ABSTRACTS OF CARDIOLOGY

EDITED BY J. L. LOVIBOND

A Comparative Study of the Effects of Veratrum Viride and Tetraethylammonium Chloride in Hypertension. A. P. SHAPIRO, A. A. BRUST, and E. B. FERRIS. *Ann. intern. Med.*, 36, 807-810, March, 1952.

At the Cincinnati General Hospital 15 patients with hypertension were studied; the hypertension was benign in 11, malignant in 3, and due to chronic pyelonephritis in 1. Tetraethylammonium chloride was given in a dose of 400 mg. and 0.2 ml. of "veratrone" (veratrum viride) was given intravenously 1½ to 2 hours later. The fall in blood pressure was of an equal degree with either drug.
Arthur Willcox

Ligation of the Vena Cava in the Treatment of Heart Failure. P. COSSIO. *Amer. Heart J.*, 43, 97-102, Jan., 1952.

Over a period of two years the author observed in detail 90 cases in which ligation of the inferior vena cava was carried out for uncontrollable heart failure. The surgical mortality was initially 25%; it was soon reduced to 6%. Early improvement, sometimes most surprising, was observed in 70% of the patients and was maintained for months or even years in 56%, provided medical treatment was continued. The early improvement is attributed to the reduction of blood return to the heart and the later improvement to the formation of a lake of blood with a slower return in the recumbent position and also to the elimination of the source of microemboli.—[Author's summary.]

Alcohol Vapor by Inhalation in the Treatment of Acute Pulmonary Edema. A. A. LUISADA, M. A. GOLDMANN, and R. WEYL. *Circulation*, 5, 363-369, March, 1952.

Alcohol has been administered by inhalation to patients in attacks of pulmonary oedema because of its "anti-foaming" action. For this purpose 100% oxygen was passed through 95% alcohol which had been vaporized into a fog, and given through a nasal catheter. This method allowed the patient to expectorate. In healthy subjects insignificant changes in pulse rate and blood pressure were recorded, and there was slight euphoria. The serum concentration of alcohol was less than 10 mg. per 100 ml. When the vapour inhalations were given in 17 attacks of pulmonary oedema, of which 7 were very severe, great relief resulted immediately in 10 and some improvement in 5 more. In the 2 failures the patient objected to the alcohol.
C. W. C. Bain

Chest Pain in Association with Pulmonary Hypertension. Its Similarity to the Pain of Coronary Disease. W. N. VIAR and T. R. HARRISON. *Circulation*, 5, 1-11, Jan., 1952.

The authors describe 6 cases in which the patient had chest pain which might have been attributed to coronary disease. The aetiological diagnoses were: atrial septal defect, chronic cor pulmonale (3 cases), massive pul-

monary embolism, and mitral valve disease. Necropsy in 3 of the cases showed no evidence of coronary disease. Although the pulmonary arterial pressure was not measured in any of the cases and there was no other factual support, the pain was attributed to distension of the pulmonary artery secondary to pulmonary hypertension.
Paul Wood

Effort Syncope as an Early Manifestation of Primary Pulmonary Hypertension. W. DRESSLER. *Amer. J. med. Sci.*, 223, 131-143, Feb., 1952.

The author reviews 6 reported cases and describes 3 others in which syncope precipitated by effort was the chief sign of primary pulmonary hypertension. He states that this symptom combined with dilatation of the pulmonary artery, accentuation and splitting of the pulmonary second sound, and evidence of right ventricular hypertrophy, should suggest the diagnosis. Syncope may often appear before symptoms of congestive cardiac failure develop. Cyanosis is not an invariable feature of the condition.
G. S. Crockett

An Anomalous Coronary Artery Arising from the Pulmonary Artery. E. S. CRONK, J. G. SINCLAIR, and R. H. RIGDON. *Amer. Heart J.*, 42, 906-911, Dec., 1951.

