

ARCHIVES OF SURGERY

JANUARY 2003 VOLUME 138, NUMBER 1 PAGES 1-120

COMMENTARY

- Mayo Clinic General Surgery Training Legacy** 7
David R. Farley, MD;
Clive S. Grant, MD

ORIGINAL ARTICLES

- Hypertonic Saline Infusion for Pulmonary Injury Due to Ischemia-Reperfusion** 9
Conor J. Shields, MB, AFRCSE;
Desmond C. Winter, MD, FRCSE;
Brian J. Manning, MB, AFRCSE;
Jiang Huai Wang, PhD;
William O. Kirwan, MCh, FRCSE;
H. Paul Redmond, BSc, MCh, FRCSE

- Isolated Limb Perfusion: Distinct Tourniquet and Tumor Necrosis Factor Effects on the Early Hemodynamic Response** 17
Dimitri Christoforidis, MD; Pierre-Guy Chassot, MD;
François Mosimann, MD; Danielle Lienard, MD;
Flavia Brunstein, MD; Dritan Bejko, MD;
Ferdj J. Lejeune, MD; René Chiolerio, MD

- Factors Predicting Survival After Intraperitoneal Hyperthermic Chemotherapy With Mitomycin C After Cytoreductive Surgery for Patients With Peritoneal Carcinomatosis** 26
Perry Shen, MD; Edward A. Levine, MD;
Jason Hall, MD; Doug Case, PhD; Greg Russell, MS;
Ronald Fleming, PharmD; Richard McQuellon, PhD;
Kim R. Geisinger, MD; Brian W. Loggie, MD

- Decrease of Collagen Deposition in Wound Repair in Type 1 Diabetes Independent of Glycemic Control** 34
Eva Black, MD; Jette Vibe-Petersen, MD;
Lars N. Jorgensen, MD; Søren M. Madsen, PhD;
Magnus S. Ågren, DMSc; Per E. Holstein, MD, DMSc;
Hans Perrild, MD; Finn Gottrup, MD, DMSc

- Postoperative Complication Rates After Hepatic Resection in Maryland Hospitals** 41
Justin B. Dimick, MD; Peter J. Pronovost, MD, PhD;
John A. Cowan, Jr, MD; Pamela A. Lipsett, MD

- Patient Outcomes in Academic Medical Centers: Influence of Fellowship Programs and In-house On-Call Attending Surgeon** 47
Saman Arbabi, MD, MPH;
Gregory J. Jurkovich, MD;
Frederick P. Rivara, MD, MPH;
Avery B. Nathens, MD, PhD, MPH;
Maria Moore, MPH; Gerald B. Demarest, MD;
Ronald V. Maier, MD

- Invited Critique** 51
David B. Hoyt, MD

- Axillary Dissection Is Not Required for All Patients With Breast Cancer and Positive Sentinel Nodes** 52
J. Michael Guenther, MD; Nora M. Hansen, MD;
L. Andrew DiFronzo, MD; Armando E. Giuliano, MD;
J. Craig Collins, MD; Baiba L. Grube, MD;
Theodore X. O'Connell, MD

CLINICAL OBSERVATION

- Presentation of Degos Syndrome as Acute Small-Bowel Perforation** 57
Francisco Miguel González Valverde, MD;
Francisco Menarguez Pina, MD; Jose Antonio Ruiz, MD;
Maria Jesus Gómez Ramos, MD;
Francisco Mauri Barbera, MD; Paloma Luri Prieto, MD;
Jose Antonio García Marcilla, MD;
Jose Luis Vázquez Rojas, MD

SPECIAL ARTICLE

- Trials and Tribulations: Current Challenges in Conducting Clinical Trials** 59
Lillian S. Kao, MD; Beth C. Aaron, RN;
E. Patchen Dellinger, MD

ORIGINAL ARTICLE

- High Isotope Counts and Sentinel Node Positivity in Patients With Melanoma** 63
Ira A. Jacobs, MD; C. K. Chang, MD;
Tapas K. DasGupta, MD, PhD, DSc;
George Salti, MD.

