ABSTRACTS OF CARDIOLOGY

Cardiac infarction may occur in a young man or woman, in whom there is no evidence of syphilis or hypertension. The authors discuss 39 such cases in patients varying in age from 28 to 47, 11 of whom were women and 28 men, and in which the ultimate cause of the infarct was thought to be fatty deposits in the small arteries due to a raised blood cholesterol. In hereditary xanthomatosis there is a disturbance of the lipid metabolism, and, although fatty deposits in skin and mucous membrane are not always seen, abdominal angi and infarcts sometimes occur; there is always a raised blood-cholesterol in such cases. In 7 cases of cardiac infarction, the only common factor was a high level of cholesterol in the blood. In only 2 cases was necropsy possible; in both there was an extensive infarct of the left ventricle, the arteries being stuffed with yellow plaques with little sign of fibrosis. All patients had a normal blood pressure, and most had had previous attacks of precordial or abdominal pain. The authors conclude that the steroids play an important, perhaps a primary, role in the causation of arterial occlusion. T. E. C. Early

At the Mayo Clinic between 1925 and 1947 coarctation of the aorta was diagnosed in 119 cases. Males predominated over females in the ratio 3:8 to 1. Only 26% of the patients were below 20 years of age—the period of life when surgery is best tolerated. In 30% the condition was discovered incidentally; high blood pressure frequently pointed to its presence, but only 3 patients gave a history of intermittent claudication. Palpation of the larger arteries to detect differences in pulsation is more reliable than the smaller limb arteries. Differences in arterial pulsation and pulse pressure in the arms may aid in locating the site of the coarctation. In 80% there was evidence of collateral circulation over the scapular and interscapular regions, and somewhat less frequently over the supraclavicular and internal mammary regions. Cardiovascular murmurs were present in 94%, the most frequent being a fairly loud systolic bruit over the base of the heart. Basal diastolic murmurs were heard in 20% and were probably associated with valvular lesions. In 25% there was x-ray evidence of cardiac enlargement and in 30% electrocardiographic evidence of left ventricular preponderance. Ophthalmoscopic examination showed general narrowing of the retinal arterioles, particularly in the cases with hypertension, but no patient had hypertensive retinopathy. Renal function studies revealed no abnormality and this possibly accounts for the absence of severe hypertensive disease. Important features in establishing the diagnosis were found to be: (1) characteristic differences in arterial pulsations and in direct and indirect blood pressure readings between the upper and lower limbs; (2) evidence of well developed collateral circulation; (3) rib notching in the presence of one or more cardiac or cardiovascular murmurs. H. E. Holling

Ten patients with angina pectoris and hypertension were treated with propylthiouracil in the Jewish Hospital, Brooklyn, N.Y. Initially a dose of from 50 to 100 mg. was given daily; this was increased to a maximum of 200 mg. daily. Improvement took place within 8 weeks in 4 of these patients, and 2 of them were able to resume work. Two became progressively worse during treatment. No correlation could be found between the levels of the basal metabolic rate and improvement in symptoms. One case with an initial figure of −8% became free from attacks when the level fell to −26%; 3 more cases, in which the initial levels were raised, improved while the rate was still above normal limits. The blood cholesterol levels often did not rise as the basal metabolic rate fell. No toxic effects on the blood were observed, but water retention occurred in 7 patients, causing dyspnoea and oedema of the legs. C. W. C. Bain

The authors, working in the Pennsylvania Hospital, Philadelphia, have participated in a controlled study sponsored by the American Heart Association to determine the value of dicumarol therapy in coronary occlusion with myocardial infarction. There were 35 treated cases and 51 controls. Prothrombin times were kept so far as was possible between 30 and 35 seconds, control times being 13 to 15 seconds. The initial dose of dicumarol was 300 mg. daily for 2 or 3 days, the maintenance dose somewhat less than 100 mg. daily; treatment was continued for about a month. Among the controls thrombo-embolic complications occurred in 12 patients, 9 of whom died; there were also 9 deaths from other causes. In the treated cases thromboembolic complications occurred in 6 with a fatal ending in 2; there was 1 other death.
The results of a preliminary analysis of the first 800 cases of cardiac infarction treated with dicoumarol which were collected by a special committee of the American Heart Association are also given. The death rate in the controls was 23% in dicoumarol-treated cases 13%. Thrombo-embolic complications occurred in 19% of the untreated and in 9% of the treated patients. Hemorrhagic manifestations of one type or another were encountered in 4% of the controls and in 11% of the treated cases; but serious hemorrhage was rare.

