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HYPERTENSION

by

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THE subject 'Hypertension' is not new. It has been discussed all these years and a number of articles written on it. Though our conception of hypertension has changed considerably within the past few years, we have not even today got clear views on the exact mechanism of Hypertension and have not yet got an ideal drug to treat the condition in all its phases. Now the life expectancy has increased to a great extent in the western countries and to a small extent in our own country and so, even in our country more people live to an age when Hypertension is more common. Hypertension hastens degenerative and obliterative changes in the arterioles of the retinal, renal, cerebral and coronary systems. Over 75% of hypertensive patients ultimately succumb to Cardiac complications especially Cardiac Failure and Coronary Sclerosis is found in the majority of patients dying of Hypertension. Though we have no ideal specific remedy, we are not quite helpness as we were a couple of years ago. The remedies available now for us have to be used with great care and I shall try to give in a few words the various remedies available and their limitations. There is no universal agreement as to the dividing line between normal and high B. P. The range of normal varies with age, from patient to patient and from time to time. Sustained systolic pressure over 145 and diastolic pressure over 100 mm of Hg. is now considered as evidence of hypertension. As we will see later, the B. P. readings by themselves are not of much importance. Series of readings have to be taken before coming to the conclusion that there exists Hypertension. Isolated readings are valueless and B. P. should be taken according to international accepted methods. Sustained elevation of arterial pressure is encountered in two main forms which has to be distinguished.

1. Systolic Hypertension — which is associated with low or normal diastolic level. This results as a mechanical consequence of such conditions as aortic regurgitation, arterio - sclerotic and regid aorta, comple heart block and thyrotoxicosis.

2. Diastolic Hypertension—is on the other hand product of a large number of interacting factors among which the peripheral resistence plays a dominant role. A sustained diastolic pressure of over 100 is observed in various conditions and among which the following are important.

1. Renal diseases—Acute and Ch. Glomerulonephritis, Ch. Pylonephritis, Polycystic Kidneys, Hydronephrosis etc.

2. Endocrine factors—Cushing syndrome, Pheochromocytoma, Pregnancy toxaemia etc.

3, Vascular diseases—Coarctation of Aorta, Periarteritis Nodosa, Cong. Heart Failure etc.

4. Cerebral diseases—Certain Brain tumours etc. In more than 75% of cases of Diastolic Hypertension, no cause can be found and these cases are termed Primary or Essential Hypertension. Before diagnosing a case as Essential Hypertension, various tests have to be done (I shall not describe them here) Benzo-dioxane and Regitin tests and estimation of 17 Keto steriods are done as a routine to exclude Pheochromocytoma. The next step is to assess the severity of the disability. The Distolic reading by itself is not a measure of the extent of the vascular damage. For that the inspection of the vascular fields offered by the retina and information gained by renal function tests are also to be done. The table prepared by Wagner and Keith in 1939 is still very useful in assessing the severity of the condition and helping us to plan the treatment of our patients.

	Grade 1	Grade 2	Grade 3	Grade 4
Symptoms	None to slight	Slight morning headache Vertigo	Moderate frequent headaches. Fatigue Dyspnoea Nocturia	Serve intense headaches. Weakness. Loss of weight Dyspnoea Confusion
Blood Pressure	150/100 200/120	180/100 270/130	180/110 280/140	240/130 300/180
Retinae	Minimal arterial narrowing	Definite sclerosis Arteriovenous compression No retinitis	As in Grade 2 with exudates, Star figures, Cottonwool patches, Haemorrhages Definite retinitis.	Papilloedema, with or without Grade 3 changes. Advanced retinitis usual.
Renal function	Normal	Satisfactory ; faint trace of albumen.	Impaired ; Albumen with casts and R.B.C.	Impaired, as in Grade 3, but progressively deteriorating.
3-year Mortality rates :	20%	35%	75%	95%

The grades 1, 2 and 3 are usually included in the term benign and 4, malignant hypertension. It is best to consider grades 1 and 2 as mild, Grade 3 as moderate and grade 4 as severe.

Management : The First step in the successful treatment of Hypertensive patients is the employment of Psychotherapy. The relief of emotional tension produces a sense of tranquility which in

itself can set a blood pressure at lower levels. Gain the confidence of the patients and achieve their co-operation and assist them to solve some of their problems. Most patients require advice on their daily routine which includes long hours of sleep, mid-day rest and week-end holidays. Obesity, if associated with hypertension, weight reduction is imperative. Reduction in the salt intake is found to benefit the hypertensive patient. Half a gram a day should be sufficient for a day. Patients vary in their tolerance to salt restriction and the salt depletion syndrome, characterised by weakness, nausea and vomiting should be prevented. This low salt diet can be achieved by salt free milk, baked potatoes. sugar and margarine kempners rice diet consists of 250–350 Grms. of corbohydrates in the form of sugar and fruits. The efficacy of this diet depends on the low sodium content. Patients in grades 3 and 4, those who have had or who have transient cerebro–vascular episodes, those who have had attacks of left ventricular failure or angina pectoris those who are disabled by severe symptoms as headaches all need energetic treatment. Those patients who have minor symptoms and have no serious cerebral, retinal or cardiac changes may be treated with general measures and in some instances with mild hypotensive agents.

