EDITORIALS:

Two Important Frontiers in Renal Physiology. James O. Davis 1

Association Acts to Promote Medical Identification Symbol 7

ORIGINAL ARTICLES:

The Clinical Diagnosis and Surgical Management of Ruptured Mitral Chordae Tendineae. Hermann Menges, Jr., Jay L. Ankeney, and Herman K. Hellerstein 8

Quinidine Syncope. Paroxysmal Ventricular Fibrillation Occurring during Treatment of Chronic Atrial Arrhythmias. Arthur Selzer and H. Wesley Wray 17


Accuracy of the Phonocardiogram in Assessing Severity of Aortic and Pulmonic Stenosis. Raul Gamboa, Paul G. Hugenholtz, and Alexander S. Nadas 35

Cardiopulmonary Dynamics in Patients with Anastomosis of the Superior Vena Cava to the Right Pulmonary Artery. Ramon V. Canent, Jr., Madison S. Spach, and W. Glenn Young, Jr. 47

Mitral Ball-Valve Prosthesis. Dynamic and Clinical Evaluation. Paul Kezdi, Louis R. Head, and Bruce A. Buck 55

Electrocardiographic Changes after Glucose Ingestion. Leon D. Ostroander, Jr., and Belson Jack Weinstein 67

Hemodynamics of the Master Two-Step Test in Hypertension and Healed Myocardial Infarction. Norman Makous, Hong Do Cha, and Elmer J. Taylor, Jr. 77

Measurement of Blood Flow in the Femoral Artery in Man at Rest and during Exercise by Local Thermodilution. V. Ganz, A. Hlavová, A. Froněk, J. Linhart, and I. Přerovský 86

Diagnostic Value of the First and Second Derivatives of the Arterial Pressure Pulse in Aortic Valve Disease and in Hypertrophic Sub-aortic Stenosis. Dean T. Mason, Eugene Braunwald, John Ross, Jr., and Andrew G. Morrow 90

Hemodynamic Events during the Development of Cyanosis and Heart Failure in a Patient with Large Ventricular Septal Defect. Harry A. Bliss and Jean E. Moffat 101
### CONTENTS OF VOLUME XXX

#### Non-surgical Retrieval of a Broken Segment of Steel Spring Guide from the Right Atrium and Inferior Vena Cava.
John Thomas, Bruce Sinclair-Smith, Dennis Bloomfield, and Asghar Davachi

106

#### Glossopharyngeal Neuralgia Associated with Bradycardia, Syncope, and Seizures.
Yihong Kong, Albert Heyman, Mark L. Entman, and Henry D. McIntosh

109

#### SPECIAL ARTICLE:
Genetic Aspects of Cardiovascular Diseases in Animals.
D. K. Detweiler

114

#### CLINICAL PROGRESS:
The Stimulus to Hypertrophy of the Myocardium.
Henry S. Badeer

128

#### ABSTRACTS
137

#### NEWS FROM THE AMERICAN HEART ASSOCIATION
151

#### CONTRIBUTORS TO THIS ISSUE
159

---

No. 2

#### EDITORIAL:
Reduction of Radiation to Children.
Forrest H. Adams and Leo G. Rigler

161

#### ORIGINAL ARTICLES:
Arrhythmias Related to Cardioversion.
L. Lemberg, A. Castellanos, Jr., J. Swenson, and A. Gosselin

163

Anomalous Origin of the Left Coronary Artery from the Pulmonary Trunk with Special Reference to the Occurrence of Mitral Insufficiency.
George R. Noren, Gunay Raghib, James H. Moller, Kurt Amplatz, Paul Adams, Jr., and Jesse E. Edwards

171

Effects of Norepinephrine on the Coronary Circulation in Man.
Peter M. Yurchak, Ellis L. Rolett, Lawrence S. Cohen, and Richard Gorlin

180

Effect of Transseptal Left Atrial Puncture upon Cardiac Output.
Philip Samet, William H. Bernstein, and Aaron Medow

188

Study of the Right Atrial Pressure Pulse in Functional Tricuspid Regurgitation and Normal Sinus Rhythm.
George A. Rubeiz, Munir E. Nassar, and Ibrahim K. Dagher

190

A Simplified Basic Classification of Spatial Alignments of the Heart, Its Chambers, and the Great Vessels.
Harold D. Rosenbaum

194

Effect of Chronic Pressure and Volume Overload on Left Heart Volumes in Subjects with Congenital Heart Disease.
Graham A. H. Miller and H. C. J. Swan

205

Traumatic Tricuspid Insufficiency. Hemodynamic Data and Surgical Treatment.

