CIRCULATION
VOLUME XXII
July-December 1960

No. 1

Editorial:
Measurement of Coronary Blood Flow in Man. R. J. Bing, H. K. Hellems, and T. J. Regan .............................................................. 1

Original Articles:


Electrocardiographic Changes Simulating Myocardial Ischemia and Infarction Associated with Spontaneous Intracranial Hemorrhage. G. J. Cropp and G. W. Manning ........................................ 25


The Electrocardiogram in Children with Ventricular Septal Defect and Severe Pulmonary Hypertension. Correlation with Response of Pulmonary Arterial Pressure to Surgical Repair. James W. DuShane, William H. Weidman, Robert O. Brandenburg, and John W. Kirklin ........ 49

Auscultatory and Phonocardiographic Assessment of Pulmonary Stenosis with Intact Ventricular Septum. Louis Vogelpoel and Velva Schrire .................. 55

Auscultatory and Phonocardiographic Assessment of Fallot's Tetralogy. Louis Vogelpoel and Velva Schrire ...................................... 73

Electrocardiogram in Asthmatic Children. Terumasa Miyamoto, Irving Kass, and Murray S. Hoffman ............................................. 90

Aortic and Coronary Atherosclerosis in the Three Racial Groups in Cape Town. M. I. Sacks .............................................................. 96

Obstruction of Left Ventricular Outlet in Association with Ventricular Septal Defect. Ronald M. Lauer, James W. DuShane, and Jesse E. Edwards ........ 110

Effect of Age on Pulse Wave Velocity and “Aortic Ejection Time” in Healthy Men and in Men with Coronary Artery Disease. Ernst Simonson and K. Nakagawa ............................................................. 126


CONTENTS OF VOLUME XXII

Pericardial Effusion, a Manifestation of Systemic Lupus Erythematosus.
Stanley S. Bergen, Jr. .......................................................... 144

Vitamin E. Effect on Serum Cholesterol and Lipoproteins. Denham Harman. 151

Clinical Progress:
Respiration and Circulation in Patients with Portal Cirrhosis of the Liver.
H. O. Heinemann ........................................................... 154

Cigarette Smoking and Cardiovascular Diseases. A Report by the American Heart Association
Abstracts ................................................................. 160

News from the American Heart Association .............................................. 171

Contributors to This Issue .................................................. 179

No. 2

Editorial:
Current Status of Bretylium and Guanethidine as Antihypertensive Drugs. Irvine H. Page and Harriet P. Dustan. 181

Original Articles:

Selective Inhibition of the Sympathetic Nervous System in Man with Bretylium Tosylate, a New Antihypertensive Agent. Edward D. Freis, Takero Sugiura, and Dorothy Liptak. 191

Tricuspid Stenosis with Pulmonary Atresia. A Cineangiographic-Pathologic Correlation. Milton H. Paul and Maurice Lev. 198

Effects of Acute Hypoxia and Exercise on the Pulmonary Circulation.
Alfred P. Fishman, Harry W. Fritts, Jr., and André Cournard. 204

Effects of Acute Hypoxia on the Volume of Blood in the Thorax.
H. W. Fritts, Jr., J. E. Odell, P. Harris, E. Braunwald, and A. P. Fishman. 216

Effects of Breathing Carbon Dioxide upon the Pulmonary Circulation.
Alfred P. Fishman, Harry W. Fritts, Jr., and André Cournard. 220

William Shapiro, Sami I. Said, and Phillip L. Nova. 226

Liver Function in Patients with Elevated Serum Cholesterol or Low-Density Lipoproteins. H. Engelberg. 232

Occupational Physical Activity and the Degree of Coronary Atherosclerosis in "Normal" Men. A Postmortem Study. David M. Spain and Victoria A. Bradess. 239

Retinal Vascular Reactivity in Patients with Diabetes Mellitus and with Atherosclerosis. J. B. Hickam and H. O. Sieker. 243