Of the drugs available, Rauwolfia Serpentina stands first. There are many preparations available and the one commonly used is Reserpine. ·5 mgm, B. D. or T. D. S. Minor side effects are observed. If there is no response after a month's trial, a preparation Veratrum veride (Veriloid) is tried in the dose of 2 mgm. 4 times a day in addition to Reserpine. The dose of Veriloid is gradually increased until the earliest symptom of intolerance develop. They are salivation vomiting etc. As a general rule, patients need about 18 mgm. a day and a large majority of patients get well. When more energetic measures are called for ganglion blocking agents consisting of the halogen salts of hexamethonium and Pentamethonium have proved useful. Pentolinium Tartrate (Ansolysen) is the methonium compound of choice. It is given by mouth as well as by injection. The ideal method of regulating Pentolinium Tartrate to the patients particular requirement is by measurement of the B. P. taken lying and standing at frequent intervals during the day. This is generally done at the Hospital. The dose varies from patient to patient. Commence with a dose of 20 mgm. twice a day. The aim is to obtain an adequate hypotensive effect throughout 24 hours. When adjustments have been made and some tolerance developed, a days routine may work out at 140 mgm. at 7 a.m., 80 mgm. at 12 noon, 100 mgm. at 5 p.m., and 240 mgm. at 10 p.m. The difficulties in this treatment are that tolerance to the drug develop rapidly at first and so the daily dose must be raised day after day for a few weeks and later less frequently, and there are side effects also. Constipation is one of the side effects and daily evacuation of the bowels should be aimed at.

Mecamylamine is a more powerful ganglion blocking agent which is under trial. This seems to be better than those previously mentioned. But the dosage of all these drugs can be determined only by trial and error, and they are not to be used indiscriminately.

A word about malignant hypertension and I finish.

These patients are gravely ill. Early detection of Papilloedema and energetic treatment with 'Retard' which is a Pentolinium Tartrate preparation for subcutanious injection use—Start with 3 mgm. B. D. or T. D. S. and gradually increase the dose. 140 mgm. a day may be needed. The prognosis of the malignant phase of hypertension has been remarkably altered by methonium compounds.

The place of lumbo–dorsal sympathectomy and bilateral adrenalectomy is reserved for another article.

CARDIAC EMERGENCIES

by

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THE popular belief that anything to do with the heart is an emergency is fortunately not true. The heart, a muscular organ with a great deal of reserve can withstand a lot of inroads into its musculature, as well as its blood supply. It is very difficult at times to foretell the prognosis of heart diseases with any certainty. Oftentimes we see a bad prognosis given being belied and the patient passing years of life, a monument to irritate the prognostician. This should on the other hand make us guarded in our views in pronouncing definite opinion on biological processes of which more are to be known.

We know also that most of the cardiac emergencies ultimately are due to ischaemia of the heart muscle and its further consequences. But the etiological factors leading to this condition is manifold. The blood supply of the heart is from the coronary vessels, taking its origin above the aortic valvular cusps in the coronary sinus. The orifices of these vessels are open when the aorta is full and stretched, the flow being passive. Thus the filling of the coronary vessels depends upon the patency of the lumen, the nature of the first part of the aorta and on the diastolic impact on the valves. It depends on the margin of the pulse pressure which should not be too narrow or wide and thus on the nature of the aortic valves. It depends again on the heart rate, the more rapid it becomes, less is the cardiac output and less is the coronary inflow. If the rhythm becomes abnormally slow or irregular, the filling is again affected.

Among the cardiac emergencies, I will put the following in the order of priority :

1. Ventricular tachycardia and fibrillation and rhythm changes like auricular fibrillation and flutter.

2. Adam-Stokes syndrome and Heart blocks.

3. Cardiac asthma, pulmonary oedema and left ventricular failure.

4. Coronary thrombosis, myocardial infarction and generally anginal syndromes.

5. Acute myocarditis, toxic and otherwise.

6. Cor pulmonale with failure.

7. Cardiac tamponade and pericardial effusion.

8. Dissecting aneurysms and rupture of the valves.

9. Congestive failures arising from all the above causes, inclusive of valvular diseases.

Classifying them as regards their frequency, anginal syndromes, ventricular failures and coronary thrombosis lead ahead of others.