The value of anticoagulants in the treatment of simple phlebothrombosis or thrombophlebitis is again stressed. In 23 untreated cases there were 9 deaths; in 30 cases treated by venous ligation, 3 deaths; in 49 cases treated with heparin and dicoumarol there was only 1 death. It is admitted that selection of cases was weighted against the controls.

Paul Wood


The literature on the mechanism of paralysis of the left recurrent laryngeal nerve in cases with cardiac enlargement is reviewed, and 2 personal cases are described. One patient had mitral and aortic valvular disease with marked enlargement of the left auricle; the other had atrial septal defect, possibly with mitral stenosis (Lutembacher’s syndrome) and greatly enlarged pulmonary conus. The area bounded by the aortic arch superiorly, the pulmonary artery inferiorly, and the ligamentum arteriosum medially was carefully examined in 5 fresh and 22 fixed cadavers, and a group of three to four lateral tracheo-bronchial lymph nodes was constantly found in close proximity to the left recurrent nerve. It is pointed out that these lymph nodes may effectively compress the nerve when accompanied by cardiac hypertrophy, engorgement of the pulmonary artery, or both. A. Schott


Cardiac output can be determined from the time-concentration curve in arterial blood (obtained from rapid serial samples) of a dye injected rapidly into a vein. This and the direct Fick method (cardiac catheterization) were compared in 48 almost simultaneous determinations in 31 subjects, including normal subjects at rest and during light and heavy exercise and patients suffering from various cardio-respiratory disease at rest and during occasional light exercise. The technique of determining cardiac output by the dye injection method is described in detail. The results agreed within 25% in all but 6 determinations. The distribution of results about the line of identity was symmetrical, so that the averages for each method were almost identical. The dye method, owing to its rapid performance and its nature, is more apt to reflect physiological variations. The sources of error in it are discussed, the chief being recirculation of blood (containing dye) during the determination.

R. A. Gregory


In 145 patients with anginal pains, areas of cutaneous hyperalgesia were repeatedly mapped out with a view to evaluating their diagnostic significance and their relation to the results of treatment. Cutaneous hyperalgesia was most commonly present in the C2 to C4 and D1 to D5 dermatomes, rarely in the C5 to C7 and D6 dermatomes. These zones were not static in any one patient but were liable to change if the irritation of the pain changed. They were always present in patients whose attacks were frequent or prolonged, but were only found in 79% of the whole series. When patients were tested within 3 days of an attack, areas of hyperalgesia were present in 93%. Their disappearance is considered to be a valuable index to the success of treatment.

S. S. B. Gilder


Plethysmographic measurements of the blood flow to the arm and leg in 14 normal persons at rest and 14 patients with aortic coarctation revealed no significant difference between the two groups, and in 9 cases no change in blood flow followed surgical removal of the coarctation.

H. E. Holling


Cerebral hemorrhage is the cause of death in nearly one-third of hypertensive individuals. The final mechanism of the hemorrhage is ill understood. It has been ascribed to the development of miliary aneurysms, to ischemia of brain tissue and weakening of support for the blood vessels, to disease and rupture of the walls of veins, and, more recently, to capillary weakness. The latter factor has been associated with the occurrence of retinal hemorrhage.

On a re-investigation, retinal hemorrhages were found to have been present in 5 out of 17 patients who had had a cerebral hemorrhage; retinal hemorrhage was present in 14 out of 18 patients with hypertension who died of cardiac failure without cerebral hemorrhage. Retinal hemorrhages occurred more frequently in patients with large areas of "spasm" of the retinal arteries than in subjects with marked thickening of these vessels. It is
concluded that retinal haemorrhages cannot be used as a
diagnostic sign of future cerebral haemorrhage.

