EDITORIAL:
The Arterial Medial Cell, Smooth Muscle or Multifunctional Mesenchyme? Robert W. Wissler .......................................................... 1

ORIGINAL ARTICLES:
Exercise and Intermittent Claudication: I. Effect of Repetition and Intensity of Exercise. James S. Skinner, and D. Eugene Strandness, Jr. 15
Assessment of Aortic Valvular Stenosis from the Aortic Pressure Pulse. Djavad T. Arani and Richard A. Carleton .............................. 30
Muscular Subaortic Stenosis: The Direct Relation Between the Intraventricular Pressure Difference and the Left Ventricular Ejection Time. E. Douglas Wigle, Pierre Auger, and Yves Marquis ........... 36
Distribution of Arterial Lesions Demonstrated by Selective Cinecoronary Arteriography. William L. Proudftit, Earl K. Shirey, and F. Mason Sones, Jr. ................................... 54
Vectorcardiographic Changes During Intracoronary Injections. Raphael F. Smith, J. Warren Harthorne, and Charles A. Sanders .......... 63
Coronary Disease in Familial Hypercholesterolemia. Julius Jensen, David H. Blankenhorn, and Valdemar Kornerup .......................... 77
Large and Small Artery Occlusion in Diabetics and Nondiabetics with Severe Vascular Disease. Margaret C. Conrad .......................... 83
The Ultra Low Frequency Force Ballistocardiograph in Acute Cardiomyopathy. Brendan Phibbs, Charles R. Lowe, and Roy W. Holmes ... 92
The Electrophysiological Properties of Diphenylhydantoin Sodium as Compared to Procaine Amide in the Normal and Digitalis-Intoxicated Heart. Richard H. Helfant, Benjamin J. Scherlag, and Anthony N. Damato .................................................. 108

(Continued)
Protection from Digitalis Toxicity with the Prophylactic Use of Diphenylhydantoin Sodium: An Arrhythmic-Inotropic Dissociation. Richard H. Helfant, Benjamin J. Scherlag, and Anthony N. Damato ........................................... 119

Antihypertensive Properties of Furosemide. Michael Davidov, Nikos Kakaviatos, and Frank A. Finnerty, Jr. .......................................................... 125

SPECIAL ARTICLES:
Decision Rules in Electrocardiography and Vectorcardiography. J. von der Groeben .................................................................................................................. 136


BOOK REVIEWS ............................................................................................................... 161

NEWS FROM THE AMERICAN HEART ASSOCIATION ..................................................... 163

No. 2

EDITORIAL:
Purging Action of Quinidine: Potentiation of Contraction Coupling to Basic Electric Rhythms. Howard B. Burchell ............................................................... 173

ORIGINAL ARTICLES:
A Comparative Study of Nitroglycerin and Propranolol. Erwin Robin, Charles Cowan, Pritpal Puri, Sunilendu Ganguly, Emile DeBoyrie, Mila Martinez, Thomas Stock, and Richard J. Bing .......................................................... 175

Myocardial Blood Flow in Man as Measured by a Coincidence Counting System and a Single Bolus of $^{82}$RbCl. Suzanne B. Knoebel, Paul L. McHenry, Leon Stein, and Ahmet Sonel .................................................. 187


Long-Term Results of Endarterectomy of the Internal Carotid Artery for Cerebral Ischemia and Infarction. Albert Heyman, W. Glenn Young, Jr., Ivan W. Brown, Jr., and Keith S. Grimson ..................................................... 212

Influence of Age on the Hemodynamic Response to Exercise. Stevo Julius, Antoon Amery, Leigh S. Whitlock, and James Conway ........................................... 222

Influence of Hypertension on the Hemodynamic Response to Exercise. Antoon Amery, Stevo Julius, Leigh S. Whitlock, and James Conway .......................... 231

Comparison of the Double Two-Step Test and the Maximal Exercise Treadmill Test: Studies in Coronary-Prone Subjects. Samuel Bellet and Laurian Roman .................................................................................................................. 238

The Exercise Test in Diabetic Patients as Studied by Radioelectrocardiography. Samuel Bellet and Laurian Roman ............................................................... 245

Paroxysmal Ventricular Tachycardia with Rate-Dependent Coupling Intervals. Leo Schamroth and Alberto Dolara .................................................................................. 255


Dynamic Analysis of Heart Sounds in Right and Left Bundle-Branch Blocks. Jan Oravetz, Stanley Wissner, Beatrice Argano, and Aldo A. Luisada .................................................................................................................. 275

(Continued)
CONTENTS OF VOLUME XXXVI


Increased Survival with Prophylactic Quinidine after Experimental Myocardial Infarction. Victor W. Hurst, III, James J. Morris, Jr., Howard J. Zeft, Donald B. Hackel, and Henry D. McIntosh ........... 294

Postpartum Death with Maternal Congenital Heart Disease. Richard L. Naeye, Jack W. C. Hagstrom, and Bruce A. Talmadge ........... 304

