

REVIEW

by Prof. Dr. Krasimir Dimitrov Ivanov, PhD
Department of “General and Surgical Operations”
Medical University "Prof. Dr. Paraskev Stoyanov" – Varna

On the dissertation

“Body Contouring in Patients with Obesity and After Massive Weight Loss”

by Dr. Evgeni Vanyov Sharkov

for awarding the academic and educational degree “Doctor” in the scientific specialty "Surgery"

Scientific supervisor: Assoc. Prof. Dr. Alexander Kamnev Zlatarov, PhD

The dissertation has been discussed and approved for public official defense by the Department Council of the Department of General and Surgical Operations, Medical University – Varna, with decision of the Department Council No. 11/21/10.2024.

The presented set of materials in paper and electronic format is in accordance with the requirements of the Act for the Development of the Academic Staff in the Republic of Bulgaria (ZRASRB) and the Regulations for the Development of Academic Staff at Medical University "Prof. Dr. Paraskev Stoyanov" – Varna.

Biographical Data

Dr. Evgeni Vanyov Sharkov was born on February 11, 1987, in Pleven.

He graduated from Sofia Medical University with a diploma for excellent achievement in 2012.

He defended his specialization in “Plastic, Reconstructive and Aesthetic Surgery” at the Clinic of Plastic, Reconstructive and Aesthetic Surgery at the UMBA “Alexandrovska” EAD, Sofia, in 2019.

Since 2021, he has been a member of the Bulgarian Association of Plastic, Reconstructive and Aesthetic Surgery (BAPREH).

From 2016 to 2019, he was the official representative of the doctors in training in Plastic Surgery in Bulgaria before ICOPLAST (International Confederation of Plastic Surgery Societies).

He specialized in “Plastic, Reconstructive and Aesthetic Surgery” in the United Kingdom and worked with Mr. Brent Tanner and Mr. Michael Cadier (Immediate Past President of BAAPS – British Association of Aesthetic Plastic Surgery).

From 2017 to 2019, he was a member of the Medical Association of the United Kingdom.

From 2019 to 2021, he was Acting Head of the Clinic of “Plastic, Reconstructive and Aesthetic Surgery” at UMBA “Alexandrovska.”

He has attended and lectured at numerous plastic surgery congresses.

He is an official international trainer for Inmode – non-invasive liposuction and radiofrequency tissue lifting. He is also an official trainer for SmartGraft – FUE technology for hair transplantation.

He is the author of numerous scientific publications, including: an article on body contouring and a “chapter” in an Elsevier textbook; and the author of a textbook on body contouring, published in 2023 by Springer.

The dissertation topic is relevant and debatable.

Obesity is a socially significant disease with a high prevalence. The dependency between adequate preoperative assessment and preparation with better results after the surgical intervention is the main goal. The set of materials and methods included is comprehensive and allows accurate assessment in choosing the surgical technique to achieve optimal results and minimal risk of postoperative complications. Such studies are relatively rare in Bulgarian scientific literature, which highlights the merits of this dissertation.

The dissertation is presented in a volume of 211 pages and contains 19 tables and 40 figures. It complies with the accepted requirements for the structure of a dissertation. It includes the following chapters:

- Literature Review (7 pages)
- Goals and Tasks (136 pages)
- Materials and Methods (137 pages)
- Results and Discussion (145 pages)
- Conclusions (203 pages)
- Contributions (207 pages)
- List of publications related to the dissertation (209 pages)
- Bibliography (210 pages)

The bibliography includes 51 titles.

The literature review is well-structured with the following sections:

- Introduction
- Obesity and Overweight
- Massive Weight Loss
- Classification of Surgical Techniques
- Surgical Methods of Treatment
- Complications – Prevention and Management
- Goals and Tasks
- Materials and Methods
- Results and Discussion
- Conclusions
- Contributions
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Notable is the abundance of types of surgical techniques, which are precisely described and selected based on the preoperative status. The presence of minimally invasive techniques aimed at optimizing final results is one of the advantages of the presented work – short recovery time, minimal risk of surgical complications, and lasting results.

The candidate clearly formulates the goal: to prove the dependency between adequate preoperative assessment and preparation with better results from the performed intervention. To achieve this goal, the following tasks are set:

1. To perform a retrospective analysis of patients who underwent surgical interventions from 2015 to 2021 at the Clinic of Plastic, Reconstructive and Aesthetic Surgery at UMBA “Alexandrovska” based on the given criteria.
2. To summarize the data through statistical analysis and identify the dependencies.
3. To create an algorithm for the behavior of performing the mentioned surgeries.
4. To prepare recommendations for avoiding complications in these surgeries.
5. To derive indicative criteria for selecting patients for a particular surgical technique based on their preoperative local and general status.

