VOLUME XIV
July–December, 1956
CIRCULATION
Official Journal of the American Heart Association

No. 1
AN EDITORIAL ON EDITORIALS.............Irving S. Wright and Herrman L. Blumgart 1
THE NURTURE OF CARDIOLOGISTS: PRESIDENTIAL ADDRESS.............Irvine H. Page 3
RESULTS OF VALVULOTOMY FOR VALVULAR PULMONARY STENOSIS WITH INTACT VENTRICULAR SEPTUM: ANALYSIS OF SIXTY-NINE PATIENTS
Don M. Hosier, John L. Pitts and Helen B. Taussig 9
BLOOD PRESSURE STUDIES AMONG AMERICAN AND FOREIGN-BORN STUDENTS
Nándor Szent-Györgyi 17
THE ANGIOCARDIOGRAPHIC DIAGNOSIS OF LEFT ATRIAL THROMBOSIS
Louis A. Soloff and Jacob Zatuchni 25
EMETINE TOXICITY WITH ELECTROCARDIOGRAPHIC ABNORMALITIES...Leslie J. Cera 33
ATRIOVENTRICULAR SYNCHRONIZATION AND ACCROCHAGE............Henry J. L. Marriott 38
COMPARISON OF LARGE AND SMALL DOSES OF HORMONES IN THE TREATMENT OF ACUTE RHEUMATIC CARDITIS
Sujoy B. Roy and Benedict F. Massell 44
THE USE OF THE LEAD-FIELD CONCEPT IN THE DEVELOPMENT OF LEADS SATISFACTORY FOR VECTORCARDIOGRAPHY. I. THE SAGITTAL LEAD
Ernest W. Reynolds, Jr., Jerome F. Cordes, Park W. Willis, III and Franklin D. Johnston 48
HEREDITARY OBESITY: RELATION TO SERUM LIPROPROTEINS AND PROTEIN CONCENTRATIONS IN SWINE......................Lena A. Lewis and Irvine H. Page 55
THE RELATION OF CARDIOVASCULAR PHENOMENA TO METABOLIC CHANGES IN A PATIENT WITH CHRONIC HYPOKALEMIA...Edward J. Huth and Russell D. Squires 60
SIGNIFICANCE OF ABNORMAL PHASE II RESPONSE TO VALSALVA MANEUVER IN CARDIAC PATIENTS....................Robert W. Burroughs and Robert A. Bruce 72
THE EFFECT OF BETA SITOSTEROL ON THE SERUM OF YOUNG MEN WITH ARTERIOSCLEROTIC HEART DISEASE
John W. Farquhar, Ralph E. Smith and Mary E. Dempsey 77
COMPARISON OF LIMB AND PRECORDIAL VECTORCARDIOGRAPHIC SYSTEMS
Ernest Frank and George E. Seiden 83
CORONARY BLOOD FLOW, MYOCARDIAL OXYGEN CONSUMPTION, AND MYOCARDIAL METABOLISM IN NORMAL AND HYPERTHYROID HUMAN SUBJECTS
Leonard Leight, Valentino DeFazio, Frederick N. Talmers, Timothy J. Regan and Harper K. Hellems 90
THE EFFECT OF AGE ON MEAN SPATIAL QRS AND T VECTORS
Ernst Simonson and Ancel Keys 100
STUDIES ON THE CONTROL OF HYPERTENSION. VII. EFFECTS OF GANGLIONIC BLOCKADE COMBINED WITH HYDRAZINE ON THE MALIGNANT STAGE COMPLICATED BY RENAL AZOTEMIA...........H. Mitchell Perry, Jr. and Henry A. Schroeder 105
CLINICAL PROGRESS
CLINICAL MANIFESTATIONS OF THE UNPERFORATED AORTIC SINUS ANEURYSM
Israel Steinberg and Nathaniel Finby 115
CONTENTS

CLINICAL CONFERENCE
Systemic Lupus Erythematosus
Joseph J. Bunim, A. McGehee Harvey, Alfred J. Bollet, T. F. Hilbish, Eugene Van Scott, Leon Sokoloff and George Brecher