A third case is reported in which the right coronary artery arose from the pulmonary artery, only two such cases having previously been reported in the literature. This patient died at 90 years of age and the condition was found at necropsy; the other two had reached adult life, dying at 30 and 61 years of age respectively. The embryology of this and other similar anomalous coronary-artery malformations is fully discussed.
T. Semple

Left Coronary Artery from the Pulmonary Artery. Three Cases, One with Cardiac Tamponade. H. I. MCKINLEY, J. ANDREWS, and C. A. NEILL. *Pediatrics*, 8, 828-840, Dec., 1951.

The authors report from the Hospital for Sick Children, Toronto, 3 new cases in which the left coronary artery arose from the pulmonary artery, bringing the total of reported cases to 35. In one of the present cases there was myocardial rupture, which has not previously been recorded in this condition. The diagnosis was made before death in all 3 cases with the aid of X rays and the electrocardiogram, which showed a low-voltage tracing, inverted T waves in leads I and III, and a variable degree of left axis deviation. (The diagnosis was similarly made before death in 5 of the 11 cases reported since 1947.) The symptom pattern is one of feeding difficulty at the second or third month of life for which no obvious cause can be found, then intermittent dyspnoea with exertion, and in some cases cardiac angina, which is well

and fully described. The desirability of recognition of this pattern is emphasized, as early diagnosis before irreversible myocardial damage has occurred might enable new methods of treatment to be applied, such as the use of vasodilator drugs or surgical measures to increase the left coronary flow by raising the pulmonary pressure, as by the Potts-Smith operation.

David Morris

Local Circulatory Changes Associated with Clubbing of the Fingers and Toes. G. M. WILSON. *Quart. J. Med.*, 21, 201-213, April, 1952.

This investigation was made to test the postulate that clubbing of the fingers and toes is primarily a manifestation of a peripheral circulatory disorder. The blood flow in the affected digits was measured by the heat elimination method of Stewart, which involves the use of a calorimeter.

An increase of blood flow was demonstrated in cases of clubbing due to congenital heart disease, subacute bacterial endocarditis, and pulmonary disease. This increase of blood flow did not appear to be due to vasodilator nervous action as it was unaffected by procaine-induced nerve block. In 2 cases of unilateral clubbing due to arteriovenous fistulae the blood flow was greater in the affected than in the normal digits. A reduction of the circulation to the fingers led to a regression of the clubbing; this was shown in 2 cases in which the main artery to the limb was ligated. The regression in finger-clubbing seen after successful treatment of underlying thoracic disease was also associated with a decrease in blood flow.

The author discusses the relationship between the increased blood flow and the structural changes in the clubbed digits, and concludes that in unilateral cases clubbing is due to physical abnormalities in the arterial tree, while in bilateral cases "it is probably a result of generalized circulatory disturbance not yet fully understood."

Albert Venner

The Treatment of Intermittent Claudication. N. HAMILTON and G. M. WILSON. *Quart. J. Med.*, 21, 169-183, April, 1952.

A critical evaluation of the effect of the current remedies for intermittent claudication has been made in a series of 40 patients.

In patients confined to bed, treatment by intermittent venous occlusion resulted in improvement, but it was no greater than that which occurred in an initial period of bed rest; or in other cases, no greater in a treated as compared with an untreated limb that received the effects of bed rest alone. Intermittent venous occlusion unaccompanied by bed rest did not produce improvement. None of their patients treated with α -tocopherol, tolazoline (priscol), methyl testosterone, or dihydroergotamine showed any improvement in exercise tolerance which could be confidently regarded as due to the treatment. Lumbar sympathectomy was performed in only 2 cases, in order to avert gangrene, which it successfully did. Tenotomy performed on 4 cases gave relief of pain in all, although in one case the disability from the operation was considered to be as great as that from the original complaint.