Atrial Flutter Associated with Isolated Pulmonic Stenosis. Shlomo Stern and Joseph B. Borman ..................................... 313

Computer Search for Electrocardiographic Lead Directions to Optimize Diagnostic Differentiation: A Novel Concept in Electrocardiographic Lead Design. Charles D. Batchlor, Alan S. Berson, I. Alzona Naval, and Hubert V. Pipberger .................................. 320

BOOK REVIEWS .......................................................................................................................... 331

NEWS FROM THE AMERICAN HEART ASSOCIATION .............................................................. 332

No. 3

EDITORIALS:

The Present Status of Clofibrate (Atromid-S). M. F. Oliver .......... 337

Does the Pattern of Carbohydrate Nutrition Hold a Clue to Atherosclerosis? Forrest E. Kendall ................................................. 340

ORIGINAL ARTICLES:

Cardiac Potentials on Body Surface of Infants with Anomalous Left Coronary Artery (Myocardial Infarction). John T. Flaherty, Madison S. Spach, John P. Boineau, Ramon V. Canent, Jr., Roger C. Barr, and David C. Sabiston, Jr. .................................................. 345

Application of Computer Techniques to the Detection and Analysis of Spontaneous P-Wave Variations. Daniel A. Brody, Melvin D. Woolsey, and Robert C. Arzbaecher ........................................ 359

Mechanisms of Pulsus Alternans. Keith E. Cohn, Harold Sandler, and E. W. Hancock ......................................................... 372

Measurement of Pulmonary Edema in Valvular Heart Disease. Michael McCredie .............................................................. 381


Cerebrovascular Disease in an Elderly Population. John L. Cutler .... 394

Diffuse Tortuosity and Lengthening of the Arteries. Ali Ertuğrul .... 400

Myxoma of the Left Atrium: Hemodynamic and Phonocardiographic Consequences of Sudden Tumor Movement. Aubrey Pitt, Bertram Pitt, Jochen Schaefer, and J. Michael Criley .................................................................................. 408

Calcified Left Atrial Myxoma Simulating Mitral Insufficiency: Hemodynamic and Phonocardiographic Effects of Tumor Movement. John L. Penny, John J. Gregory, Stephen M. Ayres, Stanley Giannelli, Jr., and Plinio Rossi .................................................. 417

(Continued)
CONTENTS OF VOLUME XXXVI


The Measurement of Glomerular Filtration Rate and Effective Renal Plasma Flow in Man by Iothalamate 125I and Iodopyracet 131I. Charles M. Elwood and Eugene M. Sigman .................. 441


Pulmonary Air Embolism During Insertion of a Permanent Transvenous Cardiac Pacemaker. Howard J. Zeft, Alex Harley, Robert E. Whalen, and Henry D. McIntosh .................. 456

Radiological Aspects of Heart Muscle Disease in Nigerian Adults. W. Peter Cockshott, G. J. Thorpe, and A. C. Ikeme .................. 460

NEWS FROM THE AMERICAN HEART ASSOCIATION .................. 468

No. 4

EDITORIALS
Follow-up Care for Patients with Cardiac Pacemakers. Edgar Sowton .................. 473

The Aftercare of Patients with Implanted Cardiac Pacemakers. William M. Chardack .................. 476

Problems and Responsibilities in the Use of Electric Pacemakers. Paul M. Zoll .................. 478

ORIGINAL ARTICLES

Noradrenaline Release and Metabolism in Orthostatic (Postural) Hypotension. McC. Goodall, W. R. Harlan, Jr., and H. Alton .................. 489


The Deleterious Role of Tachycardia in Mitral Stenosis. Djavad T. Arani and Richard A. Carleton .................. 511


Diagnostic Accuracy of Selective Coronary Cinearteriography. Harvey G. Kemp, Hilary Evans, William C. Elliott, and Richard Gorlin .................. 526


(Continued)
CONTENTS OF VOLUME XXXVI


Vascular Lesions in Infants with Congenital Rubella. John R. Estlery and Ella H. Oppenheimer .......... 544

Renal Response to Pyrogen in Normotensive and Hypertensive Man. Ervin A. Gombos, Tae Hung Lee, Joseph Solinas, and Mira Mitrovic 555


Coronary Heart Disease in Women: A Study of Risk Factors in 100 Patients Less Than 60 Years of Age. Ristéard Mulcahy, Noel Hickey, and Brian Maurer .................................................. 577

Permanent Ventricular Pacemakers: Comparison of Transthoracic and Transvenous Implantation. James J. Morris, Jr., Robert E. Whalen, Henry D. McIntosh, Howard K. Thompson, Ivan W. Brown, Jr., and W. Glenn Young, Jr. ........................................ 587

Temporary Transvenous Catheter-Electrode Pacing of the Heart. Robert G. Tancredi, Ben D. McCallister, and Harold T. Mankin 598

SPECIAL ARTICLE
Hyperglycemia: A Risk Factor in Coronary Heart Disease. Frederick H. Epstein ........................................ 609