J. McMichael

True Aneurysms of the Mitral Valve in Subacute Bacterial
Endocarditis. O. Saphir and E. P. Leroy. Amer. J.
Path., 24, 83–95, Jan., 1948.

Mycotic aneurysms of the mitral valve were found in
5 out of 12 cases of subacute bacterial endocarditis
treated with sulphonamide preparations, heparin, or
penicillin. These cases were observed between 1943 and
1946; the authors were unable to find an example of
mycotic aneurysm formation in 41 cases of subacute
bacterial endocarditis seen between 1935 and 1943.
Rupture of the aneurysm occurred in 4 cases, and the
increased incompetence of the mitral valve may have
contributed to death. The aneurysms probably arise in
areas of granulation tissue situated in the substance of
the valve. The authors suggest that the aneurysms
represent attempts at healing of the endocarditis, perhaps
as a result of the increasing use of chemotherapeutic
agents in recent years.

R. H. D. Short

The Action of Neostigmine in Supraventricular Tachy-
The action of neostigmine methylsulphate (or "prostig-
mine") on sinus tachycardia and auricular and nodal
paroxysmal tachycardias is discussed; the paper includes
case notes and electrocardiograms of 5 patients. The
tracings demonstrate the slowing of sinus tachycardias
with rates of about 130 per minute to about 80 per minute
within about 20 minutes of the injection of 1 mg. of
neostigmine, and the restoration of normal rhythm in
a case of auricular tachycardia and in one of nodal
tachycardia 5 minutes after injection. Immediately on
the return of sinus rhythm the P–R interval is prolonged,
but becomes normal within a few minutes. In another
case of auricular tachycardia the abnormal rhythm
persisted after the injection, but there was an immediate
and progressive effect on A-V conduction, so that, 33
minutes after the injection, there was 3 : 1, 4 : 1 A-V
block. Two days later normal rhythm was recorded.
The influence of neostigmine on these types of tachy-
cardia is believed to be due to its action on the myoneural
junctions of parasympathetic vague fibres in the S-A
and A-V nodes and in auricular muscle. The drug
augments vague activity at these sites by inhibiting the
action of cholinesterase. If these tachycardias result
from the action of sympathomimetic amines on the
heart, the use of the parasympathomimetic drug, neo-
stimine, is rational therapy.

S. H. Cookson

Continued Hypertension. Prognosis for Surgically
Treated Patients. R. H. Smithwick. Brit. med. J.,

It is necessary to turn to the U.S.A. for any large series
of patients treated surgically for hypertension; the
author describes his second series in this paper. The
operations were performed in Boston, Massachusetts,
and the author's own lumbo-sacral technique was em-
ployed. All of the 256 patients were suffering from
continuous essential or malignant hypertension and had
been operated upon at least 5 and at the most 91 years
previously.
The state of the cardiovascular system was evaluated
before and after operation with particular reference to the
cerebral, retinal, cardiac, and renal areas. Intravenous
pyelography was carried out as a routine, and the blood
pressure data were so far as possible obtained in a
standard fashion. Male patients comprised 39.4% and
females 60.6% of the series. The total mortality during
the 5 to 9 year period of observation was 31% the
mortality among males being 34% and among females
29%. The causes of death were cerebral, cardiac, renal,
and miscellaneous, in that order, with a heavy preponder-
ance in the very young and the older age groups. The
prognosis became poorer as the degree of eye-ground
abnormality increased, and the same applied to the
cardiovascular findings. The presence of arteriosclerosis
was associated with a particularly poor prognosis. It
had been previously noted that in a follow-up period of
1 year to 5 years the blood pressure levels were lowered
significantly in the majority of unselected patients,
but in the period of 5 to 9 years this lowering is not main-
tained and there has been a return of the pressure to
pre-operative levels in 44% of cases. There was evi-
dence, however, of the slowing up of the rate of progress
of cardiovascular disease, and this may prove to be a very
important accomplishment. Comparison with medical
treatment is made as much as possible, but the major
handicap is the absence of reliable and adequate medical
statistics. Such comparisons as can be made at this time,
while admittedly inadequate, suggest that surgical treat-
ment has favourably altered the prognosis in many cases
of continued hypertension and cardiovascular disease.