The effect of single doses of glyceryl trinitrate, adrenaline, nicotinic acid, tetraethylammonium bromide, tolazoline, dihydroergotamine and padutin was compared with that of a placebo. No consistent improvement in exercise tolerance following administration of any of these drugs could be demonstrated. *Albert Venner*

Some Limitations of Lumbar Sympathectomy in Arteriosclerosis Obliterans. Early Results in One Hundred Consecutive Cases. R. G. SMITH, M. GULLICKSON, and D. A. CAMPBELL. *Arch. Surg., Chicago*, 64, 103-107, Jan., 1952.

The results of unilateral lumbar sympathectomy in 100 cases of arteriosclerotic disease of the lower limb in a total of 83 patients are analysed.

It is concluded that 52% of the patients did not benefit from the operation and that sympathectomy holds little promise of saving the limb in the following circumstances: (1) when gangrene follows obstruction of the femoral or popliteal artery; (2) when there is severe rest pain accompanied by oedema and inability to tolerate the limb in the horizontal position; and (3) when sympathetic block produces a fall in the skin temperature of the extremity. Useful results were obtained in 45 out of 66 patients who survived without loss of the limb.

C. J. Longland

Experimental Studies on Reversal of the Circulation in the Lower Extremity. T. H. PALMER and C. S. WELCH. *Surg. Obstet. Gynec.*, 94, 206-214, Feb., 1952.

The experiments described were designed to test the possibility of maintaining the nutrition of a limb when the arterial stream is diverted into the veins in an attempt to reverse the circulation. The femoral vessels in 48 dogs were divided and the proximal cut end of the artery was anastomosed by suture to the distal cut end of the vein.

It is concluded from these experiments that true reversal of the circulation does not occur when the arterial blood is shunted into the companion vein and that a state of affairs resembling an arterio-venous fistula ensues. The distal part of the limb is deprived of blood and gross oedema is produced; this oedema is due to the transmission of the high arterial pressure to the capillaries without the intervention of the arterioles.

C. J. Longland

The Auricular Arrhythmias. MYRON PRINZMETAL, M.D., ELIOT CORDAY, M.D., ISIDOR C. BRILL, M.D., ROBERT W. OBLATH, M.D., H. E. KRUGER, and Associate Authors. Springfield, Illinois, U.S.A., Charles C. Thomas, 1952. Pp. 387. £6. (Blackwell Scientific Publications, Oxford.)

Prinzmetal's researches, developed during the past 4 years with colleagues at Los Angeles, have resulted in important conclusions, now widely accepted. The study of auricular motion by means of the high-speed cinematograph and the cathode-ray oscillograph enabled him to establish beyond reasonable doubt that all types of auricular arrhythmia have the same mechanism, originating from impulse discharges in ectopic auricular foci. The old theory of circus movement is no longer

tenable. In this monograph we can follow and understand clearly the logical development of these arguments and visualize the fascinating experimental work on which they are based. The clinical application of this new conception of auricular activity is carefully correlated with events known to occur in patients; current knowledge on practical therapy is covered. Clarity of statement and presentation, careful summarizing at every stage, and graphic illustration are some of the noteworthy features of this important production, which is a tribute to authors and publisher alike. *J. L. Lovibond*

Angiocardiography. Vol. XX, Annals of Roentgenology.

CHARLES T. DOTTER, Assistant Professor of Radiology, Cornell Univ. Med. Coll., and ISRAEL STEINBERG, Assistant Clin. Professor of Radiology and Medicine, Cornell Univ. Med. Coll. London, Cassel & Co., Ltd., 1952. Pp. 304, Illus. 635, Figs. 252. £5 18s. 6d.

The addition of this volume to the well-known series of atlas radiological monographs will be welcomed. By the familiar technique of illustrative outline drawings, the information is set out clearly and the text is direct and easy to follow. Angiocardiographic procedure is described, and due emphasis is laid on its limitations in the cyanotic child. A long and useful chapter is devoted to the normal angiocardiogram. The varieties of heart disease, congenital and acquired, common and rare, are all covered fully. There is an illuminating section on pulmonary tumours and the authors recommend that it should become a routine part of the assessment in all such cases. Adequate references and indexing complete a satisfactory work. *J. L. Lovibond*

Leonardo da Vinci, on Movement of the Heart and Blood.

