearly present the essence of the dissertation work.

The work was written in an understandable medical style, easy to read and well illustrated.

The dissertation work has some critical notes:

1. I think that it would be better if the aim and tasks are defined after the introduction but not in the review itself.
2. The section for the oncological principles is too extended.
3. The applicant does not examine all types of colorectal cancer both in the review and in the clinical material. Namely these are the three types- paratumour abscess, fistula and peritonitis.
4. There are repetitions in some of the conclusions which can be avoided if their number is reduced.

5. The applicant does not present Hartmann's surgical resection as a method of choice in case there are complications in the colorectal carcinoma with left localization.
6. It is not stated in details that the survival rate in radical surgeries depends on several factors: stage of the tumor process, lymph nodes involvement, type of surgery and histological verification of the tumor.
7. Dr. Yordanov did not specify that the survival rate of the patients with colorectal cancer depends on the positive lymph nodes. If there are more than 3 positive lymph nodes, the overall survival rate drops significantly. Therefore the ultra radical resection of the complicated colorectal cancer is not justified.
8. I do not agree with conclusions №6, №8, №9. The choice of surgical methods and technique in complicated colorectal cancer is made on one hand by the main principle in the urgent surgery (minimum operative intervention) and on the other hand- by the main principle of the oncosurgery (radical surgery combined with adjuvant therapy) aimed to improve the near and far outcomes.
9. There are accidentally made grammar and spelling mistakes.

These critical notes refer to details and they do not have impact on the overall academic value of the dissertation work.

Dr. Yordanov's work has good results as well as academic contributions:

1. A comparative study has been made of the frequency and manifestations of the complicated colorectal cancer simultaneously during daytime, weekdays and seasons.
2. Good algorithms are proposed for differentiation, registration, classification, diagnostics and work in the most severe conditions- anastomose insufficiencies and postoperative peritonitis.

To conclude I would say that the provided dissertation work with topic Contemporary surgical treatment of complicated colorectal carcinoma concerns a very important section of the urgent surgery and the main principle of oncosurgery. The social significance of the disease gives an important academic practical contribution to the problem. Dr. Yordanov's work corresponds to the current needs and summarizes the actual strategies in the approach to the complicated colorectal cancer.

I believe that the dissertation work meets the necessary requirements and I recommend that the members of the jury award Dr. Yordanov the academic degree Doctor.

17.06.2020

Sofia

Reviewer:

/Acad. Dr. Nikolay Yaramov/