

ETHICON Endo-Surgery (Johnson & Johnson) tem a honra de patrocinar o livro *New Trends in Coloproctology*, editado pelo Dr. José Alfredo dos Reis Neto e equipe, que representa o trabalho de vários autores nacionais e internacionais, na área de coloproctologia, com temas atuais e de interesse multidisciplinar.

Acreditamos poder colaborar de alguma forma com este trabalho para a atualização científica da classe médica.

New Trends in Coloproctology

Copyright © 2000 by Livraria e Editora Revinter Ltda.

Todos os direitos reservados.
É expressamente proibida a reprodução
deste livro, no seu todo ou em parte,
por quaisquer meios, sem o consentimento
por escrito da Editora.

ISBN 85-7309-457-5

A precisão das indicações, as reações adversas e as relações de dosagem para as drogas citadas neste livro podem sofrer alterações. Solicitamos ao leitor que reveja a farmacologia dos medicamentos mencionados. Envidamos todos os esforços para nos mantermos fiéis ao material recebido. Caso, inadvertidamente, tenha havido alguma omissão, faremos os ajustes necessários, de bom grado, na primeira oportunidade.

Livraria e Editora REVINTER Ltda.
Rua do Matoso, 170 – Tijuca
20270-130 – Rio de Janeiro, RJ
Tel.: (21) 502-9988
Fax: (21) 502-6830
E-mail: livraria@revinter.com.br
<http://www.revinter.com.br>

Introduction

The presented book with the title *New Trends in Coloproctology* is exactly edited at the turn from the second to the third millennium.

This is a very important date, there the history shows us that the first rectal cancer operation were already performed beginning in 1870. Since that period, the discussion did not finish which method of operation should be preferred.

Until the Second World War the surgeons around the world advocated strongly for the abdomino-perineal extirpation. But this fixed trend changed then to the sphincter-saving rectum resection which were preferred in up to 80% and with sufficient results.

For this was responsible the improvement knowledge about the pathologic and histologic attitude of the cancer cells and their settling of close and distant metastases. Not only the technique of those operations was modified during this period, but also the preoperative diagnostics intensified and the postoperative treatment with radiation and chemotherapy if necessary too.

In these era of more than 100 years, also the knowledge and treatment of benign diseases like hemorrhoids, anal fistula, inflammatory bowel diseases and many others alterations within the lower intestinal tract could furthermore developed and enhanced.

All these recent changes and new scientific experiences to edit was the aim of this book.

Therefore it is a great merit of my friend Jose Alfredo Reis Neto, MD, São Paulo, and his co-workers to put together all the chapters.

We have to thank them all for their intention. In my opinion it will certainly be an enrichment of the scientific books about this topic.

Leo Kronberger

Contributors

A. IDERNE, M.D.

Department of General and Digestive Surgery (Pr Ch. Meyer)
Strasbourg University Hospital, France

A. REALIS LUS, M.D.

Dep. of General Surgery and Liver transplantation University of Bari, Italy

ABEL MORALES-DIAZ, M.D.

Mexico

AFONSO H.S. E SOUSA JR., M.D.

Hospital das Clínicas, USP, São Paulo, Brazil

AHMED SHAFIK, M.D, PH.D.

Professor and Chairman, Department of Surgery and Experimental Research,
Faculty of Medicine, Cairo University, Cairo, Egypt

ALFREDO GRAZIANO, M.D.

Hospital de Gastroenterología Dr. Carlos B. Udaondo, Buenos Aires, Argentina

ANGELITA HABR GAMA, M.D., PH.D.

Head Professor of Coloproctology, USP, São Paulo, Brazil
Ex-President of Brazilian Society of Coloproctology
Ex-President of Latin American Association of Coloproctology

BRUNO COLA, M.D., PROF.

Direttore Servizio di Chirurgia d'Urgenza
Cattedra di Semeiotica e Metodologia Chirurgica
Bologna University, Italy

BRUNO ROCHE, M.D.

Outpatient Clinic for Surgery, University Hospitals of Geneva, Switzerland

CARLOS PIZARRO MELLADO, M.D.

Los Dominicos Clinic, Santiago, Chile

CHRISTIAN MEYER, M.D.