K. D. KEELE, M.D., F.R.C.P. London, Harvey & Blythe Ltd., 1952. Pp. 142, Figs. 68. £4 4s. 0d.

Leonardo's original and inventive genius lent themselves well to the study of human anatomy. The accuracy of his versatile observations provide a wealthy contribution to cardiovascular physiology. Although some of his deductions were faulty, he believed, for example, that the right pulmonary veins normally entered the right auricle and that the two ventricles were connected by pores in the inter-ventricular septum, he has handed down many great achievements. To mention one only, his admirable description of the mechanism of the aortic and tricuspid valves, deduced without the help of vivisection, is a masterly observation. Dr. Keele has brought vividly to light much of what might have been passed over and presents his subject with a lively interpretation and respect. *J. L. Lovibond*

Disorders of the Heart and Circulation. Edited by R. L. LEVY, M.D. London, Baillière, Tindall & Cox, 1951. Pp. xvi + 944, 368 Figs. 91s. 6d.

The chapters on cardiovascular disease which appeared first in Nelson's loose-leaf Medicine have now been collected together into a single volume, re-edited, revised and added to. Maude Abbot's original section on

Congenital Heart Disease is included, and 41 authors co-operate in this work. The articles by Levy on Coronary Insufficiency, by D. W. Richards on Circulatory Physiology, and by A. Graybiel on Electrocardiography are some of the better contributions. Repetition has not entirely been overcome and the index is confusing. *J. L. Lovibond*

Accelerated Conduction. The Wolff-Parkinson-White Syndrome and Related Conditions. MYRON PRINZMETAL, M.D., REXFORD KENNAMER, M.D., ELIOT CORDAY, M.D., JOHN A. OSBORNE, M.D., JOSHUA FIELDS, M.D., and L. ALLEN SMITH, M.D. New York, Grune & Stratton, 1952. Pp. 110, Figs. 48. \$4.

By applying to ventricular movement their technique of high-speed cinematography and simultaneous electrocardiography these authors have distinguished two types of WPW aberration, nodal and ventricular. The former is commoner, and they produce evidence to favour a nodal lesion which diminishes delay of the normal excitation wave in the A-V node; hence "accelerated conduction." There is little to support the hypothesis of an accessory conducting system. They conclude that the WPW complex is composed of a premature localized contraction in one ventricle fused with the normal contraction of the rest of the ventricular mass. *J. L. Lovibond*

Atlas der Elektrokardiographie. O. RITTER and V. FATTORUSSO. Basel and New York, S. Karger Ltd., 1951. Pp. 256, Figs. 219. Sfrs. 35 (about -3).

This book was written as an introduction to clinical electrocardiography for students and doctors and is based on a rich material mostly collected in different American and European clinics. The authors can be congratulated on giving a unitarian and well-balanced exposition of their different views, presenting the best material which each of these schools could offer. The book opens with a note of warning on the shortcomings of electrocardiography, particularly concerning prognosis. It includes a useful chapter on the electrocardiogram in children and infants, and is richly illustrated with electrocardiographic drawings, replicas of technically perfect records; it is produced on the lines of Graybiel and White's atlas. The diagrams explaining the epicardial genesis of pathological Q waves in cardiac infarction are especially clear and excellent for teaching purposes, but the insistence on the different patterns of current of injury and current of ischaemia must be misleading for the beginner. This atlas includes 50 references of electrocardiographic "classics" mostly of American and German origin; the only British reference is Lewis's book. *C. Papp*

The Treatment of Angina Pectoris with Khellin. J. J. CONN, R. W. KISSANCE, R. A. KOONS, and T. E. CLARK. *Ann. intern. Med.*, 36, 1173-1178, May, 1952.

