

**SPECIAL ARTICLE****The Next Generation of Surgical Residencies: What Are the Challenges and the Opportunities? . . . . . 433**

Robert W. Barnes, MD, Little Rock, Ark

- A chairman and program director analyzes the current state of surgical residency training and proposes a solution.

**PAPERS READ BEFORE THE 13TH ANNUAL MEETING OF THE ASSOCIATION OF VETERANS ADMINISTRATION SURGEONS, MAY 4 TO MAY 6, 1989, SAN ANTONIO, TEX****Enterococcal Sepsis and Lung Microvascular Injury in Sheep . . . . . 437**

Roderick A. Barke, MD; David L. Dunn, MD, PhD; Agustin Dalmasso, MD;

Melody O'Connor Allen, MD; Edward W. Humphrey, MD, PhD, Minneapolis, Minn

- In a bile duct contamination model, *Streptococcus faecalis* demonstrated limited pathogenicity as expressed in lung microvascular injury when compared to *Escherichia coli*.

**Hepatic Parenchymal Oxygen Tension Following Injury and Sepsis . . . . . 441**

Michael S. Dahn, MD; Robert F. Wilson, MD; M. Patricia Lange, MSN;

Aaron Stone, MD; Lloyd A. Jacobs, MD, Detroit, Mich

- Analysis of hepatic blood flow and splanchnic oxygen consumption emphasizes the importance of maintaining oxygen transport in patients with sepsis.

**Interferon Gamma and Tumor Necrosis Factor Alpha: Use in Gram-negative Infection After Shock . . . . . 444**

Mark A. Malangoni, MD; David H. Livingston, MD; Gerald Sonnenfeld, PhD; Hiram C. Polk, Jr, MD, Louisville, Ky

- Interferon gamma and TNF alpha may be useful to reduce the severity of gram-negative infections following shock with bacterial contamination.

**Liver Biochemical and Histological Changes With Graded Amounts of Total Parenteral Nutrition . . . . . 447**

Antonio Carlos Campos, MD, MS; Albert Oler, MD, PhD; Michael M. Meguid, MD, PhD; Ting-Yuan Chen, MD, Syracuse, NY

- Experimentally, fatty vacuoles were increased with total parenteral nutrition, but liver morphologic features promptly returned to normal after total parenteral nutrition cessation and normal food intake.

**Source of Plasma Chromogranin A Elevation in Gastrinoma Patients . . . . . 451**

Bruce E. Stabile, MD, San Diego, Calif; Thomas J. Howard, MD,

Edward Passaro, Jr, MD, Los Angeles, Calif; Daniel T. O'Connor, MD, San Diego, Calif

- Elevated plasma chromogranin A levels in patients with gastrinoma are primarily determined by the trophic effects of gastrin on gastrin enterochromaffinlike cells, not a corelease from the tumor itself.

**Neutrophil Chemotactic Activity in Human Gastric Secretions . . . . . 454**

Robert A. Kozol, MD; Amalia Punzo, MD; Randall Ribaud, PhD;

Edward F. Rossomando, DDS, PhD; Salwa A. Elgebaly, PhD, Farmington, Conn

- Neutrophil chemotactic activity in normal patients collected by endoscopic examination is compared with patients who have gastric inflammation.

**Vagotomy Effect on Gastric Prostaglandins: Primarily Neural or Secondary to Hypoacidity? . . . . . 457**

Barry A. Levine, MD; Luke J. Curtsinger, MD; Kenneth R. Sirinek, MD, PhD, San Antonio, Tex

- Vagotomy primarily decreases acid secretion secondarily resulting in increased mucosal generation.

**Changes in Gallbladder Volume Do Not Affect Cystic Duct Resistance . . . . . 460**

Kenneth W. Sharp, MD; Charles B. Ross, MD; Vicki N. Tillman; Lester F. Williams, Jr, MD, Nashville, Tenn

- This study found no relationship between gallbladder volume and cystic duct resistance and did not demonstrate a cystic duct sphincter mechanism at physiologic gallbladder volumes.

**Pancreaticoduodenectomy: University Experience and Resident Education . . . . . 463**

Ralph J. Doerr, MD; Ilhan Yildiz, MD; Lewis M. Flint, MD, Buffalo, NY

- The Whipple procedure is an important surgical experience and can be performed safely by residents under supervision.