ARCHIVES OF SURGERY

Invited Critique 67
Douglas S. Tyler, MD; Hilliard F. Seigler, MD

REVIEW ARTICLE

The Spectrum of Pneumatosis Intestinalis 68
Shawn D. St. Peter, MD; Maher A. Abbas, MD; Keith A. Kelly, MD

ORIGINAL ARTICLES

Laparoscopic vs Conventional Ileocolectomy for Primary Crohn Disease 76
Gregg Shore, MD; Quintin H. Gonzalez, MD; Anthony Bondora, MPH; Selwyn M. Vickers, MD

Adenocarcinoma of the Third and Fourth Portions of the Duodenum: Results of Surgical Treatment 80
Adriano Tocchi, MD; Gianluca Mazzoni, MD; Francesco Puma, MD; Michelangelo Miccini, MD; Diletta Cassini, MD; Elia Bettelli, MD; Sandro Tagliacozzo, MD

Hepatic Resection for Combined Hepatocellular and Cholangiocarcinoma 86
Chi-Leung Liu, MS, FRCS(Edin); Sheung-Tat Fan, MD, MS, FRCS(Glasg), FRCS(Edin); Chung-Mau Lo, MS, FRACS, FRCS(Edin); Irene Oi-Lin Ng, MD, FRCPath(UK); Chi-Ming Lam, MS, FRCS(Edin); Ronnie Tung-Ping Poon, MS, FRCS(Edin); John Wong, PhD, FRACS, FRCS(Edin)

REVIEW ARTICLE

Breast Cancer in Pregnancy: A Literature Review 91
Junda C. Woo, MD; Taechin Yu, MD; Thelma C. Hurd, MD

Invited Critique 99
Patricia J. Numann, MD

ORIGINAL ARTICLE

Hepatic Resection for Bilobar Hepatocellular Carcinoma: Is it Justified? 100
Chi-Leung Liu, MS, FRCS; Sheung-Tat Fan, MS, MD, FRCS; Chung-Mau Lo, MS, FRACS, FRCS; Irene Oi-Lin Ng, MD, FRCPath; Ronnie Tung-Ping Poon, MS, FRCS; John Wong, PhD, FRACS, FRCS

SPECIAL ARTICLE

Surgery in Panama 105
Luis S. Mon Barrios, FACS; Rafael Andrade Alegre, FACS

SPECIAL FEATURE

Image of the Month 109
Ruth L. Bush, MD; Charles C. Bianco, MD

CORRESPONDENCE

The Clinical and Economic Correlates of Nonspecific Abdominal Pain Mismanaged by Appendectomy 111
Basil J. Ammori, FRCS, MD

In Reply 111
David R. Flum, MD, MPH

Zenker Diverticulum 111
Ibrahim M. Ibrahim, MD

DEPARTMENTS

Reviewers for 2002 5

This Month in Archives of Surgery 6

Correction 8

CME Announcement 14

Surgical Anatomy 75

Calendar 112

Physician Marketplace 114

Index to Advertisers 119

Contact Information 120

Instructions for authors and the author and subject indexes for 2002 are available on our Web site: <http://www.archsurg.com>. If you do not have access to the Web, contact Margaret Kosiba at (510) 437-4965.

ARCHIVES OF SURGERY

Mission Statement: To promote the art and science of surgery by publishing relevant peer-reviewed clinical and basic science information to assist the surgeon in optimizing patient care. The *Archives of Surgery* will also serve as a forum for the discussion of issues that involve ethics, teaching, surgical history, and socioeconomic concerns.

Approved by the Editorial Board, *Archives of Surgery*, July 19, 1996.

