

Ferdinando Agresta · Fabio Cesare Campanile
Nereo Vettoretto *Editors*

Laparoscopic Cholecystectomy

An Evidence-Based Guide

Forewords by
Luigi Presenti and
Mario Morino

 Springer

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Società Italiana di Chirurgia Endoscopica e Nuove Tecnologie



Editors

Ferdinando Agresta
Department of General Surgery
ULSS19 del Veneto
Adria
Rovigo
Italy

Nereo Vettoretto
Laparoscopic Surgical Unit – M. Mellini
Hospital
Chiari
Brescia
Italy

Fabio Cesare Campanile
Division of General Surgery
Hospital S. Giovanni Decollato Andosilla
Civita Castellana
Viterbo
Italy

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To Patrizia, Chiara and Rita: without them everything, including this book, would be meaningless.

Ferdinando

To my beloved Tiziana and Simone for their silent support and understanding during all the time I take away from them.

Fabio

To my wife and children, Laura, Giulio and Zeno. And to my patients, main reason and motivation for everyday's work and research

Nereo

Foreword 1

It might appear singular to devote a specific volume to something that one is confronted to in daily practice, scheduled as emergency, because the “topic,” or better say the pathology, is one of the most diffuse, one about which articles can be found in almost every specialized journal.

And now a book is published about this “topic,” undoubtedly the result of an explosive revolution as laparoscopy has been in surgical procedures.

It is an honor for me to introduce the impressive work done by my colleagues who have tried, after 25 years, to analyze all the current practices and trends in laparoscopic cholecystectomy, with the idea of giving the possibility to us, surgeons, to have all the actual evidences about this topic under hand.

Above this all, besides the evidence, they have never forgotten that the very core of all attempts and improvements is the patient, his/her satisfaction understood as quality of life.

Keeping in mind this core point, another subject must never be forgotten: the young surgeon in training. How to teach and how to learn, what to teach and what to learn, in order to train and grow an expert are main themes authors and editors have here well kept in mind.

This book has to be considered an ambitious work, which surely has reached its goals. As 25 years ago, yet another fuse in order to better understand what has been, and still is, is the revolution brought by laparoscopy in surgery.

Luigi Presenti
President of the ACOI
Rome, Italy

Foreword 2

More than a quarter of a century after Philippe Mouret's cholecystectomy and 20 years after the EAES Consensus Conference held in Madrid in 1994 of which I was a member, do we need a new consensus conference on the same topic and above all a text including all the proceedings of such a debate? Yes we do, absolutely.

Medicine, and surgery in particular, is in continuous evolution, and the more a technique is practiced and diffused, the more we need to evaluate its results, its indications, and its technique on the basis of evidence-based medicine. This is the reason why, in my role as the President of SICE, I endorsed with enthusiasm the proposal by Ferdinando Agresta to conduct a consensus on cholecystectomy, and with the same enthusiasm I am introducing to the surgical community this book that has the ambition to go into the details of all the subjects that have been addressed during the consensus.

Gallbladder pathologies are among the most frequent surgical indications in every department of surgery, and laparoscopic cholecystectomy is part of the daily practice of the vast majority of general surgeons; this book contains the scientific basis on which this activity is founded.

The huge success of laparoscopic surgery and its diffusion in the majority of hospitals all over the world does not prevent us to critically analyze every clinical issue in every related pathology; the growing importance of medicolegal issues in the everyday life of the surgeon is only one further reason that will guarantee to this thorough analysis the success that it deserves.

Mario Morino
President of the EAES and of the SICE
University of Turin, Turin, Italy

Preface

“Long Branch, NJ – United States, 1990. It must have been the end of March; I was a junior surgical resident, making rounds, as every day, on the many patients in the service. It looked like an ordinary day at Monmouth Medical Center; Dr Mark Schwartz, one of the attending surgeons of the Department, just had returned from Tennessee where he attended his training course on laparoscopic cholecystectomy. I will always remember what he stated that day: ‘Shortly, every cholecystectomy will be done by laparoscopy’, and also I will always remember that I thought he was joking! I knew that he and some other attending physicians from Monmouth went to Nashville, where two surgeons, Reddick and Olsen, were teaching this new technique, but I believed that it was some kind of niche surgery, almost an oddity, not something meant to replace the most common operation in abdominal surgery! How could Schwartz possibly think that taking out a gallbladder through a small tube could be attractive in the everyday practice?

Mouret, of course, had already performed his first laparoscopic cholecystectomy in France, and Perissat, few months earlier, had presented his video at the SAGES meeting, attracting a great deal of interest by the American surgeons, but I was completely unaware of that.

As a matter of fact, a few days later the first laparoscopic cholecystectomy was done at Monmouth Medical Center and many followed. By the summer of 1990, I had performed several laparoscopic operations as first surgeon.