ABSTRACTS ................................................ 135

AMERICAN HEART ASSOCIATION ............................. 154

CONTRIBUTORS TO THIS ISSUE ............................... 158

No. 2

EDITORIAL
"Serotonin" or "Tenure for the Pharmacologist"
Irvine H. Page and J. W. McCubbin

CARDIOCIRCULATORY STUDIES IN PULSUS ALTERNANS OF THE SYSTEMIC AND PULMONARY CIRCULATIONS
M. Irené Ferrer, Régane M. Harvey, André Courmand and Dickinson W. Richards

STATUS OF FIFTY PATIENTS FOUR AND A HALF TO SEVEN YEARS AFTER MITRAL COMMISSUROTOMY .......... O. Henry Janton, Julio C. Davila and Robert P. Glover

ARTERIOVENOUS FISTULA OF THE RENAL VESSELS: A CASE REPORT .................. Jon R. Myhre

CONGENITAL AORTIC STENOSIS: CLINICAL ASPECTS AND SURGICAL TREATMENT
Daniel F. Downing

RELATIVE CONTRIBUTION OF BLOOD FROM EACH LUNG TO THE LEFT-TO-RIGHT SHUNT IN ATRIAL SEPTAL DEFECT: DEMONSTRATION BY INDICATOR-DILUTION TECHNIQUES . . . H. J. C. Swan, Peter S. Hetzel, Howard B. Burchell and Earl H. Wood

QUANTITATIVE ESTIMATION BY INDICATOR-DILUTION TECHNIQUES OF THE CONTRIBUTION OF BLOOD FROM EACH LUNG TO THE LEFT-TO-RIGHT SHUNT IN ATRIAL SEPTAL DEFECT ........... H. J. C. Swan, Peter S. Hetzel and Earl H. Wood

ANTIURESIS AND OTHER RENAL RESPONSES TO PIPEROXAN IN PHEOCHROMOCYTOMA .................. A. C. Corcoran, Harriet P. Dustan and Irvine H. Page

RAUWOLFIA SERPENTINA IN THE TREATMENT OF ANGINA PECTORIS
Bernard I. Lewis, Robert I. Lubin, L. E. January and John B. Wild

LEFT AXIS DEVIATION: AN ELECTROCARDIOGRAPHIC-PATHOLOGIC CORRELATION STUDY .................................................. Robert P. Grant

AN EVALUATION OF STARR'S EQUATION FOR THE PREDICTION OF STROKE VOLUME
Travis Bridwell, Rachel M. Jessus and David G. Greene

SURVIVAL RATES AFTER ACUTE MYOCARDIAL INFARCTION WITH LONG-TERM ANTI-COAGULANT THERAPY .... John W. Keyes, Ellet H. Drake and F. Janney Smith

SPECIAL ARTICLE
REASSURANCE IN THE MANAGEMENT OF BENIGN HYPERTENSIVE DISEASE
William Goldring, Herbert Chasis, George E. Schreiner and Homer W. Smith

CLINICAL PROGRESS
HEART FAILURE AND LUNG DISEASE ........................... Hans H. Hecht

ABSTRACTS ................................................ 291

AMERICAN HEART ASSOCIATION ............................. 310

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

No. 3

EDITORIAL
ACQUIRED OR INHERITED FACTORS IN CARDIOVASCULAR DISEASE
George A. Perera

HYPERTENSIVE PULMONARY VASCULAR DISEASE . Donald Heath and William Whitaker
### CONTENTS OF VOLUME XIV

**EFFECTS OF SITOSTEROL ON THE CHOLESTEROL CONCENTRATION IN SERUM AND LIVER IN HYPOTHYROIDISM**
*Maurice M. Best and Charles H. Duncan* 344

**ANATOMIC AND PATHOLOGIC STUDIES IN VENTRICULAR SEPTAL DEFECT**
*Luis M. Becu, Robert S. Fontana, James W. DuShane, John W. Kirklin, Howard B. Burchell and Jesse E. Edwards* 349