217

Richard W. Campbell, E. F. Steinmetz, and Charles H. Helmen

223
CONTENTS OF VOLUME XXX

Aneurysmal Dilatation of the Aortic Sinuses in Coarctation of the Aorta. Ten-Year Follow-Up of a Case. Israel Steinberg and Harry L. Stein .......................................................... 227


Feasibility of Pulmonary Embolectomy. A Case Report. Robert J. Flemma, W. Glenn Young, Jr., Andrew Wallace, Robert E. Whalen, and John Freese .................................................. 234

SPECIAL ARTICLE:
The Actions of Cardiac Glycosides on Heart Muscle Cells. Ernest Page ........................................... 237

CLINICAL PROGRESS:
Symposium: Physical Diagnosis—The Scientific Basis: Scenes of Cardiovascular Progress and "You Are There." J. Willis Hurst .......................................................... 252


Heart Sounds and Murmurs. W. Proctor Harvey .......................................................... 262

Cardiac Diagnosis from Examination of Arteries and Veins. Noble O. Fowler and William J. Marshall .......................................................... 272

Precordial Vibrations. Clinical Clues from Palpation. E. Grey Dimond .......................................................... 284

ABSTRACTS .......................................................................................................................... 301

NEWS FROM THE AMERICAN HEART ASSOCIATION .......................................................... 315

CONTRIBUTORS TO THIS ISSUE .......................................................................................... 319

No. 3

EDITORIAL:
Nomenclature and Criteria for the Diagnosis of Cardiovascular Diseases. Charles E. Kossman .......................................................... 321

ORIGINAL ARTICLES:
A Genetical View of Cardiovascular Disease. The Lewis A. Conner Memorial Lecture. Victor A. McKusick .......................................................... 326

Left Ventricular Performance Following Digitalization in Patients with and without Heart Failure. Gerald W. Murphy, Bernard F. Schreiner, Paul L. Bleakley, and Paul N. Yu .......................................................... 358


The Normal Apex Cardiogram. Its Temporal Relationship to Electrical, Acoustic, and Mechanical Cardiac Events. Emilio Tafur, Lawrence S. Cohen, and Harold D. Levine .......................................................... 381

The Apex Cardiogram in Left Ventricular Outflow Tract Obstruction. Emilio Tafur, Lawrence S. Cohen, and Harold D. Levine .......................................................... 392

The Significance of a Wide TsE Loop. Te-Chuan Chou, Robert A. Helm, and Ralph Lach .......................................................... 400

Circulation, Volume XXX, December 1964
CONTENTS OF VOLUME XXX

Pulmonic Regurgitation Following Staphylococcal Endocarditis. An Intracardiac Phonocardiographic Study. Hugh S. Levin, Vincent Runco, Charles F. Wooley, and Joseph M. Ryan .......................................... 411

The Susceptibility of Dogs with Chronic Impairment of Cardiac Lymph Flow to Staphylococcal Valvular Endocarditis. Albert J. Miller, Ruth Pick, Irwin K. Kline, and Louis N. Katz ........................................ 417


Asymmetric Division of the Pulmonary Artery. Its Significance in the Banding Procedure. Francis L. Giknis and Bruce F. Baisch ......................... 434


CLINICAL PROGRESS:
Symposium: Anticoagulants and Coronary Artery Disease.
Introduction. Carleton B. Chapman .................................................. 444
The Case for Anticoagulant Therapy. Irving S. Wright ......................... 447
The Case Against Anticoagulant Therapy. Tage Hilden ...................... 458

ABSTRACTS .................................................................................. 462
NEWS FROM THE AMERICAN HEART ASSOCIATION .................. 475
CONTRIBUTORS TO THIS ISSUE .................................................. 479

No. 4

EDITORIALS:
The Control of the Cerebral Circulation. Seymour S. Kety ................. 481
Third Report of the Committee on Ballistocardiographic Terminology .... 484