Hourly Variation in Total Serum Cholesterol. John E. Peterson, Alan A. Wilcox, Melvin I. Haley, and Robert A. Keith. 247


Atherosclerosis and Related Factors in Immigrants to Israel.
M. Toor, A. Katchalsky, J. Agnon, and D. Allalouf. 265


Blood Pressure in Bushmen of the Kalahari Desert. Benjamin Kaminer and W. P. W. Lutz. 289
Symposium on Coronary Heart Disease: (To Be Continued)

The Importance of Heredity in Coronary Heart Disease. Paul D. White.................. 296
Pathologic Physiology of Angina Pectoris and Acute Myocardial Infarction. Herrman L. Blumgart and Paul M. Zoll.................................................. 301

Special Article:
TREATMENT OF HYPERTENSIVE DISEASE. N. N. Savitzki and V. P. Nikitin.............. 308

Clinical Progress:
Dissecting Aneurysm of the Aorta. The Clinical Features of Thirty Autopsied Cases. Blair D. Erb and I. Frank Tullis.............................. 315
Abstracts ................................................................. 326
News from the American Heart Association............................................. 334
Contributors to This Issue.......................................................... 338

No. 3

Editorial:

Original Articles:
Clinical Recognition of Tricuspid Stenosis. Joseph K. Perloff and W. Proctor Harvey.......................... 346
The Dynamics of Rheumatic and Calcific Aortic Valve Disease. A Postmortem Study with the Use of the Pulse Duplicator. Richard R. Kelley, Fairfield Goodale, Jr., and Benjamin Castleman.................. 365
“Primary” Pulmonary Hypertension with Coexisting Portal Hypertension. A Retrospective Study of Six Cases. Richard L. Naeye.................. 376
Cardiac Enlargement in Chronic Severe Anemia. L. M. Sanghvi, S. N. Misra, and K. Banerjee.................. 412
Bilateral Indirect and Direct Arterial Pressures. Edgar G. Harrison, Jr., Grace M. Roth, and Edgar A. Hines, Jr.......................... 419
Adult Endocardial Fibroelastosis Associated with Dextrocardia and Situs Inversus. Franklin G. Hoffman.................. 437

Symposium on Coronary Heart Disease: (To Be Continued)
Auscultatory Findings in Myocardial Infarction. J. Scott Butterworth and Edmund H. Reppert, Jr.................. 448
Diet and Coronary Artery Disease. Robert E. Olson.......................... 453
Hormones, Cholesterol, and Coronary Atherosclerosis. George S. Kurland and A. Stone Freedberg.................. 464

Clinical Progress:
Metastatic Cancer to the Heart. Review of the Literature and Report of 127 Cases. Stanley M. Hanfling.................. 474
Abstracts ................................................................. 484
News from the American Heart Association............................................. 496
Contributors to This Issue.......................................................... 499
CONTENTS OF VOLUME XXII

No. 4

PART ONE

Editorial:
Opinions, Decisions, and Facts. Angel Keys ................................................................. 501