Editor: **Claude H. Organ, Jr, MD**
University of California—San Francisco,
East Bay
1411 E 31st St
Oakland, CA 94602
archivesofsurgery@earthlink.net

Associate Editor, CME Section Editor:
Gerald W. Peskin, MD Oakland, Calif

Section Editor, Operative Techniques:
Jack Pickleman, MD Chicago, Ill

Web Editor:
Grace S. Rozycki, MD Atlanta, Ga

Editorial Assistant:
Margaret M. Kosiba Emeryville, Calif
Phone: (510) 437-4940
Fax: (510) 534-5639
archivesofsurgery@earthlink.net

International Advisory Board:

Licinio Angelini, MD Rome, Italy
Leigh W. Delbridge, MD Sydney, NSW, Australia
S. T. Fan, MB, BS, MS Hong Kong, China
Ch. Herfarth, MD Heidelberg, Germany
Kazutomo Inoue, MD Kyoto, Japan
Jin-Pok Kim, MD Seoul, Korea
Raj Mohan Nambiar, MBBS Singapore
Hector Orozco, MD Mexico City, Mexico
Bernard F. Ribeiro, MB, BS, FRCS London, England
Manuel Trias, MD, PhD Barcelona, Spain

Editorial Board:

Timothy R. Billiar, MD Pittsburgh, Pa
Richard J. Bold, MD Sacramento, Calif
Jo Buyske, MD Philadelphia, Pa
Laurence Y. Cheung, MD Kansas City, Kan
Karen E. Deveney, MD Portland, Ore
Susan Galandiuk, MD Louisville, Ky
Clive S. Grant, MD Rochester, Minn
Alden H. Harken, MD Denver, Colo
J. Michael Henderson, MD Cleveland, Ohio
Eddie L. Hoover, MD Buffalo, NY
Joseph A. Ignatius, MD Santa Barbara, Calif

Former Editors

Dean Lewis, MD 1920-1940
Waltman Walters, MD 1941-1942; 1946-1961
Lester Dragstedt, MD 1943-1945
J. Garrett Allen, MD 1962-1969
Richard Warren, MD 1970-1976
Arthur Baue, MD 1977-1988

Danny O. Jacobs, MD, MPH Omaha, Neb
Stephen F. Lowry, MD New Brunswick, NJ
Ronald V. Maier, MD Seattle, Wash
David S. Mulder, MD Montreal, Quebec
Thomas A. Mustoe, MD Chicago, Ill
J. Patrick O'Leary, MD New Orleans, La
Mark L. Silen, MD, MBA Portland, Ore
Bruce E. Stabile, MD Torrance, Calif
Robert W. Thompson, MD St Louis, Mo
Steven D. Wexner, MD Fort Lauderdale, Fla
Michael E. Zenilman, MD Brooklyn, NY

Publication Staff

Offices: 515 N State St, Chicago, IL 60610

Catherine D. DeAngelis, MD, MPH
Editor in Chief,
Scientific Publications & Multimedia Applications
Cheryl Iverson Managing Editor

Editorial Processing Department

Department Director: Paula Giltman
Copyediting Manager: Brenda Gregoline
Freelance Copyediting Manager: Diane L. Cannon
Freelance Copyediting Coordinators: Lauren B. Fischer, Connie Manno
Editorial Systems Managers: Paul Frank, Monica Mungle
Systems Programmer/Internet Specialist: J. D. Neff
Senior Copy Editor: Vickey Golden
Copy Editors: Juana N. Llorens, Rachel Novickas,
Cheryl L. Tobey, Rachel Bodzin Young
Editorial Assistant: Wanda Hill

Scientific Publications & Multimedia Applications

Assistant to the Editor: Helga Fritz

Scientific Online Resources

Director: Margaret Winker, MD
Electronic Media Department Director: Michelle Kurzynski
Associate Web Editors: Katherine Behar, Erin M. Giannini
Web Office Manager: Marla A. Hall

Publishing & Business Staff

Group Publisher: Nawin Gupta, PhD
VP Office Staff: James Clinton, Geoffrey Flick, Terri Hanley,
Maureen Archey, Anna Goins
International Business and Development:
William Fox (director), Norman Frankel, PhD, Rhonda Bailey,
Millette Jackson-Bates
Online Business and CME: Bonnie Chi-Lum, MD, MPH (publisher)

Circulation and Classified Advertising Sales

Director: Curt Reilly
Managers: Vida Damijonaitis, Kim Krebs, Thalia Moss
Staff: Kathy Braun, Ana Dirksen, Sandra Garzon,
Christine Hearne, Amy Postlewait, Trina Rizzo,
Barbara Van Wagner