Dr. Sharkov's research is retrospective and was conducted in the structures of UMBA “Alexandrovska” EAD – Sofia, covering the period 2015-2021 with a patient population of 234 operated patients. The postoperative follow-up period covers 3 years after the intervention, with an overall rate of postoperative complications of 8%.

The material is well-described and illustrated with figures and tables. For the period covered, 234 surgical interventions were performed for body contouring in patients after massive weight loss and in obese patients. The material clearly describes the dependence between the method of weight reduction, the subsequent local status, and the selection of the chosen surgical intervention. In 35% of the total number of patients, abdominoplasty was performed, which, along with liposuction techniques, represents the leading method for body contouring.

The methodology of the study is clear and meets the set tasks. The applied protocol in choosing the surgical technique based on the preoperative status and the set of statistical tools used are described.

The results are presented in an appropriate analytical form. The role of the choice of weight reduction method and the existing preoperative status in selecting the surgical technique is assessed, and in the entire cohort of 234 surgical interventions with a subsequent 3-year follow-up, it resulted in an 8% rate of early and late postoperative complications. During the period from 2015 to 2021, patients who underwent excisional procedures for body contouring were primarily patients after weight loss or massive weight loss, while those who underwent body contouring procedures using liposuction techniques were predominantly young patients without comorbidities or previous surgeries.

A reverse proportional relationship was observed: in obese men and/or those with massive weight loss, the changes were mostly generalized throughout the body, whereas in women, the changes were more often localized to one or two areas, but much less generalized. This could be due to the preoperative findings, but in certain cases, it could also be explained by specific patient desires, i.e., women more frequently seek correction of specific areas compared to men. There may also be a relationship with disproportionate changes and a possible hormonal imbalance – most women in the study were middle-aged, over 45-50 years old. Evidence of hormonal imbalance as a cause for disproportionate changes could also be supported by the fact that men most commonly seek correction for gynecomastia.

The discussion follows the structure of the Results chapter, which allows the reader to gain a clear understanding of the place of the author's results within global literature data.

The conclusions are 11 in total and logically follow from the tasks set:

1. Patients undergoing excisional procedures for body contouring are primarily those after weight loss or massive weight loss, while patients undergoing body contouring procedures via liposuction techniques are primarily young patients without comorbidities or prior surgeries.
2. Adequate preoperative assessment, including laboratory values and comorbidities, is associated with a statistically significant lower risk of postoperative complications.
3. A reverse proportional relationship is observed, as in men with obesity and/or after massive weight loss, changes are mainly generalized throughout the body, whereas in women, changes are more often in one or more specific areas. This may be due to the preoperative findings, but in some cases, it may also be explained by the patient's specific desires.
4. The choice of weight reduction method is statistically significantly associated with patient age.
5. Preoperative findings are statistically significantly associated with patient gender.
6. The choice of weight reduction method predetermines the local status.
7. The local status determines the choice of surgical technique.
8. The frequency of complications is not directly related to preoperative BMI, as high BMI values are a reason for rejecting surgery.
9. The frequency of complications depends on the degree of invasiveness.
10. There is a direct dependency and logical sequence in preoperative planning and surgical execution based on gender, age, BMI, weight loss method, and local status, which in turn determines the choice of surgical technique.
11. Following this preselection algorithm leads to a low percentage of postoperative complications.

The contributions of the candidate are:

1. For the first time in Bulgaria, a predictive model is derived, based on which we can navigate the choice of technique solely based on age, gender, BMI, and weight loss method.
2. For the first time in Bulgaria, an algorithm is presented that, when followed for technique selection based on the existing local status, minimizes postoperative complications.

3. For the first time, an algorithm is presented that can predict the type of surgical intervention via online telemedicine in cases with limited in-person consultation options, including duration, daily operational plan, and the necessary infrastructure (public or private practice) for adequate results.
4. For the first time in Bulgaria, an algorithm is created with direct economic benefits for the clinic in terms of planning the daily surgical schedule.
5. For the first time in Bulgaria, an algorithm is created that finds immediate benefits under pandemic conditions for the delivery of medical services.

Dr. Evgeni Vanyov Sharkov is a specialist in “Plastic, Reconstructive, and Aesthetic Surgery” with potential in scientific research, respected by students and colleagues, with deep theoretical knowledge and practical skills. The dissertation is of high scientific and practical value. This gives me the right to propose to the highly respected Scientific Jury to award Dr. Evgeni Sharkov the academic and scientific degree of “DOCTOR”.

Varna

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Заличено на основание чл. 5, §1, б. „В“ от Регламент (ЕС) 2016/679
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Prof. Dr. Krasimir Ivanov, PhD, DSc