H. T. Simmons

Asynchronous Activity of the Dog's Heart After Section of
the Right Branch of the Bundle of His. A. I. Smirnov.
The influence of section of the right branch of the bundle
of His on the action of the heart was observed over
a period of 6 years in a dog. During the first days
after the operation a reduplicated first heart sound
became audible at the apex. Three weeks later a systolic
murmur became audible over the whole thorax. This
murmur disappeared just before the death of the dog.
Six weeks after the operation atypical levocardigrams
were present in leads II and III, indicating that the right
bundle of His had been severed. Repeated X-ray
examination showed a gradual dilatation of the right
ventricle. Changes in the electrocardiogram developed
slowly after the operation. During the last days before
the dog died of heart failure a marked oedema and
ascites developed. Post-mortem examination showed
that the right branch of the bundle of His had been
correctly cut and that its ends had not united again.
Hypertrophy and degeneration of the right myocardium
and a relative tricuspid incompetence were found. The
compensation of the right ventricle (hypertrophy and dilatation) had succeeded in maintaining normal circulation over a period of 4 years. This compensation, however, failed after 6 years, causing death of the animal. No synchronous rhythm with the left ventricle occurred during the 6 years after the operation.

J. Flaks


The authors report the results of serum protein estimations on 147 hospital patients with various forms of heart disease. Globulin is rarely reduced but albumin is in two-thirds of the cases, especially if there is heart failure, edema, or evidence of liver disease as shown by the other usual tests. Owing, however, to the multiplicity of factors governing the concentration of protein in the blood (absorption, utilization, synthesis, dilution, and loss) and the fact that most of these factors are affected in some way by cardiac decompensation, interpretation is very difficult.

In recovery from heart failure, the albumin content increases as does also the erythrocyte sedimentation rate, possibly due to a rapid increase in fibrinogen. These increases are thought to be due to improvement in liver function and appear to be little related to diet, though the authors recommend use of protein hydrolysates. They admit however that no increase in the serum proteins may be detectable while decompensation persists and stress the importance of not giving hydrolysates, which contain an appreciable amount of salt.

A. M. M. Wilson


The authors discuss the value of cholesterol estimations in patients with heart disease, based on the estimations carried out on 314 patients in the cardiac clinic of the Södersjukhus in Stockholm. Sackett's modification of Bloos's method was used.

The values varied considerably within an age group or disease group and even in the same patient at different times, but on the whole values were higher in women than in men, in old people than in young ones, and in patients with cardiac sclerosis than in those with other types of heart disease. The level tended to fall after admission to the ward irrespective of the diagnosis. The authors conclude, in agreement with Josephson (Nord. Med., 1947, 33, 498), that a single estimation is almost useless and that though repeated ones may be of diagnostic assistance in cases of liver disease, essential hypercholesterolaemia, and thyroid disease, they are of very doubtful value in the differential diagnosis of cardiovascular conditions.

A. M. M. Wilson


The authors describe 8 cases of carotid artery thrombosis seen in a military hospital in 1945. The thrombosis was due to trauma of the common carotid following penetrating wounds of the neck. Patients were usually comatose on admission to hospital, with changes in the pupil reactions on the affected side and signs of hemiplegia on the other. Absence of pulsation over the temporal artery from involvement of the external carotid was found to be a valuable confirmatory sign. One patient recovered after heparin was administered; the remainder died. There were 5 necropsies; in 1 case the thrombus had extended as far as the circle of Willis; in 2 cases major cerebral vessels were blocked by emboli. The authors consider that this condition may be more common in war surgery than has been supposed.