Advertising Sales and Marketing

Director: Peter J. Murphy
Sales Representatives: John P. Cahill
Marketing Services: Nancy Bell
Staff: Victoria Anne Acot, Susan Lovenberg, Mirna Monal,
Debra Ann Sardo

Reprints

Director: Mark Kuhns
Staff: Wanda Bartolotta, Joseph Reakash

Publishing Operations Division

Division Director: Vanessa Hayden
Directors: Karen Adams-Taylor, Paul Gaseicki,
Sue Sherrill
Managers: David Antos, Karen Branham, Debbie Camp,
Diane Darnell, Karl Elvin, Betty Frigerio, Linda Gardner,
Mary Ellen Johnston, Mark Matura, Michael McGraw,
Phil O'Leary, Susan Price, Charl Richey, Alfred Tomaselli,
Carmela Ware
Advertising and Production Services: Linda Alexander,
LaWanda Brown, Susan Chiara, Mary Anne Donley,
Euwanaha Joiner-Smith, Brian McCartney,
Sean O'Donnell, Noemi Olmo, Carole Piszker,
Sarah Powell, Denise Steinhauser, Ellen Yoshihara
Circulation Processing: Bernadette Bauer, Julie Burton,
Rosa Eng, Felicia Kyles, Lawrence Majkszak,
Kathryn Osten
Composition and New Media: Rebecca Aiken,
Clifford Barrett, Gail Barrett, Regina Brownlee,
Brenda Chandler-Grayer, Rowena Dagang,
Amy Evers, Mary Ann Kuranda, Sandra Lopez,
John Marcinek, Bruce McGregor, La son Diggs Sledge,
Angela Smits
Graphics: Joe Amft, Fred Furtner, Carolyn Hall,
Maria Kowalkowski, Chris Meyer, JoAnne Weiskopf
Proofreading: Carol Joy Farrell, Daniel James,
Judith A. Leterskis, Teresa H. Omiotek,
Barbara Wojtowicz, Agnes A. Zarkadas

JAMA
&
ARCHIVES
JOURNALS
American Medical Association

All articles published, including editorials, letters, and book reviews, represent the opinions of the authors and do not reflect the policy of the American Medical Association, the Editorial Board, or the institution with which the author is affiliated, unless this is clearly specified.

Copyright 2003 by the American Medical Association. All rights reserved. Reproduction without permission is prohibited.

AMA Executives

Michael D. Maves, MD, MBA
Executive Vice President, Chief Executive Officer
Robert A. Musacchio, PhD
Senior Vice President, Publishing & Business Services

ARCHIVES OF SURGERY

CONTACT INFORMATION

EDITORIAL OFFICE

Manuscript Submission: All manuscripts should be sent to Editor, *Archives of Surgery*, c/o Department of Surgery, University of California–San Francisco, East Bay, 1411 E 31st St, Oakland, CA 94602, USA; short manuscripts without tables or figures, letters to the editor, and book reviews may be sent electronically to archivesofsurgery@earthlink.net

Instructions for Authors: Available online at www.archsurg.com.

CONSORTIUM OF AMA JOURNALS

The *Archives of Surgery* is a member of the consortium of AMA journals listed below.

The Journal of the American Medical Association (JAMA)
Archives of Dermatology
Archives of Facial Plastic Surgery
Archives of General Psychiatry
Archives of Internal Medicine
Archives of Neurology

Archives of Ophthalmology
Archives of Otolaryngology–
Head & Neck Surgery
Archives of Pediatrics
& Adolescent Medicine
Archives of Surgery

JAMA/ARCHIVES MEDIA RELATIONS

Jann Ingmire; phone: (312) 464-5262; e-mail: jamaarchmedia@ama-assn.org.

ARCHIVES OF SURGERY ONLINE

Archives of Surgery is available online at www.archsurg.com.

REPRINTS

Author and Educational Reprints: Journal Products coordinator: Joseph R. Rehash; phone: (312) 464-4594; fax: (312) 464-4849. Orders of individual articles must be for a minimum of 100 reprints.