ORIGINAL ARTICLES:
Effect of Pressor Amines on Cardiac Output in Patients with Acute Hypotension. M. P. Sambhi, M. H. Weil, V. N. Udhoji, and L. Rosoff .... 485

Repetitive Ventricular Arrhythmia Resulting from Artificial Internal Pacemaker. Morton E. Tavel and Charles Fisch ................................................ 493

The Effect of Beta-Sympathetic Blockade on Arterial Oxygen Saturation in Fallot's Tetralogy. Michael Honey, Douglas A. Chamberlain, and Jane Howard .......................................................... 501

Effect of Chronically Increased Ventricular Pressure on Electrical Forces of the Heart. A Correlation between Hemodynamic and Vectocardiographic Data (Frank System) in 90 Patients with Aortic or Pulmonic Stenosis. Paul G. Hugenholtz and Raul Gamboa ......................... 511

The Quantitative Anatomy of Cyanotic Tetralogy of Fallot. Maurice Lev, Horacio J. A. Rimoldi, and Ursula F. Rowlett .......................... 531


Circulation, Volume XXX, December 1964
CONTENTS OF VOLUME XXX

Cardiovascular Dynamics in Complete Heart Block at Various Heart Rates. Effect of Exercise at a Fixed Heart Rate. Alberto Benchimol, Yeou-bing Li, and E. Grey Dimond ........................................ 542

The Fate of the Patient with Pulmonic Stenosis. Mary Allen Engle, Tomiko Ito, and Henry P. Goldberg ........................................ 554

Precordial Lead Patterns in Right Ventricular Hypertension. G. P. Human .................................................................................. 562

The Development of Outflow Tract Obstruction of the Left Ventricle in Idiopathic Myocardial Hypertrophy. Emilio Tafur, Warren G. Guntheroth, David Baum, and John R. Blackmon .................. 569

Ebstein's Anomaly Associated with Cardiomyopathy and Pulmonary Hypertension. Robert G. Sunner, William J. Jacoby, Jr., and Donald H. Tucker ................................................................. 578

Rupture of a Papillary Muscle of the Tricuspid Valve Following Acute Myocardial Infarction. Report of a Case. Shlomo Eisenberg and Joe Suyemoto ............................................................... 588

Cardiac Output as a Function of Ventricular Rate in a Patient with Complete Heart Block. Peter G. Gaal, Stanley J. Goldberg, and Leonard M. Linde ................................................................. 592

SPECIAL ARTICLE:
Vascular Mechanisms Pertaining to the Intrinsic Regulation of the Cerebral Circulation. George I. Mchedlishvili ........................................ 597

CLINICAL PROGRESS:
Atheromatous Embolism. Robert S. Eliot, Vladimir I. Kanjhu, and Jesse E. Edwards ........................................................................ 611

ABSTRACTS .................................................................................. 619

NEWS FROM THE AMERICAN HEART ASSOCIATION ............... 636

CONTRIBUTORS TO THIS ISSUE .................................................... 639

No. 5

EDITORIAL:
How Much Uniformity in Epidemiologic Research? Felix E. Moore, Oglesby Paul, and George E. Wakerlin ........................................ 641

ORIGINAL ARTICLES:


Pressor Responses to Noxious Stimuli in Hypertensive Patients. Effects of Guanethidine Sulfate and Alpha Methyldopa. Alvin P. Shapiro and Emanuel Krifcher ........................................ 671

Development of Right Ventricular Obstruction by Aberrant Muscular Bands. Alexis F. Hartmann, Jr., David Goldring, and Erik Carlsson ............................................................... 679
CONTENTS OF VOLUME XXX

Changes in Blood Viscosity, Hematocrit Value, and Fibrinogen Concentration in Subjects with Congestive Heart Failure. Seymour Eisenberg ........................................... 686


Late Cardiac Complications of Chronic, Severe, Refractory Anemia with Hemochromatosis. Mary Allen Engle, Marion Erlandson, and Carl H. Smith ........................................... 698


Studies on Starling's Law of the Heart. IX. The Effects of Impeding Venous Return on Performance of the Normal and Failing Human Left Ventricle. John Ross, Jr. and Eugene Braunwald ............. 719