Department of General and Digestive Surgery (Pr Ch. Meyer)
Strasbourg University Hospital, France

D. F. ALTOMARE, M.D.

Dep. of General Surgery and Liver Transplantation, University of Bari, Italy
Institute of Surgery University Tor Vergata, Rome, Colorectal Unit Riccione, Italy

DOMINGOS LOURENÇO PENNA LACOMBE, M.D.

Head Professor of Coloproctology, UFM, Rio de Janeiro, Brazil

EDUARDO J. DONNELLY, M.D., M.A.A.C., F.R.S.M.

British Hospital, Buenos Aires, Argentina

ERICO ERNESTO PRETZEL FILLMAN, M.D.

Head Professor of Coloproctology at PUC-RS, Brazil
Ex-President of the Brazilian Society of Coloproctology

EZIO GANIO, M.D.

Dept. of General Surgery Colorectal Eporediensis Centre, ASL9 Ivrea, Italy

F. GABRIELLI, M.D.

Institute of General Surgery, University of Milan, Italy

FÁBIO CAMPOS, M.D.

Hospital das Clínicas, USP, São Paulo, Brazil

FARSHID ARAGHIZADEH, M.D.

New Orleans, LA, USA

FERNANDO CORDEIRO, M.D., PH.D.

Head Professor of Surgery, PUC – Campinas, Brazil

FIDEL RUIZ HEALY, M.D.

Professor of Coloproctology, Mexico

FLÁVIO ANTONIO QUILICI, M.D., PH.D., F.B.S.C.P.

Head Professor of Coloproctology, Department of Surgery, PUC-Campinas, Brazil
President of the Brazilian Society of Coloproctology

FRANCISCO SÉRGIO PINHEIRO REGADAS, M.D., PH.D.

Professor of Surgery, Department of Surgery, Federal University of Ceará
Master in Surgery, UNIFESP, SP
Chief of Coloproctology at Hospital das Clínicas, UFC, Ceará, Brazil

FRANCK LAZORTHES, M.D.

Department of General and Digestive Surgery, Purpan Hospital, Toulouse, France

G. CLERICO, M.D.

Dep. of General Surgery Colorectal Eporediensis Centre, ASL9 Ivrea, Italy

G. MILITO, M.D.

Institute of Surgery University Tor Vergata, Rome, Italy

GABRIELA A. GHITULESCU, M.D., F.R.C.S.

Fellow, Colon and Rectal Surgery, Lehigh Valley Hospital, Penn State University, Allentown, Pennsylvania, USA

GERALDO MAGELA GOMES DA CRUZ, M.D., PH.D.

Head Professor of Coloproctology, Faculdade de Ciências Médicas de Minas Gerais (School of Medical Sciences of Minas Gerais)

Chairman, Faculdade de Ciências Médicas de Minas Gerais (School of Medical Sciences of Minas Gerais)

Chief Department of Coloproctology, Santa Casa, Belo Horizonte

Ex-President of the Brazilian Society of Coloproctology, Brazil

GRAHAM L. NEWSTEAD, M.D.

Chairman Colorectal Surgery, Prince of Wales Hospital, University of New South Wales, Sydney, Australia

GUILLERMO MASCIANGIOLI, M.D.

Hospital de Gastroenterología Dr. Carlos B. Udaondo, Buenos Aires, Argentina

HÉLIO MOREIRA, M.D., PH. D.

Head of the Service of Coloproctology, University of Goiás School of Medicine, Brazil

HERAND ABCARIAN, M.D.

Turi Josefsen Professor

Head, Department of Surgery, University of Illinois, Chicago, USA

IGOR V. PRAVOSUDOV, M.D.

Petrov Research Institute of Oncology, St. Petersburg, Russia

INDRU T. KHUBCHANDANI, M.D., F.A.C.S., F.R.C.S.

Professor of Surgery, Penn State University at Hershey, Allentown, Pennsylvania, USA

IRA J. KODNER, M.D.

Solon & Bettie Gershman Professor of Colon & Rectal Surgery

Washington University School of Medicine, St. Louis, MO, USA

JAYME VITAL DOS SANTOS SOUZA, M.D.