C. W. C. Bain


There is some clinical and experimental evidence that chronic infections, especially of the gall-bladder and paranasal sinuses, may play a part in the causation of atherosclerosis and associated heart failure. Micro-organisms were found in sections of the thickened, thrombosed small arteries of chronically hyperplastic sinus tissues removed at operation. Similar organisms were sometimes demonstrated in sections of thrombosed coronary arteries from patients dying of acute coronary thrombosis. Micro-organisms introduced into the paranasal sinuses or paralaryngeal lymph nodes of cats could be demonstrated in the walls of the aorta and coronary arteries. Trypan-blue granules introduced into the paralaryngeal lymph nodes were demonstrated in phagocytic cells within the walls of the aorta and coronary arteries.

Martin Hynes


Rabbits were given 1 g. of choline with their food three times weekly. A well-controlled experiment showed that the addition to the diet of 0.5 or 1 g. of choline hydrochloride daily delayed the development of atherosclerosis for 80 days or more. The effect was greater with the larger dose of choline. Hypercholesterolemia was equal in the control animals and in those receiving choline.

Martin Hynes


Vitamin E (α-tocopherol) was given without benefit to 13 patients suffering from heart disease with relatively fixed symptoms. The series comprised cases of angina pectoris and cardiac failure due to coronary disease or rheumatic valvular disease. The drug was given in doses varying between 200 and 800 mg. daily and administration was continued for from 7 to 12 weeks. In one case of angina pectoris there was a temporary improvement for the first two weeks, but the attacks then
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continued at their former frequency. In no other case was the number of anginal attacks affected, nor did any of the signs abate in those with cardiac failure. The authors conclude that the use of vitamin E in heart disease is not warranted.

C. W. C. Bain


The administration of dicumarol does not retard the healing process or the development of collateral circulation in dogs with experimentally produced myocardial infarction.

R. T. Grant


Coronary artery disease as a cause of death in young subjects received little attention until the war of 1939–45. The present article deals with findings in 11 “healthy” soldiers, ranging in age from 22 to 38 years, who died from coronary artery disease. These men had been subjected to frequent medical examination, but the results were negative. In 7 over-weight was thought to be a predisposing factor; the effects of alcohol and tobacco were considered to be negligible. The symptoms were generally atypical in those patients surviving more than an hour. Pain was present in the epigastrium, left chest, or precordium. Usually it did not radiate, although in one case there was continuous pain in the jaw for 3 days and in another left shoulder pain. Contrary to accepted ideas, the onset of pain was always in the waking hours, and pain was not associated with any strenuous activity. Six of the patients died within an hour, and 5 lived for from 2 to 33 days. At necropsy half of the cases showed significant cardiac hypertrophy. Severe coronary sclerosis was present in 6 of 8 cases with actual thrombosis, and was moderate in 2 others. Two patients had sclerosis without thrombosis and in one there was a coronary embolism with arteritis and septic thrombosis of the smaller coronary branches.

James W. Brown


From patients seen in private consultation since 1914, 100 consecutive patients were selected in whom hypertension (systolic pressure greater than 180 or diastolic pressure greater than 100) had existed for more than 8 years. Of the 100 patients 32 were between 28 and 50 years of age, 39 between 51 and 60, and the remaining 29 between 61 and 77. The shortest duration of hypertension was 9 years, the longest 25 years. In 1947, 53 patients were dead, 30 were in good health, 17 were incapacitated to a greater or lesser degree. The effects of age, sex, height of systolic and diastolic pressures had little effect on the actual duration of life.

This study emphasizes the good prognosis in uncomplicated, benign or non-progressive hypertension.

W. T. Cooke


Infraradial and infrapopliteal pulse waves were recorded by means of a hypodermic strain gauge manometer in a series of patients with coarctation of the aorta. The characteristic findings were an increase in the systolic and diastolic pressures in the radial arteries, and a reduced systolic, though often with an increased diastolic, pressure in the femoral artery. The onset of the femoral pulse wave is often delayed. When the stenosed portion of the aorta was resected and an end-to-end anastomosis was carried out the findings reverted to normal, but when the stenosed portion was excised and the subclavian artery anastomosed with the distal aorta the delay in the femoral pulse wave disappeared though the femoral pulse pressure was still reduced. The findings could not be correlated with the clinical response of the patient to the procedure.