The ARCHIVES OF SURGERY (ISSN 0004-0010) is published monthly by the American Medical Association, 535 N Dearborn St, Chicago, IL 60610, and is an official publication of the Association. Second-class postage paid at Chicago, IL 60610, and at additional mailing office.

**SUBSCRIPTION RATES**—The subscription rates for the ARCHIVES OF SURGERY are as follows: \$56 for one year, \$97 for two years in the United States and US possessions; all other countries, one year, \$66; two years, \$117 for surface delivery. For expedited air delivery to most countries, add \$15 surcharge for one year subscription, \$30 for two years. (Rates for subscriptions for delivery to Japan or South Korea are available through exclusive agents—contact the publisher.) **Special rates for residents and medical students in the United States and US Possessions are available.** Address inquiries to the American Medical Association, Circulation

and Fulfillment Division, 535 N Dearborn St, Chicago, IL 60610. Phone: (312)280-7168.

**CHANGE OF ADDRESS**—POSTMASTER, send all address changes to the ARCHIVES OF SURGERY, Attention: Subscription Department, 535 N Dearborn St, Chicago, IL 60610. Notification of address change must be made at least six weeks in advance, include both old and new addresses, a recent mailing label, and your new zip code.

**Advertising Principles:** Each advertisement in this issue has been reviewed and complies with the principles governing advertising in AMA scientific publications. A copy of these principles is available on request. 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.