Diretor do Programa de Residência Médica em Cirurgia Colorretal do Hospital Roberto Santos, Salvador, Bahia

Chefe do Serviço de Cirurgia Colorretal do Hospital Central Roberto Santos, Salvador, Bahia

Professor do Departamento de Cirurgia da Faculdade de Medicina da Universidade Federal da Bahia, Brazil

JOÃO DE AGUIAR PUPO NETO, M.D.

Professor of Coloproctology, UFRJ, Brazil

JOAQUIM GAMA-RODRIGUES, M.D., PH.D.

Head Professor of Digestive Surgery, USP, São Paulo, Brazil

JOAQUIM SIMÕES NETO, M.D., A.B.S.C.P.

Coloproctologist, Clínica Reis Neto, Campinas, Brazil

JOHN BYRON GATHRIGHT, M.D.

Ex-President of the American Society of Colon & Rectal Surgeons
Head of Coloproctology, New Orleans, LA, USA

JOSÉ ALFREDO DOS REIS JUNIOR, M.D., F.B.S.C.P.

Master in Surgery, UNIFESP, SP
Chief of Digestive Laparoscopic Surgery, HMCP, Campinas, Brazil

JOSÉ MARCIO N. JORGE, M.D., F.A.S. C.R.S., F.R.C.S. ED.

Department of Gastroenterologic Surgery, Hospital das Clínicas, University of São Paulo Medical School, São Paulo, Brazil

JOSÉ REINAM RAMOS, M.D., M.S., T.C.B.C., T.S.B.C.P.

Master in Surgery, University of Illinois at Chicago
Research Associate, University of Illinois
Head Surgeon of Coloproctology at Hospital do Andaraí, RJ, Brazil

JUVENAL RICARDO NAVARRO GÓES, M.D.

Assistant Professor, Dept. of Surgery, Gastrointestinal Surgery, Group of Coloproctology, FCM – Universidade Estadual de Campinas, UNICAMP, Brazil

MAÍSA PRANDO DE MOURA REIS, M.D.

Endoscopy, Clínica Reis Neto, Brazil.

MARC-CLAUDE MARTI, M.D.

Outpatient Clinic for Surgery
University Hospitals of Geneva, Switzerland

MARIO C. SALOMÓN, M.D.

British Hospital, Buenos Aires, Argentina

MARIO TROMPETTO, M.D., M.A.A.C., M.A.S.C.R.S.

Dept. of General Surgery Colorectal Eporediensis Centre, ASL9 Ivrea, Italy

MAURO PINHO, M.D.

Procto Clínica, Joinville, Brazil

MIGUEL A. RODRIGUEZ-BIGAS, M.D.

Colorectal Surgery Service, State University of New York at Buffalo, Buffalo, NY, USA

NICHOLAS J. LYGIDAKIS, M.D., PH.D., F.A.C.S.

Athens Medical Center, University of Athens, Greece

ODORINO KAGOHARA, M.D., F.B.S.C.P.

Coloproctologist, Clínica Reis Neto, Campinas, Brazil

PEDRO MORGADO NIEVES, M.D.

Professor of Anatomy, Faculty of Medicine, Universidad Central de Venezuela,
Caracas, Venezuela

President elected of International Society of University Colon and Rectal Surgeons

PEDRO M. SANTINHO B. DE SOUZA, M.D.

Hospital das Clínicas, USP, São Paulo, Brazil

PIERLUIGI BERTI, M.D.

Dipartimento di Scienze Chirurgiche e Anestesiologiche
Servizio di Chirurgia d'Urgenza, Bologna University, Italy

RENÉ GANSL, M.D.

Hospital das Clínicas, São Paulo, Brazil

REZA A. GAMAGAMI, M.D.

Department of General and Digestive Surgery,
Purpan Hospital, Toulouse, France

ROBERTO BERGAMASCHI, M.D., PH.D.

Professor of Clinica Surgery, University of Bergen
National Center for Advanced Laparoscopic Surgery, Trondheim, Norway

ROBERTO CORINALDESI, M.D.

Dipartimento di Medicina Interna, Bologna University, Italy

ROBERTO DE GIORGIO, M.D.