**EFFECTS OF ESTROGEN THERAPY ON HORMONAL FUNCTIONS AND SERUM LIPIDS IN MEN WITH CORONARYATHEROSCLEROSIS**

**FATAL CONGESTIVE HEART FAILURE ASSOCIATED WITH CARDIAC ENLARGEMENT OF UNEXPLAINED ORIGIN**
*Richard France, Clifford W. Atherton and William L. Alsobrook* 373

**PERIPHERAL VASCULAR SPASM AS A PRODROME OF HERPES ZOSTER**
*Leon Blumberg and Albert Behrend* 379

**EFFECT OF CHLORPROMAZINE ON CEREBRAL HEMODYNAMICS AND CEREBRAL OXYGEN METABOLISM IN MAN**
*John H. Moyer, George Morris, Robert Pontius and Robert Hershberger* 380

**ANGIOSCOPIC CHANGES IN THE SMALLER BLOOD VESSELS IN DIABETES MELLITUS AND THEIR RELATIONSHIP TO AGING**
*John Ditzel* 386

**STUDIES OF THE MITRAL VALVE. II. CERTAIN ANATOMIC FEATURES OF THE MITRAL VALVE AND ASSOCIATED STRUCTURES IN MITRAL STENOSIS**
*Ian E. Rusted, Charles H. Scheifley and Jesse E. Edwards* 398

**PRESSOR AND DEPRESSOR RESPONSES TO TILTING IN HYPERTENSIVE PATIENTS**
*Robert S. Green, Arnold Iglauer and Ralph C. Scott* 407

**CLINICAL CONFERENCE**

**ADULT FIBROELASTOSIS WITH CONGENITAL TRICUSPID STENOSIS**
*Hans Popper, Daniel S. Kushner and Benjamin Gasul* 412

**CLINICAL PROGRESS**

**DIFFERENTIAL DIAGNOSIS OF ANGINA PECTORIS**
*Joseph E. F. Riseman* 422

**PROPOSALS FOR BALLISTOCARDIOGRAPHIC NOMENCLATURE AND CONVENTIONS: REVISED AND EXTENDED REPORT OF COMMITTEE ON BALLISTOCARDIOGRAPHIC TERMINOLOGY**
*William R. Scarborough and Samuel A. Talbot* 435

**ABSTRACTS** 451

**AMERICAN HEART ASSOCIATION** 476

**PROGRAM AND PROCEEDINGS OF THE TENTH ANNUAL MEETING OF THE AMERICAN SOCIETY FOR THE STUDY OF ARTERIOSCLEROSIS** 479

**CONTRIBUTORS TO THIS ISSUE** 507

---

**No. 4**

---

**PART ONE**

**EDITORIAL**

**DIAGNOSTIC CARDIOVASCULAR RADIOLOGY: A CHANGING SCENE**
*Charles T. Dotter* 509

**FIVE-YEAR POSTOPERATIVE RESULTS OF FIRST 500 PATIENTS WITH BLALOCK-TAUSSIG ANASTOMOSIS FOR PULMONARY STENOSIS OR ATRESIA**
*B. Daniel White, Dan G. McNamara, S. Richard Bauersfeld and Helen B. Taussig* 512
CONTENTS OF VOLUME XIV

SYNDROME OF CONGENITAL ABSENCE OF THE SPLEEN WITH ASSOCIATED CARDIOVASCULAR AND GASTROENTERIC ANOMALIES
Mary Jane Aguilar, H. Brodie Stephens and Jackson T. Crane 520

SPLENORENAL ARTERIAL ANASTOMOSES
Elliott S. Hurwitt, Bernard Seidenberg, Henry Haimovici and Donald S. Abelson 532

THE ELECTROCARDIOGRAM IN INFARCTION OF THE LATERAL WALL OF THE LEFT VENTRICLE: A CLINICOPATHOLOGIC STUDY
William J. Dunn, Jesse E. Edwards and Raymond D. Pruitt 540