Original Articles:
The Evolution of Rheumatic Heart Disease in Children. Five-Year Report
of a Cooperative Clinical Trial of ACTH, Cortisone, and Aspirin. (United
Kingdom and United States Joint Report) ................................................................. 503
Catecholamines in the Localization of Pheochromocytoma. J. Richard Crout
and Albert Sjoerdama ........................................................................................................ 516
Heart Block after Repair of Ventricular Septal Defect in Children.
Ronald M. Lauer, Patrick A. Ongley, James W. DuShane, and John W.
Kirklin .................................................................................................................................. 526
Vasoconstriction and Medial Hypertrophy in Pulmonary Hypertension.
C. A. Wagenvoort .................................................................................................................. 535
Dynamic Aspects of Cholesterol Metabolism in Different Areas of the
Aorta and Other Tissues in Man and Their Relationship to Atherosclerosis.
Henry Field, Jr., Leon Swell, P. E. Schools, Jr., and C. R. Treadwell .............................. 547
Hemodynamics of Mitral Stenosis with Special Reference to Coronary
Blood Flow and Myocardial Oxygen Consumption. George G. Rowe,
George M. Maxwell, Cesar A. Castillo, John H. Huston, and Charles
W. Crumpton ....................................................................................................................... 559
Central Circulatory Changes Accompanying Mitral Commissurotomy. Harold
G. Riehman, J. Bradley Long, and Elliot Rapaport ........................................................ 563
Renal Hemodynamic Responses to Stress in Normotensive and Hypertensive
Subjects. C. T. Bello, R. W. Sevy, E. A. Ohler, C. A. Papacostas,
and R. M. Buecher ............................................................................................................ 573
Response to Exercise in Congenital Complete Atrioventricular Block.
Danae Ikkos and John S. Hanson ........................................................................................ 583
The Direction of Blood Flow in Anomalous Left Coronary Artery Arising
from the Pulmonary Artery. David C. Sabiston, Jr., Catherine A.
Neill, and Helen B. Taussig ................................................................................................. 591
Sex Differences in the Electrocardiogram. Ernst Simonson, Henry
Blackburn, Jr., Thomas C. Puchner, Pauline Eisenberg, Fernanda
Ribeiro, and Manuel Mejia ............................................................................................... 598
Studies of Peripheral Circulation during Sickle-Cell Crisis. Felice Manfredi,
Angelo P. Spoto, Herbert A. Saltzman, and Herbert O. Sieker ........................................ 602
Symposium on Coronary Heart Disease: (To Be Continued)
The Use of Anticoagulants in Coronary Heart Disease. Progress and
Problems: 1960. Irving S. Wright ...................................................................................... 608
Thrombolytic (Fibrinolytic) Therapy for Coronary Heart Disease.
Anthony P. Fletcher and Sol Sherry ................................................................................... 619
Legal Aspects of Coronary Disease. Howard B. Sprague .................................................. 627
Clinical Progress:
Atrial Repolarization—Its Importance in Clinical Electrocardiography.
Joao Tranchesi, Victor Adelardi, and Jorge Martins de Oliveira ........................................ 635
Abstracts ............................................................................................................................. 645
News from the American Heart Association ..................................................................... 648
The Council on Arteriosclerosis of the American Heart Association, The
American Society for the Study of Arteriosclerosis: Program and
Proceedings of the Fourteenth Annual Meeting ................................................................. 650
Contributors to This Issue ................................................................................................... 690

PART TWO

Program and Abstracts, 33rd Scientific Sessions of the
American Heart Association ............................................................................................... 693
CONTENTS OF VOLUME XXII

No. 5

Editorial:

Genetics and the Nature of Essential Hypertension. Victor A. McKusiek... 857

Original Articles:

The George B. Brown Memorial Lecture: Circulatory Congestion and Heart Failure. Ludwig W. Eichna................................. 864


Observations on the Occurrence of Right Bundle-Branch Block Following Open Repair of Ventricular Septal Defects. J. David Bristow, Donald G. Kassebaum, Albert Starr, and Herbert E. Griswold................. 896

The Effect of Lipemia upon Tissue Oxygen Tension in Man. Claude R. Joyner, Jr., Orville Horwitz, and Phyllis G. Williams.................. 901


I131-Diodrast Studies in Unilateral Renal Disease. Jerome B. Block, Gerald J. Hine, and Belton A. Burrows.......................... 913

Left Heart Catheterization by the Transseptal Route. A Description of the Technic and Its Applications. John Ross, Jr., Eugene Braunwald, and Andrew G. Morrow.......................... 927


Detection of Right-to-Left Shunts with an Arterial Potentiometric Electrode. Leland C. Clark, Jr., L. M. Barger, Jr., Champ Lyons, Merrill N. Bradley, and Katrina T. McArthur.......................... 949

