

Letter to the Editor

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# Medical Error and Surgical Infections.

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## Background

The XII Congress of the World Society of Emergency Surgery took place in Antalya (Turkey) last 21-25 October 2025, and developed very successfully, with an extensive programme covering all clinical aspects of emergency interventions and conditions. However, what I think was a highlight and a great feat of the organization was to include some other topics such as leadership, clinical reasoning and decision making. I was particularly interested in attending the 'Role of Medical error' workshop, directed by Belinda de Simone and Fausto Catena.

The topic was the importance of error, and how to transform it from a taboo to a learning opportunity and a window to organizational improvement. This got me thinking about the concept and definition of a medical error or mistake. How would we define medical error in surgical infections?

Do surgeons actually analyze (or know at all) their infection rates? Do they follow the patients that get infections, in many cases unfortunately due to preventable mistakes?

I will share a couple of examples to illustrate my point.

A patient presents with appendicitis with local peritonitis. He undergoes laparoscopic appendectomy and lavage, but there are more surgeries to be performed, so the team rush a bit, and do not properly visualize and aspirate the fluid in the pelvis, and they decide not to leave a drain. Two weeks later, the patient is readmitted with fever and a pelvic collection

Is this a mistake? Is the Emergency team responsible? Was it avoidable? I would say yes to all of the above, but without pointing fingers or blaming individuals, we must build on a culture that has resources to avoid these events and confidence to speak up when needed without fear of retaliation.

A learning organization approach would be 'one is too many'. In this case, a simple procedural error: simple to avoid by standardizing steps, but with a lot of consequences for the patient and the hospital (readmission, antibiotics, percutaneous drainage or reoperation, loss of working days, psychological impact for the patient, etc.) Something as simple as a focused scrub nurse, a junior trainee that has studied the steps of the operation or even a colleague passing by that would have said 'did you check the pelvis before taking the ports out?' could have completely changed the situation.

Another example, a real life-scenario that could happen in any hospital or country: laparotomy for a peritonitis (perforated sigmoid colon), the wound is not protected during the procedure (despite availability of plastic wound protectors), closure of the laparotomy is performed by a senior resident (fascial small bites, no irrigation, no subcutaneous closure, staples). The wound gets a deep SSI, is partially opened for drainage and needs extended dressings, NPWT and many outpatient visits. 1 year post-surgery the patient has an abdominal hernia.

Was this avoidable? One could argue that especially because the rate of SSI is known to be high in emergency laparotomies, the more care should be taken to prevent them. The protection of the wound from contamination during the intervention and adequate cleaning and tissue management of the wound during closure are mandatory. There is no problem in involving trainees and letting them perform closure, but supervision is essential, both for them so they are trained properly, and for the patient, that deserves the best care and all our efforts to avoid complications.

I could think of many more 'every-day' examples such as these related to emergency surgery and infectious complications. And these are not even cases with very complex decisions, such as managing a severe necrotizing pancreatitis, leaving the abdomen open, doing damage control or resuscitating very sick septic patients, where decisions and actions can be the difference between life and death for the patients.

The problem with SSI is that there are so many variables involved that it's usually very difficult to point to one specifically and 'blame it' for a complication. That's why we usually work with bundles, because they have demonstrated to be effective and work better applied as such than separately. We have to own our mistakes and learn from them, and ideally be supported by a system that doesn't transform us into second victims, but encourages constructive analysis, structural changes to avoid perpetuating mistakes and emotional aid of teams.

Reflect about it and think about your own cases. How many 'simple' mistakes or forgotten steps could actually prevent complications? Don't you think analyzing them and sharing them with colleagues or trainees should be compulsory in order to increase awareness, educate and improve outcomes? Then why don't we do it? Start today!

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