BOOK REVIEW ................................................................ 620

NEWS FROM THE AMERICAN HEART ASSOCIATION .......... 621

No. 5

EDITORIAL:
Experimental Bundle-Branch Block—Fifty Years Ago. Raymond D. Pruitt ........................................ 625

ORIGINAL ARTICLES:
Reevaluation of Electrocardiographic and Bedside Criteria for Diagnosis of Ventricular Tachycardia. R. A. Massumi, A. A. Tawakkol, and A. D. Kistin ........................................ 628

Termination of Reciprocating Tachycardia by Atrial Stimulation. R. A. Massumi, A. D. Kistin, and A. A. Tawakkol ........................................ 637


Atrioventricular and Ventriculoatrial Excitation in Wolff-Parkinson-White Syndrome (Type B): Temporary Ablation at Surgery. Howard B. Burchell, Robert L. Frye, Milton W. Anderson, and Dwight C. McGoon ........................................ 663

Experimental Production of Aberrant Ventricular Conduction in Man. Stafford I. Cohen, Sun H. Lau, Jacob I. Haft, and Anthony N. Damato 673


(Continued)
CONTENTS OF VOLUME XXXVI


Effect of Hyperventilation on Precordial T Waves of Children and Adolescents. J. H. Thomsen and R. H. Wasserburger .................. 700


Raynaud’s Disease in Children. Warren G. Guntheroth, Beverly C. Morgan, John A. Harbinson, and Gay L. Mullins .................. 724

The Percutaneous Femoral Artery Approach to Selective Coronary Arteriography. Richard D. Spellberg, and Irvin Ungar .................. 730


Cardioglobulin B Content of the Blood Plasma of Newborn Infants. Sergio A. Bencosme, D. J. Delahaye, J. E. Fay, and N. Ozen .................. 766

The Inheritance of Coronary Artery Anatomic Patterns in Rats. Colin M. Bloor, Arthur S. Leon, and Bertram Pitt .................. 771

Aortic Origin of the Right Pulmonary Artery: Surgical Repair Without a Graft. Stanley E. Kirkpatrick, Donald A. Girod, and Harold King .................. 777

Truncal Inversion with Biventricular Pulmonary Trunk and Aorta from Right Ventricle (Variant of Taussig-Bing Complex). Aaron B. Shaffer, José F. Lopez, Irwin K. Kline, and Maurice Lev .................. 783


NEWS FROM THE AMERICAN HEART ASSOCIATION .................. 800

EDITORIALS:

The Criterion for Diastolic Pressure—Revolution and Counterrevolution. A. C. Burton .................. 805

Listening to the Electrocardiogram. Franklin D. Johnston .................. 810

ORIGINAL ARTICLES:


(Continued)
Pericardial and Myocardial Disease Associated with Serological Evidence of Infection by Agents of the Psittacosis-Lymphogranuloma Venereum Group (Chlamydiaceae). George C. Sutton, Richard A. Morrissey, John R. Tobin, Jr., and Truman O. Anderson 830

Acute Mitral Regurgitation in Man: Hemodynamic Evidence and Observations Indicating an Early Role for the Pericardium. Stuart H. Bartle and Hector J. Hermann 839

Angiographic Anatomy of the Left Ventricle and Mitral Valve in Idiopathic Hypertrophic Subaortic Stenosis. Allan L. Simon, John Ross, Jr., and James H. Gault 852

CineangiocardioGraphic Studies of the Left Ventricle in Patients with Angina Pectoris. Lars Bjork, Ingemar Cullhed, and Adar Hallén 868

A Later Stage of Anomalous Coronary Circulation with Origin of the Left Coronary Artery from the Pulmonary Artery: Coronary Artery Steal. Arthur E. Baue, Stanley Baum, William S. Blakemore, and Harry F. Zinsser 878

Chromosomal Abnormalities and Congenital Heart Disease. Ingrid Emerit, J. de Grouchy, P. Vernant, and P. Corone 886


Evaluation of the Contractile State of the Human Heart from the First Derivative of the Apexcardiogram. Attilio Reale 933

Renal Venous Renin Determinations in the Diagnosis of Surgically Correctable Hypertension. Annette Fitz 942


Myocardial Biopsy in Dogs. Friedrich A. O. Eckner, Jona C. Thaemert, Peter V. Moulder, and Eugene H. Blackstone 964

The Electrocardiophone: A New Instrument for Rapid Bedside Diagnosis of Cardiac Arrhythmias. Henry L. Green 975


BOOKS RECEIVED 989

BOOK REVIEWS 991 (Continued)
CONTENTS OF VOLUME XXXVI

NEWS FROM THE AMERICAN HEART ASSOCIATION .................. 993
VOLUME AUTHOR INDEX ........................................... 997
VOLUME SUBJECT INDEX ............................................ 999
SUPPLEMENTS 1967 AUTHOR INDEX ................................. S-VII
SUPPLEMENTS 1967 SUBJECT INDEX ................................. S-IX