Streszczenie pracy doktorskiej lek. Michała Kisielewskiego pt.: *„Implementation of Enhanced Recovery After Surgery protocol in patients after colorectal surgery”*

Enhanced Recovery After Surgery (ERAS) is a protocol that includes numerous evidence-based elements of perioperative care. It aims at enhancing patients` recovery, shortening of hospital stay and decrease in perioperative complications due to reduced surgery-induced stress.
First study (*Early implementation of Enhanced Recovery After Surgery protocol – Compliance improves outcomes: a prospective cohort study,* Int J Surg, 21 (2015) 75- 81; Impact Factor 1,657, MNiSW 25 points) analyzed the relation between compliance to multifactorial ERAS protocol and the clinical outcomes in 92 patients undergoing elective colorectal surgery. Patients were divided into 3 groups according to the time after ERAS protocol implementation to clinical practice. Due to the gradual increase of compliance to ERAS protocol from the moment of its implementation (from 65% in group 1, to 83,9% in group 2, to 89,6% in group 3), we observed that number of perioperative complications dropped from 56% in group 1, to 43% in group 2, to 9,4% in group 3, and the mean length of hospitalization decreased from 5 days in groups 1 and 2, to 3 days in group 3. Acquired results allowed to conclude that implementation of ERAS protocol is a gradual process. When controlled and properly modified, compliance to ERAS protocol can steadily increase what will positively effect on clinical outcomes.
The goal of the second study from the series (*Enhanced recovery after colorectal surgery in elderly patients,* Wideochir Inne Tech Maloinwazyjne. 2015; April 10(1): 30- 36; Impact Factor 0,92; MNiSW 14 points) about the use of ERAS protocol was to assess feasibility of its implementation in elderly patients who underwent elective colorectal surgery in polish surgical unit. 92 patients (43 F/ 49 M) were included into the study. Perioperative care was based on ERAS protocol guidelines. Clinical outcomes in patients ≤ 65 years of age (group 1) were compared to elderly patients (>65 years, group 2). Patients >65 years had more comorbidities and higher American Society of Anesthesiologists (ASA) grade, but perioperative complications rate was similar (34,5% vs. 36,7%). No statistically significant difference was detected (p>0,05). Likewise, tolerance of oral fluids and diet and time to first stool passage was similar when compared between two groups (p>0,05). The length of hospitalization was also comparable between two groups (4,52 days vs 5,48 days, p>0,05) and no negative impact on the rate of readmissions was noticed. Conclusion of the study was that implementation of ERAS protocol in elective colorectal surgery is possible irrespective of the age of surgical patients and is safe even in elderly patients.
Third study (*Are we ready for the ERAS protocol in colorectal surgery?*, Wideochir Inne Tech Maloinwazyjne. 2017; 12(1): 7-12. Impact Factor 0,92; MNiSW 15 points) analyzed trends in perioperative care in elective colorectal surgery among general surgery consultants from malopolska voivodeship. Questionnaire study based on a concept of ERAS protocol was conducted. 165 general surgery consultants from 25 surgical departments took part in 20 questions-long survey. Some of the elements of perioperative care (restrictive intravenous fluid therapy, use of locoregional analgesia, postoperative oxygenation, antibiotic and antithrombotic prophylaxis) were accepted by the majority of surgeons. On the other hand, the level of acceptance of many crucial elements of perioperative care were quite poor - use of laparoscopy was supported only by 16% of respondents. Avoiding routine bowel preparation (20%) and routine use of drains (13%), early mobilization (16%) and early diet intake (2%), early catheter removal (3%) were other examples of poor acceptation of ERAS protocol elements. Interestingly, we noticed that surgeons were willing to accept elements that don`t interfere with their surgical practice, like restrictive intravenous fluid therapy or the use of locoregional analgesia. Poor acceptation of many crucial evidence-based elements

of perioperative care in colorectal surgery among malopolska voivodeship general surgery consultants was detected. This creates a barrier to optimization of patient`s care. Taking under consideration potential benefits that can be brought by the use of ERAS protocol in colorectal surgery (reduction of complications rate, shortening the length of hospital stay without increased readmissions rate) clinical practice in malopolska surgical wards requires modification.