Thus common things first, anginal syndromes will be taken up.

Anginal Syndromes : This accounts for 30% of all heart diseases and for 80% of all sudden deaths, and shows a tendency for increase in incidence of late. This is more common in men than women, the ratio being 3 · 1, but after the age of 50 they are at par. This condition is due to occlusive coronary atherosclerosis with or without sub-intimal haemorrhage or thrombosis. Syphilitic aortitis, aortic

stenosis, severe anaemia, paroxysmal tachycardia etc. are the main offenders in addition to the main cause referred to above. In hypertension, atherosclerosis of coronary vessels is rather late as the high tension irons out the fatty deposits. It is now believed that atherosclerosis is due to upset of fat metabolism and is a biochemical reaction. Experiments with cholesterol feeding, the fractionated lipoprotein, experiments of Cohn together with Goffman's chylomicron experiments of molecules of S. F. values under 10—all have gone to prove these theories of upset of cholesterol metabolism.

Angina pectoris is the commonest symptom and is a cry of the myocardium from ischaemia. This may be from (a) syphilitic occlusion in the coronary vessels, atherosclerosis and rarely embolism, (b) aortic stenosis gross aortic incompetence, mitral stenosis of marked nature, and even pulmonary stenosis, (c) gross anaemia and high altitudes and (d) increased work of the heart, as in hypertension and in other hyperkinetic circulatory states. The pain is sternal or midsternal and may radiate. The radiation is mainly centrifugal but may occasionally be centripetal. The pain is squeezing, crushing or pressing, rarely stinging, numbing or burning. It is not sharp, shooting or stabbing. The duration of the pain is a few minutes. Increase in the metabolic demands of the myocardium provokes pain. Occasionally fear or anger may precipitate it. Pain that occurs after completion of effort is not angina. There are four grades of this pain from pain on hurried walking or running to pain at rest.

Diagnosis is based on history, nature and site of pain, the frequency and by a few special tests, i.e. effort tolerance and the most reliable one is the E.C.G. before and after exertion. The E. C. G. shows depressed S. T. segments with or without inversion of the U waves.

Anginal syndromes are due to thrombosis of minute vessels and slowly and steadily it goes on to gross myocardial fibrosis or generally to a major occlusion-myocardial infarction—death.

Treatment : Prophylaxis :—Light diet, less of fat, less of alcohols and limited cigarettes.

Drugs : Trinitrin 0·5 mgms or 1/100 gr. can be kept under the tongue as and when required. It should be used for doing only normal work without pain and not for over-exertion or showing off. Other drugs are of less importance. Khellin is badly tolerated, otherwise it is a good vasodilator. Oestrogens inhibit the atherogenesis and may be used but prolonged use will produce feminism in males. As a long term measure lipotropic agents could also be tried. *Testosterones* should not be used.

Artificial myxoedema to reduce metabolism by drugs, radio-iodine or by operation is an extreme measure and is useful in some cases. But hypercholesteraemia may result defeating our purpose thereby. Surgical treatment is limited in character, the best being denervation of the heart to relieve pain and according to some sympathectomy does improve the coronary circulation and lessens the spasms.

Coronary Thrombosis and Myocardial Infarction : This is an acute cardiac emergency. Anginal syndromes slowly lead on to thrombosis. Thrombosis can also occur without previous episodes of pain. Coronary thrombosis itself in a few instances may be completely painless (silent infarcts) and is most dangerous.

The prognosis of cases depends on the site and extent of the infarct initially and later on the embolic phenomena and the resultant extent of damage and scar formation in the heart — myocardial softening (myomalacia cordis), cardiac

aneurysm, ventricular fibrillation are the dangers following the initial shock which itself may be fatal.

The attack is sudden generally and is accompanied by anginal pain. Signs of collapse supervene with vomiting and restlessness. There may be syncope. The socalled angor animi may be present. These cases are full of signs. The patient is grey, cold sweating, perhaps unconscious with a rapid pulse and dyspnoea of the L. V. type due to pulmonary oedema. The blood pressure falls initially but soon rises slightly and again drops and further recovery is slow and may take days or weeks to return to normal. Heart sounds are faint with pre-systolic gallop and there may be a pericardial friction (15%), ectopic beats are common and if sustained leads to auricular fibrillation, heart blocks and even to ventricular fibrillation which means death. Fever of low grade type stays for a week. A leucocytosis follows which comes down rapidly. The E. S. R. is normal first and rises after 48 hours and returns to normal very slowly. Serum glutamic Oxalo Acetic transaminate (SGOT) activity is increased sharply. E. C. G. shows a Q wave with initial elevation of S. T. segment as a pardee curve. If it is anterior infarction, this is shown in standard lead *I and the precordial leads. If a posterior infarction, it is shown in standard lead III as a prominent Q and an altered S.–T. segment and only leads beyond V 5 or V 6 of the precordial leads may show changes. An oesophageal lead is often necessary to bring out this best. The ' T ' wave is inverted initially and gradually reverses to normal, but slight, inversion may continue for a long long time.