Dipartimento di Medicina Interna, Bologna University, Italy

ROBERT J. MYERSON, M.D., PH.D.

Professor of Radiology
Washington University School of Medicine
St. Louis, MO, USA

ROBERT W. BEART JR., M.D.

Professor of Surgery, University of Southern California, CA, USA

S. ROHR, M.D.

Department of General and Digestive Surgery (Pr Ch. Meyer)
Strasbourg University Hospital, France

SHOZO BABA, M.D.

Second Department of Surgery, Hamamatsu University School of Medicine,
Handa-cho, Hamamatsu, Japan

SERGIO W. LARACH, M.D.

Director Orlando Regional Healthcare
Colon & Rectal Fellowship Program
Associate Professor of Surgery, University of Florida, College of Medicine, Orlando,
FL, USA

SILVIO CIQUINI, M.D., F.B.S.C.P

Assistant Professor of Surgery, PUC–Campinas, Brazil

SINARA MÔNICA LEITE MIRANDA, M.D.

Assistant Professor of Coloproctology, Faculdade de Ciências Médicas de Minas
Gerais (School of Medical Sciences of Minas Gerais)
Assistant Department of Coloproctology, Santa Casa, Belo Horizonte, Brazil

STHELA MARIA MURAD REGADAS, M.D.

Fortaleza, Ceará, Brazil

STEVEN D. WEXNER, M.D., F.A.C.S

Chairman, Colorectal Surgery Department
Chief of Staff Cleveland Clinic Florida, Fort Lauderdale, Florida
Professor of Surgery, Ohio State Health Sciences Center at Cleveland Clinic Florida
Clinical Professor , Department of Surgery, Division of Surgery,
University of South Florida College of Medicine
Fort Lauderdale, Florida, USA

TETSUICHIRO MUTO, M.D., PH.D.

Cancer Institute Hospital
The Department of Surgery, The University of Tokyo, Tokyo, Japan

TOSHIAKI WATANABE, M.D., PH.D.

Cancer Institute Hospital
The Department of Surgery, The University of Tokyo, Tokyo, Japan

ULYSSES RIBEIRO JR., M.D.

Hospital das Clínicas, USP, São Paulo, Brazil

WLADIMIR NADALIN, M.D.

Hospital das Clínicas, USP, São Paulo, Brazil

Contents

- 1** Surgical Anatomy of the Anal Canal 1
Ahmed Shafik
- 2** Evaluation of Functional Studies on Anorectal Diseases 21
Steven D. Wexner, José Marcio N. Jorge
- 3** Genetics 45
 - 3-1** The Genetics of Colon and Rectal Cancer 47
Gabriela A. Ghitulescu, Indru T. Khubchandani
 - 3-2** Genetics, Molecular Biology and Colorectal Cancer 57
Mauro Pinho
 - 3-3** Alternative Genetic Pathways in Colorectal Carcinogenesis 77
Shozo Baba, Miguel A. Rodriguez-Bigas
- 4** Urgency 89
 - 4-1** Large Bowel Obstruction 91
Geraldo Magela Gomes da Cruz, Sinara Mônica Leite Miranda
 - 4-2** Malignant Intestinal Obstruction Secondary to Colon Cancer 135
Christian Meyer, A. Iderne, S. Rohr
 - 4-3** Acute Colonic Pseudo-Obstruction: Clinical Features and Treatment 143
Bruno Cola, Pierluigi Berti, Roberto de Giorgio, Roberto Corinaldesi
 - 4-4** Anorectal Trauma 157
Pedro Morgado Nieves
- 5** Anesthesia in Proctology 161
Marc-Claude Marti, Bruno Roche
- 6** Benign Anal Disease 173
 - 6-1** Closed Hemorrhoidectomy 175
John Byron Gathright, Farshid Araghizadeh
 - 6-2** Semiclosed Hemorrhoidectomy 191
Fidel Ruiz-Healy, Abel Morales-Díaz
 - 6-3** Ambulatory Treatment of Benign Anal Diseases 197
Graham L. Newstead

6-4 Stapled Haemorrhoidectomy 207
*Ezio Ganio, A. Realis Lus, Mario Trompetto, G. Clerico,
D.F. Altomare, F. Gabrielli, G. Milito*

