

REVIEW REPORT BY A COMMITTEE MEMBER

by

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Regarding the dissertation of Dimitar Tsvetkov, MD titled:

“Intrapartum Injuries of the Pelvic Floor and Perineum – Risk Factors and Prevention”
submitted in fulfillment of the requirements for the award of the educational and scientific
degree of **Doctor (PhD)**

Scientific Supervisor:

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I. Relevance and Significance of the Topic

The dissertation addresses one of the most delicate and clinically important areas in contemporary obstetrics — pelvic floor and perineal injuries sustained during childbirth. These injuries can have lasting consequences for women's health, including functional disorders, chronic pain, sexual dysfunction, and psychological distress.

In light of the global trend toward individualized obstetric care and the minimization of birth trauma, Dr. Tsvetkov's research is both timely and socially significant. Its focus on diagnostic capabilities and preventive strategies is particularly valuable for improving the quality of obstetric practice.

II. Structure and Content of the Dissertation

The work is well-structured, with clearly defined aims, objectives, and hypotheses. The literature review is extensive and critical, drawing on more than 200 sources, including international guidelines, clinical protocols, and recent scientific publications. The author demonstrates a deep understanding of the subject and the ability to synthesize and critically evaluate diverse data.

The dissertation spans 116 pages, formatted to academic standards, and is enriched with 28 figures, 5 tables, and 4 appendices, all of which enhance clarity and analytical depth.

The research objectives are practical and relevant, focusing on the frequency and severity of intrapartum injuries, identification of risk factors, evaluation of diagnostic methods, and the creation of a clinical management algorithm.

III. Aim

To conduct a detailed analysis of the frequency and severity of pelvic floor injuries during childbirth, identify the main predisposing factors, and evaluate modern preventive and therapeutic approaches, with the ultimate goal of optimizing clinical practice and reducing long-term complications.

IV. Objectives

1. Determine the true incidence of anal sphincter injuries during childbirth using modern imaging techniques, with emphasis on endoanal ultrasound for early detection.
2. Establish the relationship between intrapartum pelvic floor trauma and later development of fecal incontinence, highlighting the clinical significance of the problem.
3. Analyze the influence of key risk factors on the occurrence and severity of occult anal sphincter injuries.
4. Assess the impact of second-stage labor duration as an independent risk factor, particularly in the context of obstetric gel use.
5. Develop an integrated clinical algorithm for prevention, diagnosis, treatment, and follow-up of intrapartum pelvic floor injuries.

V. Material and Methods

The study was conducted in four hospital facilities — two in Bulgaria and two in Slovenia — providing an international perspective. A total of 203 patients were included, grouped by delivery type and injury presence.

Modern diagnostic methods were applied, notably endoanal ultrasound, recognized for its high sensitivity and specificity in detecting sphincter defects.

Statistical analysis was rigorous and appropriate to the data type, with results presented clearly in both graphical and tabular form, ensuring transparency and ease of interpretation.

VI. Scientific and Practical Contributions

Scientific-theoretical:

The author has succeeded in identifying key risk factors that have a significant impact on the likelihood of severe perineal tears – among them, primiparity (first childbirth),

gestational age over 41 weeks, and newborn weight exceeding 4,000 grams stand out. These factors have been analyzed in the context of their effect on relative risk, contributing to a better understanding of the pathogenesis and to the development of targeted preventive strategies.

Methodological contributions:

Development of a practical algorithm for the management of intrapartum pelvic floor injuries (IPFI).

A comprehensive clinical algorithm has been created, encompassing:

- Prevention;
- Diagnosis;
- Treatment;
- Follow-up of patients with intrapartum pelvic floor injuries (IPFI).

The algorithm is based on evidence-based medicine and is aligned with current international studies and clinical practices, as established in the prevailing recommendations for good medical practice.

Scientific and applied contributions:

For the first time in the country, an innovative diagnostic method – endoanal ultrasonography (EAUS) – has been introduced, characterized by:

- Speed and non-invasiveness;
- High specificity and reliability;
- Objectivity and standardization, enabling comparability of results.

The method is aimed at the **early detection of intrapartum pelvic floor injuries**, which is of critical importance for the prevention of long-term complications such as anal incontinence and prolapse.

Confirmatory contributions:

Determination of the actual incidence of intrapartum pelvic floor and perineal injuries in primiparous women – 25.4% within the studied group. This result corresponds with data from leading international studies, thereby confirming its validity and significance.

If you'd like, I can also refine this translation into a polished dissertation-style English so it reads like a native academic submission for a doctoral thesis. That would make it sound even more authoritative and publication-ready. Would you like me to do that?

VII. Teaching and Academic Activity

Dr. Dimitar Tsvetkov is a qualified physician specializing in obstetrics and gynecology, a degree obtained at the Medical University of Pleven, where he has been actively engaged in research activities.

Within his academic involvement, he has co-authored and participated in the implementation of two scientific projects. The first - Project No. 13/2009 - was a clinical study dedicated to the incidence of spontaneous and iatrogenic intrapartum injuries to the anal sphincter in primiparous women, as well as to the possibilities for their early ultrasound diagnosis. This project constitutes a substantial part of the empirical foundation of the present dissertation.

Under the Erasmus Programme of the European Commission, Dr. Tsvetkov has twice been awarded a scholarship, undertaking part of his specialization at the University Clinical Centre in Ljubljana, Slovenia. There, he worked on issues related to intrapartum injuries and urogynecological conditions at the Clinic of Obstetrics and Operative Gynecology.

During this period, he also performed teaching duties as an assistant to students in medicine and healthcare, further enriching his academic profile.

His professional activities include participation as a lecturer and organizer in numerous training forums, seminars, and symposia dedicated to minimally invasive and regenerative gynecology, as well as reproductive medicine — fields that are at the core of his scientific interests and clinical practice.

VIII. Conclusion

Dimitar Tsvetkov's dissertation is the product of thorough, original, and clinically relevant research. The findings are statistically sound, innovative, and directly applicable to obstetric practice.

The author demonstrates scientific maturity, analytical skill, and a clear commitment to improving healthcare outcomes.

I give a positive evaluation of the dissertation and strongly recommend awarding Dr. Dimitar Tsvetkov the educational and scientific degree "Doctor."

Sofia,
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