Course and Complications: Abrupt immediate death occurs in 25 to 30%

Death from shock : 10%.

Conventional heart failure : 5%

Rupture of heart, septum etc. : 3%

Cardiac aneurysm : 5%

Pericarditis : 10%

Embolism : 5%

Changes of rhythm : 15%

Total mortality excluding abrupt deaths is about 30%

Thus in short about 60% of all the cases die and about 40% recover with modern treatment. Even these are prone to have a second thrombosis sooner or later. A proportion may be crippled with dyspnoea or residual paresis from embolism or angina pectoris may develop for the first time and chronic left ventricular failure may supervene.

Myocardial infarction has to be differentiated from (*a*) pulmonary embolism where there is early engorgement of cervical veins, rhythm changes are rare and often only chest leads of E. C. G. may differentiate this condition; (*b*) Acute pericarditis: E. C. G. comes to the rescue: (*c*) Dissecting aneurysm is differentiated by the presence of hypertension, radiating pain to the back, absence of E. C. G. changes, presence of aortic incompetence and signs of involvement of larger vessels.

Diaphragmatic hernia and gastric pains have to be differentiated as also acute pancreatitis.

Treatment: Absolute rest in bed, 3 to 6 weeks in duration depending upon the B.P., the E. C. G. and symptoms like dyspnoea and the heart rate. Very little diet is to be given for the first few days : 500 to 800 calories with no milk.

Morphine in adequate doses upto $\frac{1}{4}$ gr. intravenously should be given slowly and later pethidine by mouth 50 mgms. 6th hourly. At this stage quinidine is given

by some to prevent ectopic beats and ventricular fibrillation (0·25 Gms t.d.s.)

Anti-coagulants: Heparin and Tromexan or Dindevan is to be given very early. Heparin 150,000 units intravenous and 150,000 units intramuscular 8 hours later. Tromexan 4 tablets of 0·3 Gm. stratum followed next day by 1 or 2 tablets depending upon the prothrombin time. Dindevan is a better drug and is given 150 mgms first day and 100 mgms second day, 50 mgms. third day and later according to requirements (oral) The prothrombin time should be maintained at 2½ times the normal. This regimen definitely reduces the mortality, and thrombo-embolic episodes. Anti-coagulants are to be given for a long time and some give it permanently on a reduced dosage to prevent further episodes. Dicoumarol, the original drug has gone out of vogue and even later drugs like Dipraxine have all given place to Dindevan and Tromexan. Dindevan's action perhaps is more predictable and its action is not prolonged and this can be stopped at well early. One should be on the watch for excessive dosage leading to bleeding tendencies which manifests in the kidneys early. The antidotes for these drugs are K_1 oxide and blood transfusion.

Oxygen of course is necessary for cardiac patients. Shock can be treated by blood transfusion or better by laevo-nor-adrenaline drips. Conventional cardiac failure occurring later in the day may be treated by digitalis, mercurials, and salt-free diet. Digitalis is best withheld for the first 48 to 72 hours since there is a risk of aneurysm formation or rupture of the heart, from excessive contraction of the damaged cardiac musculature. Serious disturbances of rhythm are best controlled by procaineamide I.V. or oral. Few people get intractable pain of the left shoulder and this is amenable to hydrocortisone.

Convalescence after a myocardial infarction should be 3 to 6 months and resumption of work should be based on the cardiac reserve, the E. C. G. and the pulse rate. Change of employment to a lighter trade is to be considered seriously.

50% of the recovered cases have angina or limited cardiac reserve, 30% make complete recovery, and 20% become cardiac cripples. The average rate of expectation of life after a first infarction and recovery is 8 years at the maximum.

The next major emergency is *Cardiac asthma, Pulmonary oedema and Left Ventricular failure.* The left ventricle fails only as a last measure when after hypertrophy of the musculature to meet the great demands made on it, it dilates and then fails. When it fails, the left auricle is unable to empty its blood fully since there is some residual blood left in the incompletely contracting left ventricle thus reducing its filling capacity. Thus with each stroke, the pulmonary bed gets less emptied, becomes congested and oedematous resulting in pulmonary oedema. This occurs only after all the compensatory mechanisms like increased cardiac output, increased heart rate are unable to meet the demands. The common causes of left ventricular failure are systemic hypertension, aortic valvular diseases, mitral incompetence and myocardial infarction. L. V. failure naturally leads to breathlessness on exertion, orthopnoea, paroxysmal cardiac dyspnoea and acute pulmonary oedema and the signs will be basal pulmonary rales, pulmonary congestion in the X-Ray, a prolongation of the pulmonary circulation time, gallop rhythm, pulsus alternans and Cheyne-Stokes respiration. The dramatic sequence of L. V. failure is seen in paroxysmal nocturnal dyspnoea.