H. E. Holling


Between 10 and 20 years of age is regarded as the most suitable age for operation in cases of coarctation of the aorta. Before the age of 10 the aorta is not large enough for satisfactory anastomosis and it is not known whether the ring of scar tissue left in the aorta at the site of the anastomosis will increase in size as normal growth and development take place. Above the age of 20 considerable vascular damage may have occurred and good results cannot be expected. At operation it is found that the length of the stenosed portion varies considerably; in cases in which the two divided ends of the aorta could not be brought together the author has anastomosed the subclavian artery to the caudal end of the divided aorta. The results of this procedure, however, have not been so good as was hoped.

H. E. Holling


The study of the blind spot is considered to yield useful results in the diagnosis of early hypertension. The author examined by campimetry 69 eyes in 35 patients with early hypertension. Some control studies were carried out on normal eyes. In 67 of the 69 eyes there were definite deviations from the normal which fell into two groups: (1) significant increase in the extent of the blind spot; (2) irregularities in its contours, prolongations taking the shape of knobs, teeth, and attenuated branches. Ophthalmoscopic examination revealed some changes in the fundus in 28 cases. S. S. B. Gider

In a patient in whom the findings indicated acute embolic occlusion of the iliac artery, the presence of ecchymosis of the abdominal wall suggested the diagnosis of acute dissecting aneurysm of the aorta. This was confirmed at necropsy, the ecchymosis resulting from involvement of the deep inferior epigastric arteries. T. Semple


Intermittent venous hyperemia is indicated after acute arterial occlusion if embolectomy or sympathectomy is not feasible or after either procedure as post-operative treatment, and in patients with chronic arterial occlusion due to arteriosclerosis with and without diabetes, to syphils, or to thrombo-angiitis obliterans. Patients with marked vasospasm, as in the earlier stages of thrombo-angiitis, are subjected by the authors to sympathectomy before the treatment is begun. The procedure is contraindicated in acute venous thrombosis, lymphangitis, severe arteriolar obstruction, and in the presence of frank gangrene. The treatment has been found useless for neuropathies, whether ischemic or metabolic, caudal is states, and sequelae of frost-bite and immersion foot.

A hundred ambulatory patients with intermittent claudication and numbness and tingling of the toes, often associated with angina pectoris, were studied over a period of one year or more, the apparatus being used at home; 35 showed notable improvement with the treatment and 32 slight improvement. Improvement was measured by noting walking ability and venous filling times. The rationale of the treatment is doubtful, but in addition to a small reactive hyperemia a mechanical filling and stretching of the terminal vascular bed takes place during the procedure. T. Semple


From a study at the Beekman Downtown Hospital, New York, of 71 patients with proven coronary thrombosis the conclusion was reached that dicumarol is a therapeutic agent of safety and value; it appears to be a preventive of thromboembolic phenomena in cases of acute coronary occlusion associated with myocardial infarction. Prothrombin estimations are essential for safe therapy, but if, in spite of these, hemorrhagic complications such as hematuria occur, they will respond to intravenous administration of 60 mg. of menadione. The dosage of dicumarol is 300 mg. on the first day, with 200 mg., or less according to the prothrombin readings, daily for three or four weeks. G. F. Walker


Calf hearts and human hearts were perfused with saline and the amount of fluid reaching the various chambers was measured. It was found that drainage into the right heart by way of the vein Thebesii was quite considerable, and this fact thus lends support to the hypothesis that a reversal of blood flow in these veins may transform them into auxiliaries to the coronary arteries whenever these are narrowed or occluded. No difference in Thebesian drainage was observed between normal hearts and those showing coronary sclerosis. R. Salm


Infiltration of 30 ml. of 0·25% procaine solution into the neighbourhood of the superior cervical ganglion gave unexpectedly good results in 24 cases of angina pectoris; in 19 the attack was arrested at once and in 5 pain was greatly relieved. After 1 year, 8 out of 12 of these patients were still free from pain. A second infiltration in cases of relapse was less effective. No complications were observed. S. S. B. Gilder


The author briefly reviews the history of angiocardiography, and describes the technique employed upon a number of children. The patient was anaesthetized with cyclopropane and oxygen. It was found that the best visualization was given by films taken in the left oblique position and in the supine antero-posterior position. There were no untoward reactions. The normal appearances are described and well illustrated by line drawings. The author emphasizes that the cadaver appearance of the interior of the heart chambers is modified by the tendency to formation of an axial stream, by the presence of blood currents, and by dilution of the contrast medium.