At the White Cross Hospital, Columbus, Ohio, 42 patients with angina pectoris were treated with khellin for

periods averaging 6 months, and the clinical response was gauged by the number and severity of anginal attacks. Of these patients 30 had a favourable response to the drug, with a decrease in the number and/or severity of the anginal pains; 6 patients were unchanged, and 3 developed an increase of cardiac pain; 3 patients died during the course of treatment. One or more undesirable reactions, including nausea, sometimes accompanied by vomiting, loss of appetite, epigastric pain, insomnia, and tachycardia were observed in 26 of the patients.

The authors still prefer nitrites in the routine treatment of angina, but think that khellin may be useful in patients who fail to respond to the usual type of therapy. The dose used was one 20-mg. tablet per day for the first week, increasing to 2 a day in the second week, and thereafter increased at weekly intervals by 1 tablet a day until a response or reaction took place.

J. McMichael

Stenosing Coronary Arteritis: its Possible Role in Coronary Artery Disease. F. G. ZAK, M. HELPERN, and D. ADLERSBERG. *Angiology*, 3, 289-305, Aug., 1952.

Among 50 fatal cases of coronary artery disease, all in subjects under 46 years of age, the authors encountered one in a man of 27 with acute tonsillitis. At necropsy the heart showed a large anterior infarct, though atheroma was mild. A thrombus was associated with eccentric narrowing of the descending branch of the left coronary artery.

A further series of 25 fatal cases, in which the patients' ages ranged from 25 to 40 years, were studied histologically. In 7 of these there were typical lesions of acute coronary arteritis and in 6 further cases one or more of these lesions were observed.

The authors point out that several attacks of acute arteritis are necessary to produce sufficient stenosis for a thrombus to occlude the main lumen.

Peter Harvey

Factors in the Onset of Coronary Occlusion and Insufficiency. Effort, Occupation, Trauma, and Emotion. A. M. MASTER and H. L. JAFFE. *J. Amer. med. Ass.*, 148, 794-798, March 8, 1952.

A study of 2080 attacks of acute coronary occlusion and 100 episodes of acute coronary insufficiency, revealed that these can be differentiated by cardiographic investigation in 95% of cases. Through-and-through infarction results from coronary occlusion, whereas coronary insufficiency produces only subendocardial necrosis. The authors were concerned with the relationships of these conditions to exertion. They found that unusual effort was present in only 2% of the cases of occlusion, but there was a relationship to effort, or to factors increasing the work of the heart, in about half the cases of coronary insufficiency. They formed the impression that the prognosis is much better than was formerly thought; about half to two-thirds of cases of occlusion return to gainful employment within a year, and the authors consider that the outlook in coronary insufficiency is even better.

James W. Brown

Revascularization of the Heart by a Pedicle Skin Flap.

J. VON WEDEL, P. W. STONE, C. G. NEUMANN, J. W. LORD, J. W. HINTON, and R. E. MORAN. *Science*, 116, 319-320, Sept. 26, 1952.

A series of experiments were carried out in 25 dogs in an attempt to supply blood to the myocardium through a skin flap. All except 2 dogs survived the initial operation. A tubed pedicle skin graft was raised from the abdominal and chest walls, based on the region of the 5th and 6th ribs near the apex of the heart. The tube was passed through the pleural space and pericardium, the distal end opened out and sutured to the ventricles, about one-third of the area of such ventricle being covered. The average size of the flaps was 16 cm. long and 9 cm. wide at the base. That a good vascular anastomosis may develop between heart muscle and skin pedicle was demonstrated by the flow of an injected dye and an opaque medium from the descending branch of the left coronary artery into the pedicle. [A radiograph of this is reproduced.] The anastomosis was shown to be sufficient, in one instance, to keep the pedicle alive for a month after the base of the pedicle had been divided at a second operation.

The authors do not know of any previous attempt to supply blood to the myocardium through a skin flap.

Bryan P. Moore

Clinical Evaluation of 1-Hydrazinophthalazine (C-5968) in Hypertension With Special Reference to Alternating Treatment with Hexamethonium. R. L. JOHNSON, E. D. FREIS, and H. W. SCHNAPER. *Circulation*, 5, 833-841, June, 1952.