A LINEAR TIME SCALE FOR SPATIAL VECTORCARDIOGRAPHIC DATA
J. A. Abildskov, W. E. Ingerson and B. L. Hisey 556

FACTORS INFLUENCING CONVERSION OF CHRONIC ATRIAL FIBRILLATION WITH SPECIAL REFERENCE TO SERUM QUINIDINE CONCENTRATION
Maurice Sokolow and Robert E. Ball 568

THE ACUTE HEMODYNAMIC AND METABOLIC RESPONSE OF HYPERTENSIVE PATIENTS TO PENTOLINIUM TARTRATE
Archer P. Crosley, Jr., John F. Brown, Herman Tuchman, Charles W. Crumpton, John H. Huston and George G. Rowe 584

RADIOLOGIC ASPECTS OF OPERABLE HEART DISEASE. II. RETROGRADE BRACHIAL AORTOGRAPHY
Herbert L. Abrams 593

CARDIOTOXIC EFFECTS OF HYPERCATECHOLEMIA IN RENAL INSUFFICIENCY
W. Raab, E. Lepeschkin, Y. K. Starcheska and W. Gigee 614

CLINICAL PROGRESS

PHEOCHROMOCYTOMA
Walter F. Kvale, Grace M. Roth, William M. Manger and James T. Priestley 622

ABSTRACTS ........................................... 631

AMERICAN HEART ASSOCIATION ................................... 656

29TH SCIENTIFIC SESSIONS: PROGRAM AND EXHIBIT INFORMATION ........ 667

CONTRIBUTORS TO THIS ISSUE ..................................... 687

PART TWO

EVALUATION OF SERUM LIPOPROTEIN AND CHOLESTEROL MEASUREMENTS AS PREDICTORS OF CLINICAL COMPLICATIONS OF ATHEROSCLEROSIS
Report of a Cooperative Study of Lipoproteins and Atherosclerosis 691

No. 5

EDITORIAL

CEREBRAL VASCULAR DISEASES: AN AREA OF OPPORTUNITY . . . . . . James Watt 743

THE EFFECTS OF EXTERNAL ELECTRIC CURRENTS ON THE HEART: CONTROL OF CARDIAC RHYTHM AND INDUCTION AND TERMINATION OF CARDIAC ARRHYTHMIAS

QUINIDINE AS A CAUSE OF SUDDEN DEATH . . . . . . . . . . . . . . . . . George W. Thomson 757

MASSIVE THROMBOTIC OCCLUSION OF THE LARGE PULMONARY ARTERIES
K. P. Ball, J. F. Goodwin and C. V. Harrison 766

GRAPHIC REGISTRATION OF CARDIAC THRILLS IN ACQUIRED AND CONGENITAL HEART DISEASE
David C. Levinson, John P. Meehan, Jr., Leonard H. Schwartz and George C. Griffith 784
CONTENTS OF VOLUME XIV

Serum Glutamic-Oxalacetic Transaminase in Coronary Artery Disease: A Review of 201 Cases

Bernard H. Ostrow, Daniel Steinberg, Howard E. Ticktin, George N. Polis and John M. Evans 790

Anomalies of the Coronary Arteries and Their Clinical Significance

Ralph W. Alexander and George C. Griffith 800

Hemodynamic and Clinical Appraisal of Coarctation Four to Seven Years After Resection and End-to-End Anastomosis of the Aorta

J. Leo Wright, Howard B. Burchell, Earl H. Wood, Edgar A. Hines, Jr. and O. Theron Clagett 806

A Clinical Correlative Study of the Electrocardiogram in Electrolyte Imbalance

L. S. Dreifus and A. Pick 815

Bronchial and Arterial Anomalies with Drainage of the Right Lung into the Inferior Vena Cava