He describes 5 cases of congenital heart lesion. These included 3 cases of patent ductus arteriosus, 1 accompanied by complete heart block, 1 by pulmonary stenosis, and 1 by a patent interauricular septum. In one of these cases the communicating channel between pulmonary artery and aorta was visualized directly. A case of coarctation of the aorta is well illustrated and the defect in the interventricular septum in a fifth case is clearly shown.

In the author's view, when a lesion is present for which, on clinical grounds, surgery is the treatment of choice, angiocardiography is indicated, both for accurate diagnosis and to reveal any co-existing abnormalities. A. M. Rackow

Undernourished men and women of all ages generally have a lowered systolic and diastolic blood pressure and a slowed heart rate. The hypotension and bradycardia, which appear before any gross intestinal disturbance (such as hunger edema), are not the result of myocardial damage or of a disturbed circulatory control. They are rather the expression of a special type of control for the sake of circulatory economy, and are associated with a diminished minute volume, a lessening of the elastic resistance, and an increase of the peripheral resistance. R. T. Grant


Observations on 43 patients before and after operation lead to the conclusion that the blood-pressure response to spinal and caudal analgesia has no more than a negative value in the selection of patients for sympathectomy. R. T. Grant


High spinal or caudal analgesia, which materially reduces blood pressure in hypertensive patients, usually causes renal vasodilatation, resulting in increased renal blood flow and a slight decrease in glomerular filtration rate. This is inconsistent with the view that essential hypertension is a compensation for increased renal vascular resistance. The renal vascular response to analgesia is not a positive guide to the selection of patients for sympathectomy. R. T. Grant


The effects on systolic and diastolic blood pressure of intravenous injection of tetraethyl-ammonium chloride and the standard sodium amytal test were compared in 68 hypertensive subjects. Injections of 2 ml. (0.2 mg.) of tetraethyl-ammonium chloride were given intravenously over a period of 1 to 1½ minutes, and the blood pressure was recorded until the initial level was regained. The lowest level was reached 1 to 3 minutes after the injection, and a smaller secondary fall was usual about 10 minutes after the injection. There is a parallel fall in systolic and diastolic pressures. In a comparison of the fall in the diastolic pressure in the two tests, it was found that the difference was less than 15 mm. in 51 cases, 15 to 30 mm. in 13 cases, and above 30 mm. in 4 cases. The largest discrepancies occurred in cases of malignant hypertension, the fall usually being greater with tetr-ethyl-ammonium chloride. Reactions were not important, but were most noticeable in patients with malignant hypertension.

The authors regard the test as an advance on the sodium amytal test in the assessment of cases for sympathectomy in view of its greater convenience and on the theoretical grounds that tetraethyl-ammonium chloride acts by blocking impulses at the sympathetic ganglia.

J. W. Litchfield


Fine nodular shadows disseminated throughout the lung-fields in association with mitral stenosis are occasionally seen on radiological examination, and have been described in Britain by Anglin, Elkeles, and Gumpert. Five further cases are here described and discussed and the literature reviewed. The small hard shadows are characteristically most densely aggregated in the mid-zones and there is a generalized fibre-mesh appearance of the lung with marked hilar congestion. The condition is seen most commonly in males between the ages of 20 and 40 with mitral stenosis and frequent hemoptyses. In one case histological examination at necropsy showed that the nodules consisted of masses of large heart-failure cells full of iron pigment, clumped together in the alveoli and their walls. There was also much extracellular pigment. It was previously thought that the nodules consisted merely of aggregations of heart-failure cells due to capillary stasis, but here the importance is stressed of repeated hemoptyses and subsequent phagocytosis of the red blood corpuscles.

E. G. Sita-Lumsden