**CONTENTS—Continued**

<b>Protein Differences in Human Pancreatic Cancer Cell Lines With Diverse Metastatic Potential</b> . . . . .	<b>469</b>
Michael A. Schwalke, MD; Craig M. Doremus, MS; Ronald Bleday, MD; Harold J. Wanebo, MD; Michael P. Vezeridis, MD, Providence, RI	
● There are quantitative and qualitative differences in the cellular proteins of human pancreatic cancer with varying metastatic potential.	
<b>The Cause of Coagulopathy After Peritoneovenous Shunt for Malignant Ascites</b> . . . . .	<b>474</b>
John J. Gleysteen, MD; Clara V. Hussey, MD; Margaret G. Heckman, MD, Milwaukee, Wis	
● Studies of postoperative coagulopathy following peritoneovenous shunting indicate that plasminogen- rather than thromboplastin-activated fibrinolysis occurred and that platelet reduction was largely dilutional.	
<b>Release of Chemotactic Factors by Veins During Preparation for Arterial Bypass</b> . . . . .	<b>481</b>
Steven T. Ruby, MD; Medhat E. Allam, MD; MaryAnn Gallo; Sara Barth; Salwa A. Elgebaly, PhD, Farmington, Conn	
● Vein grafts play a role in the recruitment of neutrophils to implanted veins by releasing chemoattractants.	
<b>Effects of Atherosclerosis on the Cutaneous Regional and Microcirculatory Response to Ischemia</b> . . . . .	<b>485</b>
Richard W. Schwartz, MD; Hu Qing-Fu, MD; Nancy M. Logan; Daniel R. Richardson, PhD; Gordon L. Hyde, MD, Lexington, Ky	
● Atherosclerosis does not alter the mechanisms of reactive hyperemia in either the macrocirculation or the microcirculation.	
<b>Unna's Boot vs Polyurethane Foam Dressings for the Treatment of Venous Ulceration: A Randomized Prospective Study</b> . . . . .	<b>489</b>
Jeffrey R. Rubin, MD; Jeffrey Alexander, MD; Edward J. Plecha, MD; Cynthia Marman, RN, Cleveland, Ohio	
● Impregnated gauze exhibited superior treatment results when compared with polyurethane foam dressings.	
<b>FESTSCHRIFT FOR GEORGE H. A. CLOWES, JR, MD</b>	
<b>In Memoriam: George H. A. Clowes, Jr, MD, 1915-1988</b> . . . . .	<b>491</b>
John H. Siegel, MD, Baltimore, Md; William V. McDermott, MD; Glenn D. Steele, MD; Douglas W. Wilmore, MD; Erwin F. Hirsch, MD; Roger L. Jenkins, MD, Boston, Mass; Louis R. M. DelGuercio, MD, Valhalla, NY; Josef E. Fischer, MD, Cincinnati, Ohio; Frank B. Cerra, MD, Minneapolis, Minn	
<b>Alterations of Gene Expression in Human Colorectal Cancer: Biologic Implications</b> . . . . .	<b>493</b>
Glenn D. Steele, Jr, MD, PhD; Samuel Davis, PhD; Hsiukang Yow, PhD; Jau Min Wong, PhD; Elissa N. Rivers, PhD; Ian C. Summerhayes, PhD; T. S. Ravikumar, MD; Lan Bo Chen, PhD, Boston, Mass	
● Understanding colorectal cancer will not be accomplished by studying one or two oncogenes in a limited number of cell lines or fresh human tissue.	
<b>Early Physiologic Predictors of Injury Severity and Death in Blunt Multiple Trauma</b> . . . . .	<b>498</b>
John H. Siegel, MD; Avraham I. Rivkind, MD; Samir Dalal, MD; Shirin Goodarzi, MS, Baltimore, Md	
● This model predicts outcome in patients with blunt liver trauma and is highly correlated with initial 24-hour blood volume requirements; it was highly significant as an early predictor of outcome in patients with multiple trauma.	
<b>Invited Commentary:</b> Donald D. Trunkey, MD, Portland, Ore	
<b>Is There a Circulating Proteolysis-Inducing Factor During Sepsis?</b> . . . . .	<b>510</b>
Per-Olof Hasselgren, MD, PhD; J. Howard James, PhD; Daniel W. Benson, MD; Shujun Li, MD; Josef E. Fischer, MD, Cincinnati, Ohio	
● Septic plasma did not stimulate myofibrillar protein breakdown; hence, the role of a circulating muscle proteolysis factor during sepsis remains unclear.	
<b>Invited Commentary:</b> Lyle L. Moldawer, PhD, New York, NY	
<b>APACHE II Score Does Not Predict Multiple Organ Failure or Mortality in Postoperative Surgical Patients</b> . . . . .	<b>519</b>
Frank B. Cerra, MD; Francesco Negro, MD; Jerome Abrams, MD, Minneapolis, Minn	
● The APACHE II score did not predict the development of multiple organ failure syndrome (MOFS) or mortality and significantly underestimated the potential to develop MOFS.	
<b>The Budd-Chiari Syndrome and Hepatic Veno-occlusive Disease: Recognition and Treatment</b> . . . . .	<b>525</b>
William V. McDermott, MD, FACS, Paul M. Ridker, MD, Boston, Mass	
● The Budd-Chiari syndrome, caused by the toxic effects of specific alkaloids, is treated effectively with hepatic and portal decompression.	
<b>Sepsis, Signals, and Surgical Sequelae (A Hypothesis)</b> . . . . .	<b>531</b>
Hamish R. Michie, FRCS, Douglas W. Wilmore, MD, Boston, Mass	
● Blocking the deleterious effects of cytokines while maintaining their beneficial effects is a future therapeutic goal.	
<b>ORIGINAL ARTICLE</b>	
<b>Excellent Shoulder Function Is Attainable After Partial or Total Scapulectomy: Analysis at Prolonged Follow-up</b> . . . . .	<b>537</b>
Barbara Ward, MD; Charles McGarvey, RPT; Michael T. Lotze, MD, Bethesda, Md	
● Preoperative assessment and postoperative rehabilitation are essential in obtaining maximum shoulder function following partial scapulectomy.	
<b>CLINICAL NOTES</b>	
<b>Adenomyoma of the Common Bile Duct</b> . . . . .	<b>543</b>
Nicholas Ch. Legakis, MD; Apostolos P. Stamatiadis, MD; Constantina Papadimitriou-Karapanou, MD; Nicholas S. Apostolidis, MD, Athens, Greece	
<b>Vertebral Artery Pseudoaneurysm: A Rare Complication of Subclavian Artery Catheterization</b> . . . . .	<b>546</b>
Joseph F. Amaral, MD; Victor E. Grigoriev, MD; Gary S. Dorfman, MD; Wilfred I. Carney, Jr, MD, Providence, RI	
<b>REGULAR DEPARTMENTS</b>	
<b>Correspondence and Brief Communications</b> . . . . .	<b>551</b>
<b>Books</b> . . . . .	<b>551</b>
<b>Instructions for Authors</b> . . . . .	<b>529</b>
<b>Classified Advertising</b> . . . . .	<b>554</b>
<b>Index to Advertisers</b> . . . . .	<b>428</b>