

Triclosan coated sutures for SSI prevention in abdominal surgery: a critical appraisal

Marco Ceresoli, Francesca Carissimi, Luca Gianotti
Milano-Bicocca University



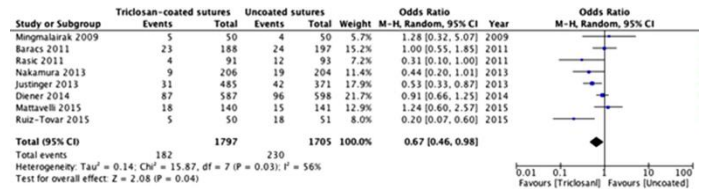
Background: Surgical site infection (SSI) is a frequent complication of surgical procedures. WHO guidelines suggest the use of triclosan coated sutures (TCSs). Meta-analysis suggest a role of TCS: the aim of this study was to analyze the clinical evidence about SSI prevention with triclosan-coated sutures (TCSs) in abdominal surgery.



Consider using triclosan-coated sutures

Methods: this was a systematic review of existing RCT on TCSs in abdominal surgery

Results: results of meta-analysis were evaluated and 10 RCT were critically analyzed: results are shown in tabel. There were great variability and clinical heterogeneity among patients



Conclusions: despite meta-analysis show a statistical effect, the real role of TCS should be carefully evaluated; prevention of SSI seems to be related to a complex interaction of several factors.

Study ID	N° of pts	Type of surgery	Adjunctive Prevention of SSI strategies	Exclusion criteria	Follow-up	Results (SSI Rates)		
						study group	controls	p
Baracs et al.	385	Elective open colorectal surgery	Antibiotic prophylaxis	autoimmune disease immunosuppression emergency surgery Intra-operative incurable tumor or sepsis. Sterile surgical site dehiscence	Clinical examination during hospital stay, telephonic follow-up at 30d	12,20%	12,20%	0,98
Diener et al.	1185	Elective midline laparotomies	Antibiotic prophylaxis routine scrub site preparation	Impaired mental state, language problems,	Clinical examination at 10 and 30d from discharge	14,80%	16,10%	0,64
Justinger et al.	856	Emergency or elective laparotomies	bowel preparation, iodine shower, site preparation, antibiotic prophylaxis		Clinical examination during hospital stay and at 14d	6,40%	11,30%	<0,05
Mattavelli et al.	281	Elective open colorectal surgery	Hair removal; skin disinfection; antibiotic prophylaxis; prevention of hypothermia	Pregnancy, emergency operations, ongoing infections, ASA ≥3, organ insufficiency contamination of surgical field, re-operation for any reason	Weekly examination until 30d	12,90%	10,60%	0,564
Mingmalairak et al.	100	Open appendectomy	Antibiotic prophylaxis	Diabetes, immunocompromised host, HIV, immunosuppressive drug, malignancy, allergy to triclosan, pregnancy.	Clinical examination at day 1, 3, 7, 14, 30	10%	8%	0,727
Nakamura et al.	410	Elective colorectal surgery	Antibiotic prophylaxis and wound protector	Patients who refused to sign the consent	Daily during hospital stay, weekly until 30d after discharge	4,30%	9,30%	0,047
Rasic et al.	184	Elective colorectal surgery	Antibiotic prophylaxis		Clinical evaluation during hospital stay	4,30%	13,20%	0,039
Ruiz-Tovar et al.	101	Emergency Laparotomies for fecal peritonitis	Antibiotic prophylaxis wound irrigation; sterile drape		Clinical examination at 5, 30 and 60 days	10%	35,30%	0,004
Olmez et al.	890	Elective and emergency gasrointestinal surgery	Antibiotic prophylaxis		clinical examination until 30 d1s	19,10%	25,80%	0,016
Ichida et al.	1013	open and laparoscopic gastroenetrologic surgery	Antibiotic prophylaxis	contaminated surgical field	clinical examination until 30 days	6,90%	5,90%	0,606