

OPINION

by Prof. Dr. Nikola Yordanov Kolev, PhD, BSc

member of the Scientific Jury

appointed by Order No. RD-26-850/08.05.2024 of the Executive Director of University Hospital "N. I. Pirogov", Sofia.

Regarding: competition for Scientific degree of "Doctor" to Dr. Petar Stamov for the dissertation titled "Method of temporary decompression of the gastrointestinal tract by forming an enterostomy with T-tube in newborns with low and extremely low birth weight", in the Scientific specialty "Pediatric Surgery" in the professional field 7.1. Medicine of the higher education area 7. Healthcare and Sports.

Information about the doctoral candidate

The doctoral candidate has been trained in a free doctoral student at the Pediatric Surgery Clinic of the University Hospital "N.I. Pirogov" in the scientific specialty of Pediatric Surgery. The submitted set of materials complies with the requirements of the Scientific Council of University Hospital "N.I. Pirogov" for disclosing the procedure for defending a dissertation. The doctoral candidate has included 3 publications (in Bulgarian editions) and 4 scientific presentations at national and international forums.

Biographical data

Education: Dr. Petar Stamov obtained a professional qualification in Medicine from the Medical University "Prof. Dr. Paraskev Stoyanov" - Varna in 2007. In 2015, he specialized in Pediatric Surgery. He has attended numerous specialized courses in the fields of minimally invasive endoscopic and laparoscopic surgery, as well as pediatric urology.

Professional Experience and Skills: Dr. Stamov has a 15-year experience as a physician. His professional experience began in 2008 at St. Anna Hospital in Varna. Currently, he is appointed as an assistant at the Department of General and Operative Surgery, Medical University "Prof. Dr. Paraskev Stoyanov" - Varna. Since 2021, he has been working as a pediatric surgeon at the First Surgery Clinic, Department of Pediatric Surgery at University Hospital "St. Marina" - Varna. He is proficient in English and Turkish, as well as possesses good computer skills.

Dissertation

The dissertation on the topic "Method of temporary decompression of the gastrointestinal tract by forming an enterostomy with T-tube in newborns with low and extremely low birth

weight" is presented in a volume of 106 pages and contains 29 tables and 54 figures. It complies with the accepted requirements for the structure of a dissertation. It includes the following chapters: Introduction (2 pages), Literature Review (24 pages), Aim and Objectives (1 page), Clinical Material and Methods (14 pages), Results (45 pages), Discussion (3 pages), Conclusion and Findings (3 pages), Bibliography (6 pages). The bibliography includes 112 Latin titles. The literature review describes the various types of enterostomies, their indications, time for closure of the enterostomy, possible complications, and management strategies upon their occurrence, as well as the latest global trends in the use of T-tube for enterostomy formation. Issues and opinions in the available literature on the comprehensive treatment of patients, including the characteristics of anesthesia in newborns and infants with intestinal obstruction, are discussed. The aim of the dissertation is clearly defined: To introduce into clinical practice a method for temporary decompression of the gastrointestinal tract using T-tube in newborns, infants, and children up to 1 year of age and to conduct a comparative study with classical enterostomy. The tasks set are four:

1. *Introducing the method of temporary decompression as a routine surgical procedure.*
2. *Defining the indications for applying enterostomy using T-tube in newborns and infants.*
3. *Evaluating the effectiveness and safety of the technique.*
4. *Assessing the advantages of the technique compared to conventional stoma.*

The clinical material includes 62 patients up to one year of age who underwent enterostomy at the Department of Pediatric Surgery at MHAT "St. Anna" - Varna, covering the period from 2008 to 2021. The patients were divided into two groups - Group A with enterostomy performed using T-tube and Group B with conventional enterostomy. A comparative study of the results in the two groups was conducted. An analysis of the material and the results from both groups was performed. Statistical tools were used for data processing in tables through Descriptive, Variational, and Graphical analysis, as well as other modern statistical methods. In the "Results" section, statistically significant advantages of the applied method for performing enterostomy using T-tube are demonstrated, along with its significance in the treatment of intestinal obstruction in newborns and infants up to 1 year of age with low and extremely low birth weight. Special attention is given to the analysis and comparison of the duration of the operative time, complications, the need for repeat surgical intervention, as well as the time for restoration of gastrointestinal tract continuity.