There is no systemic congestion in pure L. V. failure, the liver is not enlarged, nor is there any cyanosis of peripheral type. As a matter of fact, when the

right ventricle ultimately fails the back-pressure from the lungs is distributed to the systemic circulation and the temporary relief in the dyspnoea often lulls the patient into a false sense of security. The symptoms are distinct from L. V. failure which are oedema. cyanosis, ascites, hydrothorax, distented neck veins, enlarged tender liver, oliguria, albuminuria and gastro-intestinal symptoms. The treatment of paroxysmal dyspnoea is different from others. Morphine ¼ gr. should be given intravenously very slowly, followed by intravenous aminophylline 0·5 gm. to relieve the bronchospasm. Cough is to be allayed by Codeine or physeptone and oxygen if there is central cyanosis. If manifest L. V. failure is present, digoxin 0·1 mgm. intravenously is to be given followed by oral medication. And after the acute phase is over mercurial diuretics may be given. Venesection is a good method, withdrawal of a pint of blood is not out of place. Prevention of paroxysmal dyspnoea can be made by judicious use of mersalyl.

The treatment of conventional heart failure is well known. Except that I would emphasize that digoxin should be given in adequate quantity, aminophylline intravenous and oral for relieving the bronchospasm, diuretics to get rid of the watter-logging, restricted Sodium intake to help the elimination of water since it is the sodium radicle which is responsible for water holding and oxygen to relieve cyanosis. In extreme cases of severe oedema, radical measures like multiple incisions in the dependant part and employment of Southey's tubes may be undertaken, measures which may not be easily feasible in our country.

Digitalisation is to be adopted for each situation. Intravenous digoxin is followed by oral digoxin of 0·25 mgm. sixth hourly for quick results, and a loading dose followed by maintenance for other types of digitalisation. I find many of us use rather inadequate doses and also discontinue the drug too soon. Sometimes digoxin or digitalis in cruder forms fail to act in a particular case and a change to another alkaloid of digitalis like digitalin (nativelle) bears results.

Now arises the question of *restoration of normal rhythm in cases which have auricular fibrillation.* Auricular fibrillation follows generally the failure following mitral disease, hypertension, thyrotoxicosis and myocardial infarction. If the fibrillation is of recent origin and in young individuals with a good mycardium, normal rhythm should be restored soon and if not effected by digitalis, by the use of oral quinidine. In thyrotoxicosis, simultaneous treatment of the basic condition is necessary for restoration. If the fibrillation is of long standing nature and if the myocardium is grossly damaged as in old people, restoration of normal rhythm will either produce embolic episodes or will be of no avail. Such cases should be adequately digitalised and should have digitalis *throughout their lives*, a fact which is often forgotten leading to repeated failures and early deaths therefrom. Mercurials like mersalyl are the best and should be used generously and could be given biweekly with an intake-output fluid chart maintained. Weighing the patient regularly also gives an idea of water elimination.

Kation exchange resins act feebly, are rather laborious and irksome to the patient and often removes wanted minerals like potassium. The carbonic anhydrase inhibitors and mictine etc. are feebly acting and are not as effective as the mercurials.

The presence of albumin in the urine in heart failure is a natural phenomenon due to renal anoxia and does not mean renal failure unless casts are also present or the blood urea is high and thus albumin is not a contra - indication for

mercurials if the renal pathology is understood correctly.

Disorders of Rhythm : Sinus arrhythmias and sinus tachycardias do not tell badly on the heart unless the rate exceeds 150 per minute and when complete failure can develop. Such rates produce defective filling of the coronary vessels due to low cardiac output and manifests themselves as anginal syndrome. But the heart tolerates these high rhythms much better generally than hypertension and other high cardiac output states, which incur their overwork. Treatment of the cause of these arrhythmias is the only course to stop them.

Only complete heart block or complete A–V dissociation gives rise to any anxiety. E. C. G. has a great role in the diagnosis and prognosis of these conditions. During a transition stage from incomplete to complete heart block before the idioventricular rhythm takes over, cardiac standstills are common leading to syncope — Adam–Stokes syndrome. This syndrome means a bad prognosis. Treatment of the condition is prophylaxis. Ephedrine ½gr. t.d.s. and during the attacks adrenaline intravenous or intracardiac may be necessary. Sublingual isoprenaline 20 mgms is also helpful to prevent the attacks. This condition is due to asystole of the ventricle and not due to fibrillation. A note of warning is given here that in cases of syncope of cardiac origin which may be due to ventricular tachycardia or fibrillation, adrenaline is harmful whereas in Stokes–Adams it does good. In such cases of ventricular tachycardia or fibrillation which are next door to death intravenous or intracardiac procaine–amide may turn the table in our favour. Quinidine has been the drug of choice till lately to prevent these and can still be used, but procaineamide (Pronestyl) is better.

