Emergency laparoscopic surgery in the elderly and frail patient

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Editors

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Thinking of our elders, from a professional, personal, and human point of view; taking into account our young people—the reason for our being professional, personal, and human; without forgetting us, with our frailties: professional, personal, and human.

Foreword

Randomized clinical trials (RCTs) are the best way to assess the efficacy and/or toxicity of a therapeutic product. They have been developed and refined particularly for clinical pharmacology. RCTs are seldom used for non-pharmacological interventions, and very rarely in surgery.

Even when there is an improvement, it is hard to find scientific evidence to establish whether a surgical procedure is better than some other one, whether surgery that has achieved good results in adults is also effective in old people and is equally favorable in males and females. This kind of information is very important for supplementing a Health Therapeutic Assessment (HTA) and implementing the guidelines in various areas of surgery.

However, the field of surgery is always very complex because the experience and the manual skills of surgeons and their staff are of paramount importance for the success of any intervention. This means that surgical RCTs must be multicentric in order to randomize the surgeons when comparing, for instance, two surgical procedures. It is even harder to achieve double blindness because the surgeons must be aware of the procedure, while the blindness should be mandatory for the patients. It is instead possible that the results of a surgical intervention are evaluated by surgeons who are not involved in that clinical trial.

This book, written by Italian surgeons, sets out to define and discuss these problems in a specific field: laparoscopy in frail old people. The definition of frailty is particularly relevant for the Italian population. In fact, Italians top the lists for lifespan (81 and 85 years for males and females, respectively), but the drop lower when the healthy lifespan is considered because they often suffer one or more pathologies in the last part of their lives. Probably, scarce attention to good life styles is the main reason.

Therefore, "classic" surgery could be contraindicated in such conditions while laparoscopy, being less invasive, may be tolerated better by frail old people.

The authors of this book are convinced that only RCTs can give answers to a number of questions. Is the treatment urgent and necessary or could it be delayed? Some cases of acute appendicitis can avoid surgery because the infection could be cured by antibiotics. A recent study shows that obese diabetics achieve the same results—loss of body weight—with a well-balanced diet or a gastric bypass.

Most surgical knowledge is based on interventions in adults. Are they transferable to frail old people? Then too, if laparoscopy is really well

tolerated in old people, are the results acceptable? Results mean not only in the short term, but also with long enough follow-up to evaluate late or long-term side effects and relapses. All these questions in the various pathological areas call for RCTs to avoid "good intentions" translating to damage. We need to know what is better because we cannot accept that the age of patients and their frailty is a reason to avoid surgery or an excuse to limit them to non-surgical treatments.

The possibility of organizing more RCTs in surgery depends essentially on the availability of adequate resources that national and European governments will make available. This book gives them good reasons.

Frail old people deserve attention!

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Preface

"Science is built of facts the way a house is built of bricks: but an accumulation of facts is no more science than a pile of bricks is a house", wrote the mathematician Henri Poincare.

However, as surgeons and doctors, we have to face and consider our own "facts".

We are ageing! This is the first fact. From a global perspective, it is estimated that the number of people over 65 years old will increase from 5234 million in 2010 to more than 1.5 billion in 2050 and, currently, about 33% of hospital stays and 41% of hospital costs are attributed to patients over 65 years old.

As an example, more than 20% of the Italian population is over 65 years old and this percentage is expected to rise to 34% by 2050. Over the last 20 years, life expectancy in the country has increased from 78 to 80 years for men and from 84 to 85 years for women. About 20% of the elderly and 6% of the country's total population are now over 80 years old.

Second fact: when we think of the elderly, our first thought is chronic medical illness, but it is estimated that 21% of the total population over 60 will need surgery, compared to only 12% of people in the 45–60 age group.

Third fact: we are all well aware of the advantages of laparoscopy in planned surgical procedures, which include elderly and frail patients. However, there are many doubts about emergencies: people over 70 who undergo an emergency laparotomy have a hospital mortality of 21.4%, and older patients, especially octogenarians, have worse outcomes with up to 44% mortality reported.

Fourth fact: an ageing population will put greater financial pressure on elderly care systems. And in an era of budgetary restrictions, this has to be taken into careful consideration.

Fifth fact: we continue to use the term "elderly" only in a chronological sense: 65 years old continues to be adopted as a threshold for old age. This can no longer be the case, just as it can no longer be just a number (age) to define a person's situation. That is why it is better to use and talk about, and define, frailty.

Sixth fact: last but not least, it is no longer the time for the one-man show; surgeons cannot and must no longer ignore multidisciplinarity, especially in the medical profession.

These are the facts. However, on their own, these facts are not science.

"… As doctors and surgeons, our mission is to treat patients to the best of our knowledge and expertise. The exponential knowledge eruption and the nearly daily skill-related technology advances in minimally invasive surgery make it more than ever mandatory that we, surgeons and doctors, humbly examine, analyze and objectively audit our own practice…we have to recognize and discard our acquired biases, and base our diagnostic procedures and surgical therapy on 'hard' evidence…" It is still correct, timeless, and contextual what Dr. Fingerhut wrote.

So these were the ideas that led us to be the Editors of a book about the laparoscopic approach in emergencies in elderly and frail patients.

We tried to work on it with a multitasking approach, involving not only surgeons but also anaesthetists, internists, nurses, and radiologists. As this is an indisputable fact, only together, we could try to summarize the facts in science.

Without forgetting ethics!

The idea for this book was born at the beginning of 2020, and in the meantime another worrying fact has emerged, the SARS-CoV-2 (COVID-19) infection.

There is no real evidence, especially regarding surgery, about this "worrying fact". However, we could not overlook it, especially considering that our elderly were significantly affected during the first wave. On the contrary, in the second wave, younger people became frail.

We have tried to answer the questions listed above, which we want to share with everyone. Perhaps "forcing" the meaning of the Aristotelian syllogism a bit: if the safety and efficacy profiles of laparoscopy in the elderly and frail patient have been confirmed, then it is even more true in the non-elderly and non-frail patient.

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