The phthalazine derivative 1-hydrazinophthalazine ("C-5968") depresses blood pressure and, in contrast to other hypotensive agents, causes an increase in renal blood flow. It can be given by mouth. The development of side-effects—headache, palpitations, dizziness, weakness—and tolerance could be obviated to a certain extent by giving the drug at wide intervals and by slow increases in dosage. In contrast to the poor results obtained with C-5968 alone, it became apparent that this drug was more effective than any other in maintaining the hypotensive action of hexamethonium when given midway between two parenteral doses of the latter; moreover, it appeared to potentiate the action of hexamethonium, as well as that of veratrum viride.

A. Paton

Angina Pectoris as a Symptom of Spontaneous Hypoglycaemia. [In English]. P. I. HALONEN and E. TAIPALE. *Cardiologia*, 20, 243-249, 1952.

At the Wihuri Hospital, Helsinki, 5 patients with angina pectoris stated that their symptoms appeared only several hours after a meal and that food relieved the pain. In all cases a glucose tolerance test showed that marked reactive hypoglycaemia followed about 2 hours after the ingestion of glucose. Anginal pains occurred during this period of hypoglycaemia and one patient showed electrocardiographic changes. The symptoms and signs were immediately relieved by taking sugar. These patients

were seen during the course of one year; 18 months to 2 years later it was found that the advice to take more frequent meals had caused relief of symptoms in all.

H. E. Holling

The Pathogenesis of Spontaneous Cardiac Rupture.

S. WESSLER, P. M. ZOLL, and M. J. SCHLESINGER.
Circulation, 6, 334-351, Sept., 1952.

An analysis of published figures showed that among 2609 patients dying in 29 general hospitals from acute myocardial infarction the incidence of cardiac rupture was about 9%, and was somewhat greater in women than in men. Similar conclusions were drawn by the authors from an unselected series of 1641 necropsies, in which the myocardium and coronary arteries were studied by injection and dissection, the incidence of rupture being 1.2% in the whole series, and 7% in the group with acute myocardial infarction. This survey showed that rupture usually develops within 2 weeks of acute infarction and is favoured by persisting arterial hypertension or episodes of unusual effort; there is, as a rule, no previous history of infarction or congestive heart failure. From the pathological examination it was concluded that rupture supervenes where the zone of infarction is transmural and of recent origin, with a poor collateral blood supply and absence of fibrosis in at least part of the infarcted area. Most of the drugs commonly used in the treatment of patients with acute infarction are unlikely to cause rupture, but vasopressin, which is occasionally given in order to combat severe hypotension, should not be used, for it is not only a powerful pressor agent but also a potent constrictor of the coronary arteries.

An extensive bibliography is appended.

Adrian V. Adams

Cholesterol Tolerance in Coronary Thrombosis. I. WANG.

Brit. med. J., 1, 1278-1281, June 14, 1952.

In this work from the Victoria Infirmary, Glasgow, the author describes an investigation in which 50 patients, who had fasted overnight, were given 5.0 g. of cholesterol in 25 g. of margarine. The blood cholesterol content was estimated, fasting, and at 2, 4, 6, and 8 hours after the test doses. The patients were divided into 3 groups: Group 1 consisted of 20 normal controls; Group 2 of 12 patients who were suffering from Type 2 nephritis, diabetes mellitus, or myxoedema. Group 3 consisted of 18 patients with atherosclerosis, 15 also had coronary thrombosis.

The cases in Group 2 showed significant increases in the serum cholesterol level, apart from those with myxoedema on adequate thyroid therapy. The results in Groups 1 and 3 did not show any significant difference. The author submits that these results support the belief that the restriction of cholesterol in the diet of patients with coronary thrombosis serves no useful purpose. He also points out that despite the low-cholesterol diet which rationing has imposed in Great Britain for over 10 years, the incidence of coronary thrombosis continues to increase.