6-5 Anal Fissure 219
Erico Ernesto Pretzel Fillmann

6-6 Anal Stenosis 235
*José Alfredo dos Reis Neto, Flávio Antonio Quilici,
Fernando Cordeiro, José Alfredo dos Reis Junior*

6-7 Anal Fistulas 243
Herand Abcarian

7 Diverticular Disease of the Colon 253

7-1 Physiopathology and Etiopathogenesis 255
José Alfredo dos Reis Neto, José Alfredo dos Reis Junior

7-2 Acute Non Complicated Diverticulitis - Elective Surgery 273
Eduardo J. Donnelly, Mario C. Salomón

7-3 Surgical Aspects of Uncomplicated Disease of the Sigmoid
Colon 283
Roberto Bergamaschi

8 Inflammatory Bowel Disease 293

8-1 Ileal Pouch: Complications and Treatment 295
Alfredo Graziano, Guillermo Masciangioli

8-2 Microscopic Colitis 317
Maísa Prando de Moura Reis

9 Acquired Megacolon 327

9-1 Acquired Megacolon 329
José Alfredo dos Reis Neto, José Alfredo dos Reis Junior

9-2 Laparoscopic Colectomy for Megacolon 335
Jayme Vital dos Santos Souza

10 Cancer 337

10-1 Colorectal Flat Adenoma: Clinicopathologic Features and Clinical
Signification 339
Tetsuichiro Muto, Toshiaki Watanabe

10-2 Early Colorectal Cancer 351
Flávio Antonio Quilici

10-3 Present-Day Tendencies in the Diagnosis and Treatment of Colorectal
Cancer 359
Igor V. Pravosudov

- 10-4** Sphincter Preservation for Distal Rectal Carcinoma 369
Franck Lazorthes, Reza A. Gamagami
- 10-5** Ileal Pouch-Anal Anastomosis: Double Staple or Endoanal Handsewn Anastomosis? 379
Juvenal Ricardo Navarro Góes
- 10-6** Preoperative Radiation Therapy for Rectal Cancer 385
Ira J. Kodner, Robert J. Myerson
- 10-7** Long-Term Results of Preoperative Radiotherapy for Cancer of the Lower Rectum 401
José Alfredo dos Reis Neto, Flávio Antonio Quilici, Fernando Cordeiro, Silvio Ciquini, José Alfredo dos Reis Junior, Odorino Kagohara, Joaquim Simões Neto
- 10-8** Follow-Up of Patients Submitted to Surgery of Colorectal Cancer 411
Hélio Moreira
- 10-9** Low Rectal Cancer: Impact of Pre-Operative Radiation and Chemotherapy on Surgical Treatment. "Hospital das Clínicas" of the University of São Paulo Medical School Experience 423
Angelita Habr Gama, Pedro M. Santinho B. de Souza, Ulysses Ribeiro Jr., Fábio Campos, Afonso H.S. e Sousa Jr., Wladimir Nadalin, René Gansl, Joaquim Gama-Rodrigues.
- 10-10** Two-Stage Liver Surgery for the Management of Advanced Metastatic Liver Disease 431
Nicholas J. Lygidakis

11 Laparoscopy 455

- 11-1** Laparoscopic Abdominoperineal Resection 457
José Reinam Ramos
- 11-2** Laparoscopic Hand Assisted Surgery – Comparative Study for Treatment of Rectum Cancer 473
João de Aguiar Pupo Neto, Domingos Lourenço Penna Lacombe
- 11-3** Rectal Prolapse 489
Francisco Sérgio Pinheiro Regadas, Sthela Maria Murad Regadas
- 11-4** Laparoscopic Total Mesorectum Excision 497
José Alfredo dos Reis Neto, Fernando Cordeiro, José Alfredo dos Reis Junior, Odorino Kagohara, Joaquim Simões Neto
- 11-5** Laparoscopic Complications in Colorectal Surgery 505
Sergio W. Larach
- 11-6** Laparoscopic Low Colorectal Anastomosis 513
Carlos Pizarro Mellado
- 11-7** Laparoscopic Colectomy 519
Robert W. Beart, Jr.