The Vectorcardiogram in the Differential Diagnosis of Atrial Septal Defect in Children. Jerome Liebman and Alexander S. Nadas.......................... 956

A Double-Needle Technic for Transbronchial Left Heart Catheterization. Stewart M. Scott, Robert G. Fish, and Timothy Takaro.......................... 976

Symposium on Coronary Heart Disease: (To Be Continued)

Diagnosis of Angina Pectoris. E. Cowles Andrus.................. 979

Exercise Tests in the Diagnosis of Coronary Heart Disease. Eugene Lepeschkin.......................... 986

Clinical Progress:


No. 6

Editorial:

Pulmonary Arterial Hypertension in Congenital Heart Disease. Alexander S. Nadas, Abraham M. Rudolph, and Robert E. Gross.......................... 1041

Original Articles:

Spontaneous Closure of Ventricular Septal Defects. J. R. Evans, R. D. Rowe, and J. D. Keith.......................... 1044

Circulation, Volume XXII, December 1960
# CONTENTS OF VOLUME XXII

Raynaud's Disease and Primary Pulmonary Hypertension. Guillermo C. Celoria, Gilbert H. Friedell, and Sheldon C. Sommers ........................................ 1055

The Precordial Electrocardiogram during Exercise. Ramon F. Abarquez, Alvin H. Freiman, Fredric Reichel, and John S. LaDue ........................................ 1060

The Mammary Souffle of Pregnancy and Lactation. Bernard Tabatnik, Thomas W. Randall, and Colin Hersch ................................................... 1069

Comparative Studies of Protoperatrine A and Protoperatrine B Intravenously in Hypertensive Man. Bertram M. Winer ........................................ 1074

Tetralogy of Fallot with Anomalous Tricuspid Valve Simulating Pulmonary Stenosis with Intact Septum. Henry N. Neufeld, Dwight C. McGoan, James W. DuShane, and Jesse E. Edwards ........................................ 1083

Serum Cholesterol and Relative Body Weight of Coronary Patients in Different Populations. Ancel Keys and Flaminio Fidanza ........................................ 1091

Physiologic Studies in Congenital Absence of the Left Main Pulmonary Artery. Burton S. Tabakin, John S. Hanson, Prasant K. Adhikari, and Donald B. Miller ................................................... 1107

Common Circulatory Measurements in Smokers and Nonsmokers. Henry Blackburn, Josef Brozek, and Henry L. Taylor ........................................ 1112


Correlation of the Roentgen Appearance of the Thoracic Aorta in Life with the Degree of Stenosing Arteriosclerosis of the Coronary Arteries at Necropsy. Irving M. Liebow, Robert R. Oseasohn, George F. Badger, and Benjamin Kaufman ................................................... 1133

An Index for the Evaluation of Arteriosclerotic Lesions in the Abdominal Aorta. A Report by the Committee on Lesions of the American Society for the Study of Arteriosclerosis. Russell L. Holman, Chairman .................... 1137

The Effects of Specific Gravity upon the Distribution of Intravascular Contrast Agents. Charles T. Dotter, William Veatch, David Wishart, and Pamela Dotter ................................................... 1144

Intermittent Atrial Parasystole. Charles Fisch and Robert B. Chevalier 1149

Symposium on Coronary Heart Disease: (To Be Concluded)

Treatment of Intractable Angina Pectoris. Bruce Logue ........................................ 1151

Amine Oxidase Inhibitors. Their Current Place in the Therapy of Cardiovascular Diseases. George C. Griffith ................................................... 1156


Clinical Progress:

Russian Research on the Role of Visceral Reflexes in Coronary Insufficiency. Ernst Simonson ................................................... 1179

Abstracts ................................................................................ 1185

News from the American Heart Association ........................................ 1198

Contributors to This Issue ................................................................ 1200

Volume Author Index .................................................................. 1201

Volume Subject Index .................................................................. 1203