Abstract ID: 90465

Student: Steyer Gerhard Ernst

Area of Research: Sustainable Health Research and Clinical Science

PhD Programme: DS Lifestyle-Related Diseases (LIFEMED)

Semester: 100

Colorectal anastomosis leakless

Gerhard Ernst Steyer; Johann Pfeifer

Background: Anastomotic leakage (AL) in intestinal surgery is a worldwide, since decades well known problem [Schardey 2021] and recently P. Aeruginosa and E. faecalis are detected [Alverdy 2017] to cause leaks via activating matrix metallo protease 9 that can cut leaks into tissues. Aim: To reduce AL means to reduce the hospital bug P. aeruginosa in the microbiota of the gut. If we make assumptions (or in equal wise words “sea pocks” [Anschober 2020]) such a reduction is theoretically possible in two different ways: one is competition via probiotics, but in literature there is no evidence for a multispecies probiotic (in a “study” [Zhang 2012] the “multispecies probiotic” contains E. faecalis!) and on the other hand P. aeruginosa is a strong bacteria that itself suppresses other bacteria [Bullen Sept. 2022]; an other, but promising way, is to kill P. aeruginosa via special antibiotics that act local in the gut and are not resorbable. Method: To prevent AL we compared a prospective treatment group of 150 patients, who recieved a mixture of 3 antibiotics [Rx by Schardey 2017] with a retrospective control group (n=150). Result: According to our protocol clinically we did not find a single case of AL in the treatment group; that result is highly significant ($p<0,01$) in the Fisher exact test. Conclusion: The triple antibiotic mixture from our study is a very promising method to prevent / reduce AL after colorectal surgery (AL is reported in the literature to be over 10%). Dose finding studies are necessary. It is also worth to investigate, if AL occures periodically (P. aeruginosa is a hospital bug and Hippocrates said of course in ancient Greek do not harm !).
Acknowledgement: Without a sponsor we interpreted results without any conflict of interest. We want to thank Prof. HM Schardey, Clinic Agatharied, Germany, for his input regarding the magistral preparation of the antibiotic mixture used in the study.