The Relationship Between Human Endocardial Fibroelastosis and Obstruction of the Cardiac Lymphatics. Irwin K. Kline, Albert J. Miller, Ruth Pick, and Louis N. Katz ................. 728

Prenatal Narrowing or Closure of the Foramen Ovale. Richard L. Naeye and William A. Blanc ........................................... 736

The Brockenbrough Transseptal Catheterization. An Unusual Complication. John O. Parker, Roxroy O. West, and John E. Fay .................. 743

Double-Outlet Right Ventricle with Intact Interventricular Septum. H. Edward MacMahon and Michael Lipa ........................................... 745

Atresia of the Aortic Arch. R. Cree Pillsbury, Richard R. Lower, and Norman E. Shumway ........................................... 749

Right Axis Deviation, Clockwise QRS Loop, and Signs of Left Ventricular Underdevelopment in a Child with Complete Type of Persistent Common Atrioventricular Canal. David Baum, Gilbert J. Roth, and S. Allison Creighton ................. 755

CLINICAL PROGRESS:


ABSTRACTS ........................................... 783

NEWS FROM THE AMERICAN HEART ASSOCIATION ............. 795

CONTRIBUTORS TO THIS ISSUE ........................................... 799

No. 6

EDITORIAL:

Postoperative Hemolytic Anemia in Endocardial Cushion Defects. Catherine A. Neill ........................................... 801
CONTENTS OF VOLUME XXX

ORIGINAL ARTICLES:


Correlation between Component Cardiac Weights and Electrocardiographic Patterns in 185 Cases. A. Mazzoleni, R. Wolff, L. Wolff, and L. Reiner ........ ........ 808

Hemodynamic Effects of Pargyline in Hypertensive Patients. Gaddo Onesti, Paul Novack, Osvaldo Ramirez, Albert N. Brest, and John H. Moyer 830


Complications of Angiocardiography. Bruce A. Kottke, John F. Fairbairn II, and George D. Davis .......... ........ 843

Nitrogenous Compounds in Hemodialysate. Glenn D. Lubash, Kurt H. Stenzel, and Albert L. Rubin ........ 848

The Corrected Orthogonal Electrocardiogram and Vectorcardiogram in 510 Normal Men (Frank Lead System). Harold W. Draper, Catherine J. Peffer, Friedemann W. Stallmann, David Littmann, and Hubert V. Pipberger 853


Bundle-Branch Block. An Epidemiologic Study. Leon D. Ostrander, Jr. 872


Atrial Heart Sounds in Atrial Fibrillation and Flutter. Lewis M. Neporent 893

Transient Myocardial Damage Secondary to Extravasation of Contrast Material during Left Ventricular Angiocardiography. Chuichi Kawai and Walter H. Abelmamn 897

Aneurysm of the Right Ventricle Caused by Selective Angiocardiography. Russell Vandenberg, George L. Donnelly, K. W. Macleod, and Ian Monk 902

Dextrorotation of the Heart in Rheumatic Mitral Stenosis. Report of a Case Complicated by Obesity. Nathan Poker and Israel Steinberg 907

Congenitally Unguarded Tricuspid Orifice with Coexistent Pulmonary Atresia. Vladimir I. Kanjuh, James E. Stevenson, Kurt Amplatz, and Jesse E. Edwards 911

Total Anomalous Pulmonary Venous Drainage into the Left Innominate Vein Associated with Transposition of the Great Vessels. William Whitaker, David A. Watson, and Philip C. Keates 918

Situs Inversus with Levocardia. Report of a Case with Unusual Cardiac Malformations. Oscar Creech, Jr., Keith Reemtsma, and Albert Hyman 923
CONTENTS OF VOLUME XXX

CLINICAL PROGRESS:
Coronary Artery Anomalies. Hu A. Blake, William C. Manion, Thomas W. Mattingly, and Georgio Baroldi .......................... 927

ABSTRACTS ................................................................. 941

NEWS FROM THE AMERICAN HEART ASSOCIATION .................. 954

CONTRIBUTORS TO THIS ISSUE ........................................... 958

VOLUME AUTHOR INDEX .................................................. 961

VOLUME SUBJECT INDEX .................................................. 963

SUPPLEMENTS 1964 AUTHOR INDEX

SUPPLEMENTS 1964 SUBJECT INDEX