Commercial Reprints: Wanda Bartolotta; phone: (718) 946-7424; fax: (718) 946-7372; e-mail: Wanda_Bartolotta@ama-assn.org. Orders of individual articles must be for a minimum of 300 reprints.

PERMISSIONS

Information about obtaining permission to republish, reprint, or adapt material published in *Archives of Surgery* is available from Rhonda Bailey; phone: (312) 464-2513; fax: (312) 464-5835; e-mail: Rhonda_Bailey@ama-assn.org.

DOCUMENT DELIVERY

Copies of individual articles are available online at www.archsurg.com and from the following: Infotrieve, phone: (800) 422-4633; fax: (310) 208-5971; URL: www.infotrieve.com; e-mail: orders@infotrieve.com; Institute for Scientific Information (ISI), phone: (800) 603-4367; fax: (856) 787-1679; URL: www.isidoc.com; e-mail: service@isidoc.com; Dialog Information Services; Proquest; Ovid Technologies, Inc; and EBSCO.

The ARCHIVES OF SURGERY (ISSN 0004-0010) is published monthly by the American Medical Association, 515 N State St, Chicago, IL 60610-0946, and is an official publication of the Association. The ARCHIVES OF SURGERY reaches more than 21 500 readers in over 71 countries each month. Periodicals postage paid at Chicago, IL, and at additional mailing offices. GST registration number 12622 5556 RT. Canada Post International Publications Mail (Canadian Distribution) Sales Agreement No. 319309. Printed in the USA. Official publication of the New England Surgical Society, Pacific Coast Surgical Association, and Western Surgical Association.

ADVERTISING

Information about advertising is available from the following sales representatives and online at www.archsurg.com.

Account Manager: John P. Cahill (nationally); phone: (708) 352-0322

Manager, Marketing Services: Nancy Bell; phone: (973) 263-9191 ext 216

Advertising Office: J. P. Cahill & Associates, 341 S Waiola Avenue, La Grange, IL 60525; phone: (708) 352-0322

Classified Advertising: Thalia Moss, 515 N State St, Chicago, IL 60610; phone: (312) 464-4169; e-mail: Thalia_Moss@ama-assn.org.

ADVERTISING PRINCIPLES

Advertisements in this issue have been reviewed to comply with the principles governing advertising in AMA publications. A copy of these principles is available on request and online at www.archsurg.com. The appearance of advertising in AMA publications is not an AMA guarantee or endorsement of the product or the claims made for the product by the manufacturer.

ADDRESS CHANGES

Postmaster, send all address changes to *Archives of Surgery*, c/o the AMA Unified Service Center, American Medical Association, 515 N State St, Chicago, IL 60610. Notification of address changes must be made at least 6 weeks in advance; include both old and new addresses and a recent mailing label if sending via mail.

SUBSCRIPTION RATES AND SERVICE

Subscription rates are shown in the table below. For service in the US and Americas, inquiries on pricing, address changes, missing issues, subscription billing, subscription renewal, and back issues, contact the AMA Unified Service Center, 24 hours a day, 7 days a week.

AMA members: phone: (800) 262-3211; e-mail: msc@ama-assn.org. **Other physicians and nonphysician customers, including subscription agents:** phone: (800) 262-2350 or (312) 670-7827; fax: (312) 464-5831; e-mail: ama-subs@ama-assn.org. **Mail inquiries:** Unified Service Center, American Medical Association, PO Box 10946, Chicago, IL 60610-0946. For subscribers with mailing addresses outside the US and the Americas: Contact JAMA/Archives Journals, American Medical Association, Tower House, Sovereign Park, Market Harborough, Leicestershire LE15 9EF, UK. Phone: +44 1858-438880; fax: +44 1858-434958; e-mail: ama@subscription.co.uk.

Annual Subscription Rates

	United States	Americas	UK	Rest of World
INDIVIDUAL				
Print and Online	\$180	\$235	£165	€240
Online Only	\$140	\$140	£100	€160
INSTITUTION				
Print and Online	\$340	\$445	£290	€455
Online Only	\$260	\$260	£185	€300

In Canada, US rate plus GST. Rates for residents and medical students available at pubs.ama-assn.org, or from the AMA Unified Service Center.