The discussion follows the sequence from the analysis of the literature data and the data from the obtained results. The obtained results are comparable to the universally accepted standards in the global literature and pediatric surgery.

The conclusions are properly formulated and correspond to the objectives set, outlining the complete achievement of the dissertation's aim:

1. *A method for enterostomy using a T-tube has been introduced as a routine surgical intervention, following the indications for the application of the method.*
2. *Indications for the application of the method for temporary decompression of the gastrointestinal tract using a T-tube are present in newborns with low and extremely low birth weight, infants, and children up to one year of age. The method is applicable in conditions such as: congenital intestinal obstruction, meconium ileus, necrotizing enterocolitis, and acquired diseases where necrosis of the small intestine is observed.*
3. *The effectiveness of enterostomy with a T-tube is superior to conventional enterostomy.*
4. *Compared to conventional enterostomy, the formation of an enterostomy with a T-tube in newborns, infants, and children up to one year of age is associated with the following advantages:*
 - A method characterized by greater conservation, aimed at preserving organ function during the surgical procedure. Compared to conventional enterostomy, it allows for minimally invasive exploration and sanitization of the abdominal cavity, as well as meticulous treatment of the affected area with minimal trauma. There is no need for resection of a long segment of the small intestine.
 - The time for closure of the enterostomy is reduced.
 - There is no need for a repeat surgical intervention to close the enterostomy.
 - The operative time and anesthesia duration are reduced accordingly.
 - Complications from the applied surgical technique are not observed in the studied sample.
 - The placed T-tube can be used for applying medications, as well as contrast agents for monitoring gastrointestinal tract patency.

In the "Conclusion" section, it is correctly noted that the use of a T-tube for creating an enterostomy is a safe and reliable method for both definitive and staged treatment. Additionally, systematically observed advantages compared to the traditional method for creating an enterostomy are presented.

As contributions to the dissertation, I can recognize:

1. The first comparative study on the use of T-tube for enterostomy in cases of intestinal obstruction.
2. Introduction of this method as a routine minimally invasive approach in patients with low and extremely low birth weight, due to its swift management of acute unstable conditions, reduced operative time, and absence of complications associated with the method.
3. Provision of comprehensive literature data summarizing the safety, effectiveness, capabilities, and limitations of both methods for enterostomy.
4. Conducted a detailed contemporary literature review on indications for enterostomy, types of stomas, their complications, and closure time.
5. Demonstrated the advantages of the T-tube technique over conventional methods as effective, safe, and organ-preserving regarding bowel resection, accompanied by fewer complications.

The abstract meets the requirements for a doctoral thesis and reflects the main results achieved in the dissertation. Three published articles related to the scientific work are presented. The obtained results have been presented at four scientific forums, three of which are national and one international.

CONCLUSION: The presented dissertation is the first study and comparative analysis in our country of the use of the method for creating an enterostomy using a T-tube in children. Dr. Petar Stamov's dissertation fully meets the criteria for the award of the educational and scientific degree "Doctor" and complies with all the requirements of the Law on the Development of the Academic Staff in the Republic of Bulgaria (LDASRB), the Regulations for the Implementation of LDASRB, and the corresponding regulations of University Hospital "N.I. Pirogov". This gives me grounds to give a positive vote and to recommend to the esteemed members of the Scientific Jury to award Dr. Petar Stamov the educational and scientific degree "Doctor".

Varna

Prof. Dr. Nikola Yordanov Kolev, PhD, BSc

