## **OPINION**

by Assoc. Prof. Dr. Maria Angelova, PhD,

Head of the Department of Obstetrics and Gynecology at the Medical Faculty of the Thracian University

of a dissertation on "Methods for termination of pregnancy in obstetric and gynecological practice" for the award of scientific and educational degree "Doctor". Scientific specialty 03.01.45. "Obstetrics and Gynecology".

Author: Dr. Zhivko Stoyanov Zhekov

Scientific adviser: Assoc. Prof. Dr. Kremen Tsvetkov, Ph.D.

The submitted documents under the procedure are in full compliance with the requirements and are perfectly arranged.

Data for the doctoral student - Biographical data and career development

Dr. Zhivko Stoyanov Zhekov was born on October 26, 1961 in the city of Varna. In 1987 he graduated Medicine from MU-Varna. He acquired a specialty in Obstetrics and Gynecology in 1993.

Since 2016 he has been working at SBAGAL-Varna, as Head of the Gynecology Department, and is an assistant at MU-Varna. He has specializations in Bulgaria and abroad in the field of endoscopic gynecological surgery.

He speaks English and Russian, both written and spoken. His main professional interests are in the field of operative gynecology.

## Relevance of the dissertation

The dissertation developed by Dr. Zhivko Zhekov contains 150 pages, including 25 tables and 72 graphs. The bibliography includes 207 literary sources, of which 33 in Cyrillic and 174 in Latin. The publications related to the dissertation are 3. The dissertation of Dr. Zhivko Zhekov begins with an overview on the topic. The author presents in depth the current trends in abortion in the first and second trimesters. The topicality of the topic is categorically justified in the introduction of the dissertation.

The purpose of the dissertation is clearly stated. For the fulfillment of the scientific goal the dissertation has set 8 tasks. To perform the tasks, the author has studied and studied 420 pregnant women who underwent termination of pregnancy. Randomized in four cohorts, two for each trimester: 140 MA I / 140 VA; 70 MAII / 70 D&E. The groups were compared by patient age, gestational week in which the abortion was performed, parity, mode of delivery (p.n, SC), history of previous abortion and number of abortions, history of previous vaginal infection, and indications for termination of pregnancy (by demand and medical). The structure of the compared groups for the two trimesters is approximately the same. The study was conducted in SBAGAL "Prof. Dr. D. Stamatov" - Varna and MHAT" St. Anna"- Varna, and covers a five-year period, from 2013. until 2018 and is retrospective and prospective in nature.

The methodology section of the dissertation is clearly presented. The data of the patients from both groups are clearly presented in tabular and graphical form. Patients are divided into two groups:

- Pregnant women in the first trimester (MA I VA)
- Pregnant women in the second trimester (MA II D&E)

The results are presented in detail according to the study criteria of 25 tables and 72 graphs. Medical abortion in the first and second trimesters is highly effective (91.4) and safe, requiring time to expel the uterine contents - an average of 7 hours (first trimester) and 8 hours for (second trimester). The relative proportion of early complications of medical abortion in the first trimester is two to three times greater than that of vacuum aspiration. The use of surgical abortion through dilatation and evacuation is associated with a higher relative risk of infertility and late complications. Risk factors for these late complications include previous vaginal infection, abortion, and a cesarean section.

The scientific work of Dr. Zhekov ends with 8 conclusions on the topic. The conclusions are substantial, correspond to the set tasks and fully prove the fulfillment of the scientific goal. The dissertation has original contributions. Evidence was obtained in support of the opinion that medical abortion is a multistage process that requires time for implementation - an average of  $6 \div 7$  hours (Trimester) and  $7 \div 8$  hours (II trimester) for expulsion of uterine contents.

The relative risk of early complications from vacuum aspiration is shown to be two

to three times lower than that of medical abortion in the first trimester, and the use

of medical abortion in the second trimester is associated with a reduced risk of infertility and late complications. A detailed analysis of the risk factors associated

with early and late complications during medical and surgical abortion in the I and

II trimesters of pregnancy.

An original contribution is the derivation of criteria for selection of patients for

termination of pregnancy, as well as the development of an algorithm for the use

of Topogyne in medical abortion in the second trimester.

The economic feasibility of abortion methods in the first and second trimesters has

been clarified.

**In conclusion**: The dissertation of Dr. Zhivko Zhekov has an indisputable

scientific contribution to the effects of medical and surgical abortion in the first

and second trimester, in terms of effectiveness, safety and complications (early and

late).

The scientific work fulfills the technical requirements for awarding the educational

and scientific degree "Doctor".

I give a positive assessment of the scientific work and express my opinion to the

respected scientific jury to award Dr. Zhivko Stoyanov Zhekov the educational

and scientific degree "Doctor" in Obstetrics and Gynecology.

06.04.2021

Stara Zagora

Prepared the opinion: .....

Assoc.Prof.dr. Maria Angelova, PhD

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