

STATEMENT

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Dear Professor Raikov,

In accordance with Order No. R-109-336/29.07.2025 of the Rector of Medical University "Prof. Paraskev Stoyanov" - Varna, and as a member of the Scientific Jury for the acquisition of the educational and scientific degree "Doctor" in the doctoral program "Obstetrics and Gynecology" (code 03.01.45), professional field 7.1, Medicine, higher education area 7, Healthcare and Sports, I am providing my statement on the proposed dissertation thesis titled "Intrapartum Injuries of the Pelvic Floor and Perineum - Risk Factors and Prevention" authored by Dr. Dimitar Lyubchov Cvetkov.

The submitted dissertation contains 116 standard typewritten pages, illustrated with 28 figures, 5 tables, and 4 appendices. The bibliographic references include 215 sources, of which 5 in Cyrillic and 210 in Latin script.

Relevance of the Topic

The dissertation is dedicated to intrapartum trauma of the perineum and pelvic floor – a topic that is both well-known and debated. Even today, there are ongoing discussions within the scientific community regarding the frequency, indications, and benefits of "minor" obstetric procedures in the third stage of labor. The current interdisciplinary approach in cases of obstetric injuries is extremely important, but it is the obstetricians who most often encounter the problem and should be thoroughly familiar with the risk factors, prevention, diagnosis, treatment, follow-up, and rehabilitation of such injuries. Besides clinical diagnosis, ultrasound is also recognized as a leading, indisputable method for diagnosis. Dr. Cvetkov offers for the first time in our country, a new perspective on this method – diagnosing anal sphincter injuries after childbirth using endoanal

ultrasound, which is why I consider the topic both relevant and beneficial for obstetricians-gynecologists.

The review of the literature clearly shows that the author has extensively studied various current sources addressing early diagnosis, prevention, and diagnostics of intrapartum injuries of the pelvic floor and perineum. The review is educationally valuable (50 pages) with over 200 cited sources, including guidelines and protocols from organizations such as WHO and RCOG.

Aim of the Study

The goal is to determine the true frequency and severity of intrapartum pelvic floor injuries, the risk factors for their occurrence, and the methods for prevention and treatment.

Objectives

The dissertation's objectives are well-defined and include five points:

1. Establish the actual frequency of anal sphincter injuries using imaging methods for early diagnosis (endoanal ultrasound).
2. Determine the significance of intrapartum pelvic floor injuries for the common occurrence of fecal incontinence in the older female population.
3. Identify the influence of the most common risk factors and their severity on the occurrence of occult intrapartum anal sphincter injuries.
4. Evaluate changes in the duration of the second stage of labor as an independent risk factor for pelvic floor rupture in clinical practice after application of the obstetric gel device.
5. Develop an algorithm for prevention, diagnosis, timely treatment, and follow-up of intrapartum pelvic floor injuries.

Materials and Methods

Data were collected between 2009 and 2014 from four hospitals: two Bulgarian ("Dr. Georgi Stranski" University Hospital, Pleven, and "Nadezhda" Hospital, Sofia) and two Slovenian (Birth Clinic at the University Clinical Center – Ljubljana and Obstetrics&Gynecology Department at the General Hospital in Trbovlje, Slovenia). The Slovenian cases were personally gathered by the author during his Erasmus project and professional work in those hospitals. The methods used included anamnesis, clinical examinations, endosonographic-anatomical assessments, and therapeutic procedures (obstetric gel "Dianatal"). The results were analyzed with MedCalc and SPSS software.

Own Results and Discussion

A final analysis was conducted on data from 203 patients. The patients were divided into groups based on detailed criteria, and three main factors with positive predictive value for intrapartum perineal rupture and occult anal sphincter injuries were identified: parity, gestational age, and fetal weight. A clinical algorithm based on current protocols was proposed.

Assessment of Conclusions and Contributions

The dissertation author formulates 11 conclusions, including 3 scientific-theoretical contributions of an original nature and 3 practical contributions, supported by 7 of their own publications related to the topic of the dissertation.

The scientific-theoretical contributions concern the actual frequency of intrapartum injuries to the pelvic floor and perineum among primiparous women (25.4% in the studied population), which confirms previously established results in international studies. Key risk factors for the occurrence of intrapartum injuries have been identified, as well as the extent of their impact on the relative risk of severe perineal tears — such as primiparity, gestational age over 41 weeks, and fetal weight over 4000 g.

Among the contributions of scientific and practical significance, the following are considered most valuable:

- 1) For the first time in Bulgaria, endoanal ultrasonography has been applied as a rapid, non-invasive, highly specific, and reliable method for early

diagnosis of intrapartum pelvic floor injuries in obstetric practice. The methodology used is objective and standardized for the diagnosis of anal sphincter injuries.

- 2) The proposed algorithm for prevention, timely diagnosis with immediate surgical treatment, and follow-up of patients with intrapartum pelvic floor injuries is based on current research and good clinical practices and is recommended for all practicing obstetricians-gynecologists.

Educational and Teaching Activities

As a graduate of Medical University Pleven, Dr. Dimitar Cvetkov participated in the development and implementation of two scientific projects, the first of which forms the basis for much of the data underpinning this dissertation. (Research project No. 13/2009 from Medical University Pleven: "Study of the frequency of spontaneous and iatrogenic intrapartum anal sphincter injuries and early ultrasound diagnosis in primiparous women"). Twice, as an Erasmus scholarship recipient through the European Commission, he spent part of his specialization working on issues related to intrapartum pelvic injuries and urogynecology at the University Clinical Center Ljubljana, Slovenia, Department of Obstetrics and operative gynecology. During this period, he also trained medical and health care students. Dr. Cvetkov actively participated as an organizer and lecturer at numerous training sessions and symposia in minimally invasive and regenerative gynecology, reproductive medicine, and other areas of scientific interest.

Critical Remarks and Advice

The references should be correctly ordered in the bibliography: first Bulgarian authors, then foreign ones.

Conclusion

Dr. Dimitar Cvetkov's dissertation is methodologically well enough structured, with credible conclusions and significant contributions to the national

obstetric practice. The results and the proposed algorithm for prevention, diagnosis, treatment, and follow-up of patients with intrapartum pelvic injuries are practical and enrich the existing knowledge and experience in Bulgaria. Given its importance, relevance, and originality, the work possesses all the qualities of a dissertation for awarding the academic degree of "Doctor."

Based on the above, I confidently recommend to the esteemed Scientific Jury that the academic and scientific degree of "Doctor" be awarded to Dr. Dimitar Lyubchov Cvetkov.

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