Peter Harvey

Cor Pulmonale Resulting from Deformities of the Chest.

[In English]. S. SAMUELSSON. *Acta med. scand.*, 142, 399-408, April 30, 1952.

At the University Hospital, Copenhagen, 41 patients with kyphoscoliosis were examined and the records of 62 dead patients who were known to have suffered from kyphoscoliosis during life were studied in order to determine the incidence of cor pulmonale in such cases. Dyspnoea was an early symptom in 85%, and the pulmonary second sound was accentuated in one-third. Electrocardiograms were taken in 70 cases and in 27 there were signs (chiefly those of right axis deviation) that were considered to signify right heart "strain"; left axis deviation was shown in 16. Of the 62 deaths the cause of death was cardiac failure in 60%, the average age at death being 46 years. Necropsy had been performed in 10 cases, in all of which the right ventricle was hypertrophied.

C. W. C. Bain

Mechanism of Syncope and Action of Drugs in Complete Heart Block. M. H. NATHANSON and H. MILLER.

Calif. Med., 76, 370-375, June, 1952.

Rational treatment of Adams-Stokes seizures depends on the underlying cardiac mechanism, that is, on whether the attacks are due to ventricular asystole on the one hand, or to ventricular tachycardia or fibrillation on the other. An abrupt onset without any premonitory disturbances of rhythm and the absence of any periods of ventricular arrhythmia in an electrocardiogram taken between attacks suggest that ventricular asystole is the causal factor. Conversely, ventricular arrhythmia as a causal factor is suggested by periods of arrhythmia preceding the attack, and a routine electrocardiogram, especially if long strips are taken, may show periods of ventricular extrasystole.

In the treatment of Adams-Stokes seizures due to ventricular systole isoprenaline is recommended, the route of administration depending on the patient's condition. Usually a subcutaneous injection of 0.14 to 0.2 mg. is given, but in the presence of actual syncope 0.02 mg. is given by intracardiac injection, and if syncope is impending 0.02 mg. is given intravenously. In the treatment or prevention of attacks associated with ventricular arrhythmia neither quinidine nor procaine amide is recommended, because these drugs tend to increase ventricular irritability and thereby convert a ventricular tachycardia into a fibrillation, or they exacerbate the latter. Isoprenaline is preferred in these cases also, because it does not exert any unfavourable effect upon ventricular fibrillation; it should certainly be used in those cases in which the causative factor of the seizure cannot be determined.

William A. R. Thomson

Surgical Closure of an Aortic Septal Defect. R. E. GROSS.

Circulation, 5, 858-863, June, 1952.

The author describes a case in which an aortic septal defect was treated surgically with success. He discusses the similarity between this condition and patent ductus

arteriosus, and emphasizes the difficulty of preoperative differential diagnosis. In patients suffering from an aortic septal defect the thrill is palpable in the pulmonary artery at a much lower level than it is in cases of patent ductus arteriosus and is not obliterated by pressure on the area of the ligamentum arteriosus. In the case described closure was achieved by ligation of the communication with tape. The author states that access through a left interior thoracotomy proved difficult.

J. R. Belcher

An Evaluation of Intracardiac Angiocardiography. G. C. SUTTON, G. WENDEL, H. G. WEDELL, and D. C. SUTTON. *Amer. J. Roentgenol.*, 67, 596-601, April, 1952.

The authors have compared two methods of angiocardiography: (1) by intracardiac catheterization; and (2) by the more usual technique of injection through a vein. The intracardiac technique was employed on 36 patients, all over 16 years of age, and the venous injection technique on 47.

The advantages of the direct procedure include high concentration of the opaque medium at the site of the investigation, and a clear field unobstructed by shadows of the medium in the right atrium and large veins. The dye can, if desired, be injected directly into the pulmonary artery. Accurate timing of the radiographs can be more easily achieved, and good films can be obtained with a relatively simple low-powered apparatus, the cassettes being hand-operated. The disadvantages are the slightly longer time required for carrying out the catheterization, the greater risk of reaction due to concentration of an irritant medium, and the risk of infection resulting from a slightly more elaborate surgical procedure. Transient arrhythmia was noticed in about one-third of the patients, and there was one death.