Nicholas A. Halasz, Katherine H. Halloran and Averill A. Liebow 826

Diagnosis of Mitral Regurgitation by Angiocardiography

Philip W. Smith, Hugh A. Cregg and Karl P. Klassen 847

Blood Coagulation After a Fat Meal

Ratko Buzina and Ancel Keys 854

Morphologic Aspects of the Negativity of the U Wave and Their Corresponding Electrocardiographic and Clinical Data

D. Furbetta, F. Santucci, A. Bufalari and P. Solinas 859

Clinical Progress

Clinical Evaluation of Antihypertensive Drugs

Irvine H. Page and A. C. Corcoran 868

Clinical Conference

Nonspecific Pericarditis and Myocardial Infarction: Their Differential Diagnosis

Johnson McGuire, Robert A. Helm, Arnold Iglauer, Ralph C. Scott, J. Harold Kotte and Benjamin Felson 874

Abstracts

883

American Heart Association

897

Abstracts of the 29th Scientific Session

901

Contributors to This Issue

1025

No. 6

Editorial

Hyponatremia: Clinical State or Biochemical Sign?...J. Russell Elkinton 1027

Chagas' Disease: A Clinical, Epidemiologic and Pathologic Study

F. S. Laranja, E. Dias, G. Nobrega and A. Miranda 1035

Acute and Chronic Cardiovascular Effects of Pentolinium in Hypertensive Patients

Josef R. Smith and S. W. Hoobler 1061

Isolated Pulmonic Valvular Regurgitation

Ralph F. Morton and Thomas N. Stern 1069

Intra-Atrial Block

Samuel M. Bradley and Henry J. L. Marriott 1073

The Abnormally Situated Azygos Vein: X-ray Demonstration of Its Distention in Congestive Failure and in Various Positions

Robert N. Armen and Charles S. Morrow 1079

Widespread and Sudden Occlusion of the Small Arteries of the Hands and Feet

R. P. Jepson 1084
AORTA-PULMONARY ARTERY COMMUNICATION THROUGH THE LUNGS: REPORT OF A CASE .....................T. Sterling Claiborne and William A. Hopkins 1090
EXCHANGEABLE POTASSIUM CONTENT OF THE BODY IN CONGESTIVE FAILURE:
CHANGES DURING TREATMENT ........Jerry K. Aikawa and Reginald H. Fitz 1093
EXPERIENCES WITH PULSUS ALTERNANS: VENTRICULAR ALTERNATION AND THE STAGE
OF HEART FAILURE .......J. M. Ryan, J. F. Schieve, J. B. Hull and B. M. Oser 1099
EFFECT OF CAROTID SINUS STIMULATION ON THE ELECTROCARDIOGRAMS OF CLINI-
CALLY NORMAL INDIVIDUALS ........G. H. Heidorn and A. P. McNamara 1104
THE HEART AND ELECTROCARDIOGRAM OF AN ALLIGATOR ........L. Minor Blackford 1114
STUDIES MADE BY SIMULATING SYSTOLE AT NECROPSY. VIII. SIGNIFICANCE OF THE
PULSE PRESSURE ..........................Isaac Starr 1117
ABNORMALITY OF THE U WAVE AND OF THE T-U SEGMENT OF THE ELECTROCARDIO-
GRAM: THE SYNDROME OF THE PAPILLARY MUSCLES
D. Furbetta, A. Bufalari, F. Santucci and P. Solinas 1129
SYMPOSIUM ON RHEUMATIC FEVER
NATURE OF RHEUMATIC FEVER ......................Maclyn McCarty 1138
PROPHYLAXIS OF RHEUMATIC FEVER
Edward A. Mortimer, Jr. and Charles H. Rammelkamp, Jr. 1144
TREATMENT OF RHEUMATIC FEVER ......................E. G. L. Bywaters 1153
CLINICAL PROGRESS
CORONARY EMBOLISM ......E. Lee Shrader, M. B. Bawell and V. Moragues 1159
ABSTRACTS .................................................. 1164
AMERICAN HEART ASSOCIATION ...................... 1183
CONTRIBUTORS TO THIS ISSUE ...................... 1185