

REVIEW

By Prof. Emil Georgiev Kovachev, MD, DSc

Manager of the Obstetrics and Gynecology Hospital – Varna

Head of the Department of Obstetrics and Gynecology

at the Medical University – Varna

Regarding a postdoctoral thesis for awarding the educational and scientific degree Doctor of Science (DSc) in the scientific specialty Obstetrics and Gynecology (03.01.45), Department of Obstetrics and Gynecology, MU–Varna.

Thesis subject: **Enhanced Recovery after Surgery (Eras – Enhanced Recovery After Surgery Protocol) in Gynecologic Surgery.**

Author: Assoc. Prof. Stanislav Hristov Slavchev, MD, PhD

The thesis submitted for defense contains 152 standard pages and is illustrated with 7 tables and 16 figures.

The bibliographic reference contains 432 literature sources.

1. Relevance of the thesis subject

In his postdoctoral thesis, Assoc. Prof. Slavchev examines a present-time method for enhanced recovery after surgical intervention, which is of exceptional medical and social importance. The application of the ERAS protocols in gynecologic surgery reduces hospital stay, reduces the frequency of rehospitalization, has good pain control, and improves the quality of life of patients operated on gynecologically.

The literature review clearly shows that the doctoral researcher has thoroughly investigated various contemporary literary sources. The review has good educational value. The application of the ERAS protocol in gynecologic and gynecologic oncology surgeries is described.

The study aims to investigate the feasibility and outcomes of the ERAS protocol in operative gynecology by auditing and reporting perioperative outcomes.

The thesis tasks are clearly formulated. There are 11 tasks set, with tasks 1, 2, 3, 4, 5, and 6 being of explicit interest, namely:

1. To investigate the applicability of early mobilization as an ERAS component for the recovery of patients in the early postoperative period.
2. To investigate the feasibility and effect of early oral feeding on the recovery of patients without prior mechanical bowel preparation.
3. To investigate the effect of carbohydrate fluid intake before surgery on glycemic control in the early postoperative period.
4. To evaluate the influence of antimicrobial prophylaxis on the occurrence of postoperative infections and/or fever.
5. To evaluate the effect of opioid-sparing analgesia and antiemetic therapy in the postoperative analgesia of patients undergoing open, laparoscopic and vaginal gynecologic surgeries.
6. To investigate the incidence and nature of early postoperative complications following adherence to components of the ERAS protocol in gynecology.

Materials and methods

A prospective study of 121 women hospitalized for planned surgeries at the Gynecology Clinic at St. Anna Hospital was conducted. The patients included in the study signed an informed consent and were preoperatively prepared according to the ERAS protocol.

The following research methods and relevant procedures were used in the implementation of the ERAS protocol:

- ✓ The day before surgery includes:
 - No limitations in feeding until midnight;
 - Low molecular weight heparins at 9 pm;
 - Avoidance of mechanical bowel preparation and laxative medications
 - In expected intestinal resections, an enema is performed twice, and Gentamycin Metronidazole is administered orally;
 - A carbohydrate drink is given to the patient;
- ✓ On the day of surgery
 - Bowel preparation;
 - Oral fluid intake up to 2 hours before surgery;
 - Mechanical prevention of thromboembolic complications;
- ✓ During the operative intervention
 - Ensuring normothermia of the patient;
 - Targeted infusion therapies;
 - Regional anesthesia techniques;
 - Avoidance of drains and nasogastric tubes;

- ✓ After the operative intervention
 - Targeted infusion therapies – infusion of water-salt solutions;
 - Opioid-sparing analgesia;
 - Control of postoperative hyperglycemia;
 - Early verticalization and mobilization – 6 hours after surgery;
 - Removal of the urethral catheter immediately after mobilization.

Heterogeneous statistical methods were employed.

Own results and discussion

For a period of 14 months, 121 patients with an average age of 52.6 years participated in the study; 83 were operated on with open access, 28 underwent laparoscopic gynecologic surgery, and 10 – underwent vaginal surgery. Of the studied contingent, 78 patients were diagnosed with benign tumors, and 43 had oncological diagnoses.

Early verticalization and mobilization on the day of surgery were achieved in 95%. The oral fluid intake on the day of surgery was achieved in 99% of the patients. Antibiotic prophylaxis as a measure to limit wound infections was applied in 100% of the cases, and in 1.6% (2 patients) complications from the surgical wound occurred, necessitating the development of an Algorithm for limiting wound infections and complications. In all 121 patients, opioid-sparing analgesia and antiemetic prophylaxis were administered in the early postoperative period.

Evaluation of conclusions and contributions

Assoc. Prof. Slavchev formulated 11 conclusions and 8 contributions, dividing his contributions into two categories: original contributions and confirmatory ones. It is essential to emphasize the original contributions, namely:

1. For the first time in Bulgaria, a prospective single-center study of 121 patients was performed on the applicability of the ERAS protocol in surgical gynecology, and perioperative results were reported.
2. The frequency of complications after introducing measures and procedures for enhanced recovery after gynecologic surgeries was studied.
3. An "Algorithm for limiting wound infections and complications" was developed and implemented in daily practice.

Critical remarks and recommendations

Assoc. Prof. Slavchev has complied with all previously made critical remarks.

Teaching activity

Assoc. Prof. Stanislav Slavchev was born in 1972 in Targovishte. He completed his higher education in medicine at the Medical University "Prof. Dr. Paraskev Stoyanov" - Varna in 1996. He gained his initial clinical experience at the Centre for Emergency Medical Care – Varna, where he worked for nine years. Since 2008 until now, he has been an obstetrician-gynecologist at Gynecology Clinic at St. Anna Hospital – Varna. In 2009, he obtained his Certificate of completion of special training in Obstetrics and Gynecology. In the following years, he attended and completed courses in various highly specialized activities in obstetrics and gynecology in the fields of ultrasound diagnostics, laparoscopy, colposcopy, and high-risk childbirth. Since 2011 he has been a part-time Assist. Prof. at the Department of Obstetrics and Gynecology, MU-Varna; later on, he became a full-time assistant professor; in 2018, he was appointed a Ch. Assist. Prof. at the same department. In 2019 St. Slavchev acquired the academic position of Associate Professor. His doctoral thesis on “The role of radical hysterectomy with pelvic and/or aortic lymph node dissection for optimal cytoreductive surgery in advanced-stage

epithelial ovarian cancer” earned him a doctoral (PhD) degree in 2016. St. Slavchev is the author and co-author of 30 scientific publications published in Bulgarian and international science journals – mainly in the fields of gynecologic oncology and obstetric pathology. His monographic work on "Modern aspects in the early diagnosis and treatment of carcinomas of the female reproductive system" was published in 2018. St. Slavchev is a member of the Bulgarian Society of Obstetrics and Gynecology and the European Society of Gynecological Oncology (ESGO).

Conclusion

The postdoctoral thesis developed by Assoc. Prof. Stanislav Slavchev on "**Enhanced Recovery after Surgery (Eras – Enhanced Recovery After Surgery Protocol) in Gynecologic Surgery**" is relevant and up-to-date research meeting the quality benchmarks and requirements for scientific research. I take the liberty of recommending to the respected members of the Scientific Jury to vote positively for awarding the scientific degree "Doctor of Sciences" in the scientific specialty Obstetrics and Gynecology to Assoc. Prof. Stanislav Hristov Slavchev, MD, PhD, in compliance with the Rules and Regulations for Development of the Academic Staff at Medical University – Varna.

Date: 06.12.2022

Prof. E. Kovachev, MD, DSc