Auricular flutter and fibrillation of which the latter is more common have already been taken up.

Acute Myocarditis : This is the mainly due to acute infections, collagen diseases allergic states, disorders of metabolism, and endocrine stress. Rheumatic and bacterial endocarditis, diphtheria, poisonous drugs like emetine and digitalis, endocrine upset like thyrotoxicosis, virus diseases like influenza and metabolic upsets like Beri - Beri are the main offenders. Rheumatic myocarditis rarely kills, but diphtheria does. These toxic myocarditis manifest themselves suddenly with acute cardiac failure precipitated generally by sudden exertion from an asthenic state. Sudden deaths are thus common in Diphtheria Influenza and emetine poisoning. These toxic myocarditis is not amenable to drugs. Digitalis has no action on this toxic myocardium. Prevention of the toxic state is ideal by giving ample, continued absolute rest during and after these illnesses with adequate specific treatment : e. g. antitoxin in Diphtheria. Acute myocarditis of Beri–Beri can be dramatically countered by intramuscular or intravenous Berin in high doses.

Sub-Acute Bacterial Endocarditis is killing but slowly. These patients have some congenital or acquired defect in the valves, the septa and sometimes outside the heart itself : e. g. the ductus arteriosus. There is a superimposed infection with generally Streptococcus viridans starting from a foci in the teeth or tonsils. Continuous fever, typhoid state, tachycardia, embolic phenomena in the kidney, spleen and other organs inclusive of the eye ensue. The march of events is steady but slow, and naturally is not an emergency and this condition can be countered by using high dosage of penicillin and other antibiotics and prevention or treatment of episodes.

Pericarditis : Among the members of this group to produce an emergency is acute pericarditis with effusion and producing thereby cardiac tamponade. Symptoms of urgent dyspnoea, pain in

the praecordium, engorged veins in the neck, enlarged pulsatile liver, pulsus paradoxus, the characteristic skiagram and changes in the E. C. G. occur

In treatment it may seem strange that we have to use drugs which do not reduce the venous pressure as maintenance of a high venous pressure is a necessity. Thus mersalyl, low sodium diet and venesection are contraindicated. Our idea is to treat the cause of this condition, viz. rheumatic, tuberculosis, pyogenic, allergic, uraemic or secondary to myocardial infarction. If the treatment of the causative condition does not produce lessening of embarassment to the heart, paracentesis should be done carefully and is not difficult.

Pulmonary Embolism : Only those of massive nature present as an emergency. The patient feels as if he is struck down in the centre of the chest and becomes faint, grey, clammy and restles. Jugular venous pressure is raised and various changes occur in the E. C. G. Subacute cases occur less dramatically and it is not always ' Call for the bed pan and fall back dead. " This may be difficult to differentiate from a myocardial infarction E. C. G. shows constant S_1, a Q_2, and elevated R. T. in lead III. Treatment is similar to myocardial infarction with anticoagulants, oxygen, morphine etc. Rarely embolectomy could be done.

There are quite a few other emergencies, but are rarely met with in ordinary practice. Cor pulmonale, a hyperkinetic state of the heart, with a basal pathology in the lung can produce an urgent state of failure which does not generally respond to the usual digitalis-aminophylline group.

Thus an attempt has been made to present the major catastrophies in the " Heart " and their immediate management.

RECENT TRENDS IN PSYCHIATRIC PRACTICE *

by

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IT is impossible to give a comprehensive account of all the recent trends in Psychiatry within the short time at my disposal. I have therefore decided to give a bird's eye view of such of those recent trends that are interesting to the General Practitioner and the non-specialist. I intend speaking to you on four topics–1. Legal 2. Organisational 3. Teaching and Research and 4. Therapeutic trends.