A great excitement spread among surgeons and later that year we started approaching also appendectomies, hernias, colon resections and other operations by laparoscopy. The laparoscopic era had started!

Patients were attracted by the new technique: many came to New Jersey from NYC to have their gallbladder out “with the laser” (actually we often used a YAG laser for dissection in those days); we completed 563 cholecystectomies in 14 months [1].

The instruments we used in those days were quite simple, but had vivid, zoological, names: duckbill, big bird, whale. They were all straight tools, the curved instruments that could pass through a trocar cannula came later. We used to focus on aspects that seem ingenuous today: achieving a good angle of view with only straight tools and zero degree scopes, never letting go on a detached gallbladder for fear of losing it in the abdomen, assuring the cystic duct with two or three clips.

Almost a quarter of century after the times this memories by Dr. Campanile recalled, and after countless cholecystectomies, we have a much more sophisticated

equipment, and our indications have broadened to include almost all cases; alas, have we looked into the evidence that is actually available on laparoscopic cholecystectomy? How much of our practice is evidence driven, and how much is, instead, based on “tradition,” habit, or unproved personal preferences?

At the beginning, the explosion of laparoscopic cholecystectomy (and of laparoscopic surgery, in general) has been led by patient preference and surgeon enthusiasm, rather than rigorous scientific scrutiny. J.C. Hunter in an editorial, back in 2001, observed that “Reading’s Rule” applies [2]; in other words if two groups look very different, they probably are. As a matter of fact, asking a patient nowadays to be randomized between laparoscopic and open cholecystectomy might be a difficult task, as laparoscopy is clearly perceived as the best treatment and its advantages are widely known.

Hunter noticed that randomized trials on cholecystectomy did not really alter surgical practice [2]. Is this still true today, more than 25 years since the first laparoscopic cholecystectomy? It is a fact that even a meta-analysis proving equivalent outcomes between laparoscopic and small-incision cholecystectomy [3] did not have an impact on our everyday practice. Trials and scientific papers are difficult to construct and even more difficult to read and interpret. However, we must, at least, be aware of the available evidence if we want to make sound clinical choices and act according to the so-called good clinical practice.

The idea of gathering the updated evidence in this book about one of the most frequent operations that general surgeons practice all over the world has been the base for a national consensus conference held under the auspices of several international scientific societies. In this occasion, a panel of Italian experts has met to examine the literature, discuss the topics, and produce evidence-based recommendations, which could be worthwhile for the everyday clinical practice. The reader will find in this book the actual state of the art regarding laparoscopic cholecystectomy, divided into technical and medical issues that summarize the evidence about indications, operating strategy, safety, complications, new technologies, and comprehending details that are generally left to the personal inclination of the surgeon without a real scientific effort to find out what is best. The will to dedicate a chapter of the book to the patients, thanks to the presence in the authors’ panel of a foundation called “Chirurgo e Cittadino” (surgeon and citizen), opens a new perspective for the surgeon, where quality of life, examined from the patient’s point of view, is a mainstay for the evaluation and the validation both of a correct clinical behavior and the introduction of a new technology.

We hope that our effort will serve, at least, to stimulate the curiosity of surgeons and the improvement of what we do.

Ferdinando Agresta, MD
Fabio Cesare Campanile, MD, FACS
Nereo Vettoretto, MD

Addendum

The authors of this book adopted the following methodology for literature search and appraisal: the primary objective of the search was to identify all clinical relevant randomized controlled trials (RCT) and meta-analysis. Afterwards, other reports, population-based outcome studies, case series, and case reports have been also included. A systematic review based on comprehensive literature search has been made on PubMed according to the following criteria:

Limits Activated: Humans, Clinical Trial, Meta-Analysis, Practice Guideline, Randomized Controlled Trial, Review, English, All Adult: 19+ years, published in the last 20 years. Search details: [((“laparoscopy”[MeSH Terms] OR “laparoscopic”[All Fields]) AND (“condition-specific key word”[MeSH Terms] OR “ condition-specific key word”[All Fields])) AND (“humans”[MeSH Terms] AND (Clinical Trial[ptyp] OR Meta-Analysis[ptyp] OR Practice Guideline[ptyp] OR Randomized Controlled Trial[ptyp] OR Review[ptyp])) AND English[lang] AND “adult”[MeSH Terms] AND “1995/1/1”[PDat]: “2013/12/31”[PDat]]].

Then, limits regarding language, age, and publication date and study type have been removed, to search for additional papers. Cross-link control was performed with Google Scholar and Cochrane library databases. The full text paper was obtained for all relevant articles. The papers have been selected and classified on the basis of the highest level of evidence, design of the study, and most recent publication. The 2011 Oxford hierarchy for grading clinical studies according to levels of evidence (LoE) has been used. Studies containing severe methodological flaws have been downgraded as necessary. For each intervention, the validity and homogeneity of study results, effect sizes, safety, and economic consequences have been considered.

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