A. M. Rackow

Congenital Pulmonic Stenosis with Open Foramen Ovale in Infancy—Report of Five Proved Cases. R. P. JOHNSON and E. E. JOHNSON. *Amer. Heart J.*, 44, 344-359, Sept., 1952.

The clinical and pathological features of congenital pulmonic stenosis with an open foramen ovale are described. The stenosis is usually valvular, and of severe degree. This results in considerable right ventricular hypertrophy, with systolic pressures which may exceed the systemic systolic pressure. As right atrial pressure increases, a right-to-left shunt develops; hence cyanosis may not be apparent until some months or even years after birth. Examination reveals signs of pulmonary stenosis with central cyanosis. Radiographs show post-stenotic dilatation of the pulmonary artery and oligæmic lung fields. The electrocardiogram is strongly right-sided.

Five illustrative cases are described, all of which were fatal. In 2 cases death followed a respiratory infection and in the remainder it was heralded by paroxysmal dyspnoea. The serious prognostic significance of the latter is stressed, and the authors regard it as constituting an urgent indication for valvotomy.

D. Weitzman

Treatment of Peripheral Arterial Obliterative Diseases and Their Complications by Arterial Infusions of Histamine. I. MUFSON. *Amer. J. Med.*, 12, 680-687, June, 1952.

The author discusses the treatment of occlusive vascular disease involving the lower extremities with histamine administered by slow drip into the femoral artery; 2.75 mg. of histamine phosphate was dissolved in 500 ml. of normal saline and infused at the rate of 2 to 5 drops per heart beat. The immediate effects were an erythema from toes to groin, an increase in skin temperature, and filling of superficial veins. Not infrequently the infusion was followed by pain which necessitated termination of the procedure unless a regional nerve block was employed. The injections were given weekly or bi-weekly, the total number varying from 4 to 10.

Three groups of patients were studied. Group 1 consisted of 107 subjects with absent popliteal pulses; Group 2, 10 subjects with no palpable femoral pulses; and Group 3, 16 patients with severe infected ischæmic lesions. The results were judged by improvement in walking distance and by decrease in nocturnal pain. In Group 1 the improvement was very good in 53%, good in 36%, and absent in 11%. In Group 2 the improvement in walking was good in 7 patients and absent in 3. In Group 3 severe infection was significantly improved when antibiotics were added to the infusion solution, and resting pain was abolished in all but one of the 16 patients.

The authors consider that intra-arterial histamine is a more effective vasodilator than either tolazoline given by the same route, or sympathectomy, although the effect of the latter is more lasting.

J. F. Goodwin

Spatial Vectorcardiography. ARTHUR GRISHMAN and LEONARD SCHERLIS. W. B. Saunders Co., Philadelphia, 1952.

In this monograph the opening chapters describe the theoretical problems of vectorcardiography and the principles are clearly presented and discussed. Relatively little space is devoted to techniques and apparatus, so that the many difficulties of the method are not stressed.

The normal spatial vectorcardiogram is described and well illustrated, and the following sections deal with the common pathological variations. It is perhaps unfortunate that the rare case is often used to illustrate a common condition; this is particularly apparent in the chapter on right ventricular hypertrophy. All chapters are profusely illustrated and the vectorcardiograms are accompanied in most cases by the appropriate electrocardiograms. The standard of reproduction does not always do justice to the high quality of the text; QRS loops are clear in most illustrations but the P and T waves are rarely so.

An overall review of the subject is attempted with success. The authors emphasize the value of an understanding of the concepts of spatial vectorcardiography in the study of routine electrocardiography, and the interrelation of the two forms of recording the electrical activity of the heart is stressed throughout.

Wallace Bridgen