Legal—This may appear uninteresting to many as a subject for discussion. However, the changes that are taking place in this field are so fundamental and they affect the general medical man so directly that there is need to know the direction in which these changes are proceeding. In brief they are attempts to simplify the procedure for the treatment of the mentally ill patient. As many of you may know a Royal Commission went into this question in the United Kingdom to suggest suitable alterations in the current laws in relation to mental illness and mental deficiency. After collecting considerable evidence they submitted their report in the beginning of this year (Brit. Med. J. 1957, I, 1355). The changes envisaged by them are in tune with recent developments in psychiatric thought. It is the recognition by the administrator and the public alike of the undesirableness of the present method of custodial care of patients in ever increasing number of mental hospitals. The existing system has tended to overcrowding and stagnation of recoverable cases amidst chronic ones. In spite of modern forms of treatment and the employment of energetic rehabilitative measures there are over 1,50,000 patients in Mental Hospitals and about 50,000 in Mental Deficiency institutions accounting for more than 1/3 of the hospital patients in England and Wales (B.M.J. 56). This has resulted in 15·6% overcrowding in mental hospitals and 12% overcrowding in mental deficiency hospitals. The recommendations of the Commission must be viewed on this sombre background. The following changes have been suggested by the Royal Commission. The present classification into mental illness and mental deficiency has been found to be unsatisfactory. The term 'person of unsound mind' is to be dropped and replaced by 'mentally ill', 'mental defective' is replaced by 'severely subnormal personality'. The Commission has recommended that there should be a third group, 'the psychopathic personality' or 'psychopath'. These latter are neither mentally defective nor mentally disordered; they are emotionally immature and much of their behaviour is a social or antisocial. In this group are included liars, swindlers, sex offenders, etc. At present it is difficult to certify them and administer treatment for any length of period. The Commission also recommends that the present nomenclature of the different grades of mental defect viz., Idiot, Imbecile, Feeble-minded be dropped as they convey an ugly meaning to the lay mind. Instead the broad term of 'severely subnormal personality' is employed. The Commission considers that the present trend of admitting as many cases as possi-

* Address delivered to the Indian Medical Association, Tanjore Branch, on the 5th Oct, 57. Slightly modified.

ble on a voluntary basis is in the right direction and suggests that as few cases as possible should be admitted after the usual formality of certification. It points out that even the usual formalities of signing papers for voluntary admission be done away with and the procedure simplified as for admission into a general hospital for any physical ailment. With this simplified procedure more people will have the benefit of treatment in the early stages of their illness which means also there will be greater chances of success. The Commission suggests certain measures for the treatment of cases which cannot be admitted voluntarily but we are not concerned with these at the moment. To sum up you will find that the trend is to remove many of the ugly features of the old law which was more concerned with the certification of the 'insane' for the protection of Society from the imaginary dangers of the 'lunatic' this meant his removal to an institution where he could be 'kept away'; treatment of his sick mind seemed secondary In keeping with social progress and in the light of recent advances in treatment there is emphasis now almost exclusively on the protection of the individual, not in the sense of his custodial care but from the point of his early and efficient treatment.

Organisational—With lengthening waiting lists for admission to mental hospitals and the excessive demands made on the psychiatric services the Administration was compelled to take urgent note of this problem in most countries. It was at this time that Professor Querido evolved the method of extra-mural treatment of psychiatric cases. This goes by the name of the 'Amsterdam experiment' and the idea has caught the imagination of other people in the field. For a description of what happens to a mentally ill patient in Amsterdam —The family physician or the police or any public body puts in a call to a central point, the bureau, and gives certain particulars about a case needing psychiatric help. The patient is seen immediately or within 24 hours *on the spot* by the city psychiatrist. He assesses the possibility of treating him either in the home, in the observation ward of a general hospital, or in a mental hospital. No medical treatment, in the ordinary sense, is given by the bureau but by the family physician or polyclinic or out-patient department of a general hospital. The bureau, if it is necessary, initiates legal formalities. It also assesses the problems and difficulties of the patient in order to determine the extent of social pressure that he can stand and to relieve from him such burdens as he is unable to bear. The doctor makes his first contact with the patient and his relatives in his natural sorroundings where he can observe the interplay of all that is related to the conflict, he notes the quality of the sorroundings, the influence of his near and dear ones, the responsibilities, material and otherwise, that rest on him, the hobbies and cultural and social activities of the person before he fell ill, and a host of such information which will prove of great help to him in the treatment and rehabilitation Domiciliary treatment has obvious advantages—he knows that he is still able to live in the outside world and treatment is given in an environment with which he is intimately associated. When institutional treatment is resorted to the last prop of the patient has been knocked off him and he is isolated and examined and treated in isolation. The Amsterdam experiment shows up the uselessness of cluttering up mental hospitals and points to the possibilities of treating cases on a domiciliary basis. In this type of setting the psychiatrist will be closely associated with the economic, social and cultural melieu in which his patient lives, hence treatment and rehabilitative measures can be more intelligently and successfully applied. It is only in the very acute case needing special care and treatment that the case is advised admission to a mental hospital (Querido 55).

