R E V I E W

BY

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Concerning: procedure for acquiringthe educational and scientific degree "Doctor of Philosophy (Ph.D.)" in Obstetrics and Gynecology by Dr. Boyan Hristov Georgiev, dissertation topic:: "Comparative analysis of techniques for opening the anterior abdominal wall during Caesarean section: Misgav Ladach and Pfannenstiel"; field of higher education: 7. Health and Sport, Professional field 7.1 Medicine, Scientific specialty "Obstetrics and Gynecology," pursuant to Order No. P-109-519/16.12.2025 of the Rector of MU – Varna.

I. CAREER PROFILE OF THE APPLICANT:

Dr. Boyan Georgiev was born in 1970 in Varna. He graduated as a doctor from the Medical University of Varna. This was followed by years of residency in obstetrics and gynecology and obtaining the same specialty. The candidate also has a master's degree in Health Management. His professional career has taken him through the Veliki Preslav Multiprofile Hospital and Maychin Dom Medical Complex in Varna. Since 2019, he has been the head of the Maternity Ward at SBALAG"Prof. Dr. D. Stamatov" in Varna.

Dr. Georgiev has completed a number of additional qualification courses in Bulgaria and abroad: hysteroscopy, laparoscopy, colposcopy, ultrasound in obstetrics and gynecology, and fetal morphology.

The candidate participates in the procedure with a sufficient number of publications and scientific presentations related to the dissertation.

He supervises practical exercises for students majoring in Medicine, Dental Medicine, and Midwifery. He participates in postgraduate training courses.

He is a member of BMA and BSObGyn.

He speaks English and Russian.

II. SIGNIFICANCE OF THE PROBLEM:

Caesarean section is one of the most widely performed surgical procedures on women worldwide, with its frequency increasing rapidly in recent years. The percentage varies across different regions. In Bulgaria, more and more deliveries end with Caesarean section – in the 1960s, the frequency of this method of delivery was around 2%, and today it is approaching 50% of all births.

According to the WHO, the rate of Caesarean sections should be in the range of 10-15%, as it is believed that a rate below 10% poses risks of harm to the baby, while a rate above 15% creates risks of more intra- and post-operative complications for the mother.

Statistics on complications from C-sections show variations depending on the region, clinical practice, techniques used to perform the operation, etc. In order to optimize the duration of the surgical intervention, minimize blood loss and complications, and improve the recovery of the mother, methods for opening the anterior abdominal wall continue to evolve. Two such basic methods are Misgav Ladach and Pfannenstiel. The first was developed as a gentle, minimally invasive technique with an emphasis on minimal trauma, shorter duration, and less blood loss. Pfannenstiel-Kerr, on the other hand, remains the standard and widely used approach, known for being reliable and safe. Each of these techniques has advantages and disadvantages, so a thorough analysis is necessary when choosing a method.

In view of the above, I believe that the chosen topic of the dissertation is extremely relevant and important for the obstetrical practice.

Aim of the study: to conduct a comparative analysis of the techniques for opening the anterior abdominal wall during cesarean section: Misgav Ladach and Pfannenstiel-Kerr, and to establish the advantages of the Misgav Ladach method over the classic Pfannenstiel technique.

The author defines six tasks:

1. To track the duration of the Caesarean section using both techniques;

2. To determine the time from the start of the operation to the extraction of the foetus using both methods;

3. To establish the intraoperative complications of both techniques;

4. To examine the intensity of postoperative pain syndrome in both techniques;

5. To compare the amount of medications required for the operation itself and the postoperative period;

6. To establish the economic feasibility for the hospital in both methods.

III. STRUCTURE OF THE DISSERTATION

The dissertation is 110 standard pages long and includes 26 tables, 21 graphs, and 14 figures. The bibliography consists of 204 titles, 16 of which are in Cyrillic and 188 in Latin.

MATERIALS AND METHODS: The study covers 327 women who gave birth at the Maternity Ward of SBAGAL "Prof. Dr. D. Stamatov" in Varna during the period 2019-2023. The scientific information was collected retroactively and prospectively. Based on clearly formulated inclusion and exclusion criteria, two groups were formed: a study group of patients with modified Cesarean section performed using the Misgav Ladach method (215 women) and a control group of women with Cesarean section performed using the Pfannenstiel technique (112 women).

A number of methods were used: clinical, physical, laboratory, statistical (statistical verification of hypotheses for comparing two mean values and two relative proportions based on independent samples, correlation analysis). Statistical significance is accepted at $p< 0.05$.

RESULTS AND INTERPRETATIONS: The author thoroughly analyzes the results obtained, the most significant of which are: there is a pronounced correlation between BMI and the duration of the operation; the average time for fetal extraction in the study group is 2 minutes, and in the Pfannenstiel group – 3 minutes; the duration of the intervention using the Misgav Ladach method is 7.5 minutes shorter than that using the Pfannenstiel method; blood loss in women with a BMI >= 30.0 using the Misgav Ladach method is lower than that in women who gave birth using the Pfannenstiel method; the time from skin incision to delivery of the fetus is longer in a subsequent cesarean section than in a first cesarean section; the Misgav Ladach method is faster for delivery of the fetus in both first and repeat cesarean sections.

There are 8 conclusions, which correspond to the formulated tasks.

CONTRIBUTIONS OF THE DISSERTATION: There are contributions of an original and confirmatory nature. The original model protocol for selecting a method for operative delivery is particularly valuable. For the first time in Bulgaria, a comparative analysis of the advantages and disadvantages of surgical techniques for opening the anterior abdominal wall during cesarean section—Misgav Ladach and Pfannenstiel—has been performed.

For the first time in Bulgaria, a study and analysis of the aforementioned surgical techniques in specific groups of patients has been conducted, etc.

IV. CONCLUSION

Dr. Georgiev's dissertation is particularly relevant and contributes to the enrichment of knowledge on an extremely important topic. It meets the requirements of the ADASRB(Act for the Development of the Academic Staff in the Republic of Bulgaria), the Regulations for its implementation, and the relevant Regulations of MU-Varna.

In view of the above, I give my positive assessment and recommend to the respected members of the Scientific Jury to vote in favor of awarding Ph.D. degree to Dr. Boyan Hristov Georgiev.

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