A survey of patients in Mental Deficiency institutions in England showed that over half were classed as feeble-minded with an I. Q. of 70 and less than 5% were Idiots and about 40% Imbeciles. Half the patients did not need special nursing or supervision. Their general behaviour was good and delinquent behaviour was seen in about 5% only. (O'Connor and Tizard 54). They further pointed out (Tizard and O'Connor 52) that the policy of the institution which had custodial care over them was not designed to return them to the community but for their segregation. They showed that high-grade defectives trained for and employed on simple repetitive work can and do succeed in many cases when well supervised and adjusted to strange surroundings. The hypothesis that individuals with mental defect coupled with psychopathic traits will show no improvement in behaviour or attitude under group therapy was disproved (Yonge and O'Connor 54). The subject of defectives in institutions was brought out into public discussion, in the Press and on the Radio. This shows the intense desire on the part of the medical man to fall in line with the present trend to salvage the considerable number of defectives who are now condemned under the existing laws into mental deficiency hospitals and colonies ; to provide them with such opportunity as would help their early rehabilitation ; this would in turn lead to their discharge from custodial care and thereby save the expense of their upkeep by the State. In India this problem has not arisen so far for the simple reason that there is not a single mental deficiency institution in this country. This is a situation that we should deplore deeply. A small number of these institutions are essential for diagnosis, psychometric and psychological assessment of cases and for their rehabilitation. Some of them, those with very low intelligence, do need long term custodial care (Murti Rao 55)

Much is being said about Preventive Services especially in the more advanced countries like the United States of America. Marriage counselling, family guidance and occupational guidance, Child Clinics, and the like are all the products of this drive to prevent nervous and mental breakdown. These assume that environmental factors play a significant role in the precipitation of at least some neurotic illnesses.

Faced with a growing demand on the psychiatric services there has been a noticeable trend to treat cases in groups. Group therapy was popularised by Moreno and established (?) on a scientific basis. It has received enthusiastic support of some psychiatrists. Individual attitudes dictated by religion, social organisation and cultural factors should be taken into account while advocating this type of psychotherapeutic treatment.

The rising costs of institutional treatment has led to the caring of the recovering and convalescing cases, mental and otherwise, in what are known as ' half-way houses '. In this category are included hostels, ' day hospitals', ' night hospitals ', foster homes and the like. Cameron described an experimental form of hospitalisation for psychiatric patients which he called the Day hospital. This was meant for the patient's treatment *at* the hospital and not *in* the hospital. He suggested that this will permit all hospital centres to give intensive medical care to considerable number of patients without the necessity of providing the most expensive form of hospitalisation viz,, in-bed care. Joshua Bierer (56) had earlier experimented with the Day hospital.

Teaching and Research—Although the address is entitled ' Recent Trends in Psychiatric *Practice* ' you will permit me to touch on this subject for a moment. As you will see this has a direct bearing

on our orientation towards the management of psychiatric cases. Even at this time the teaching of Psychiatry is sadly neglected in this country. It is only in the United States and in some States of the Continent of Europe, including the U. K. that due stress is laid on this subject. It was the University of Edinburgh which started for the first time regular courses in Psychiatry and introduced it as an examination subject for the degree of M.B. Ch. B. A few other universities followed suit and this is a significant move in the right direction. In India there has been a lack of qualified teachers to impart knowledge of mental illnesses in the undergraduate classes of most universities. There is no examination in this subject anywhere and except for an occasional question in the Final Year Medicine Paper there is no other compulsion or persuasion to study this important branch of Medicine.

Happily, following on the recommendations of the Bhore Committee the Government of India have commenced in 1955 a Post-graduate Centre—the All India Institute of Mental Health—in Bangalore for the training of Psychiatrists, Clinical Psychologists and Psychiatric Nurses. This centre will, to some extent, fulfil the emergent needs of the country's Mental Health Services.

In the field of *Research* we notice most significant developments over the last few years. The general trend appears to be towards the elucidation of cognisable basic changes in mental disease. Enzymatic and bio-chemical changes are sought for to explain the mental symptoms on the analogy of the symptoms produced by the use of 'hallucinogens' like Mescaline, Lysergic Acid diethyl amide, Adrenochrome, etc. But it seems hardly justifiable *in the present state of our knowledge,* to incriminate enzymes or hormones as etiologic agents in the production of mental disease on the basis of 'model psychoses' induced by the administration of drugs from without. There is, however, an *indication* that valuable further information might be obtained by pursuing the subject along these lines.

I shall not attempt to touch on the trends that are noticeable in psychoanalytic and psychologic approach towards mental illness as much of this is lost in misty speculation.

Therapeutic—Experimental work with hallucinogens and research totally unconnected with psychiatry have yielded for us some very potent drugs which can alter the psychotic behaviour of patients sometimes in a dramatic fashion. Chlorpromazine (Largactil) and Reserpine (Serpasil) and allied drugs have been in use in this country for less than three years but the practice with these drugs has already pushed the conventional forms of treatment like Insulin and even Electrical treatment into second choices. There is, however, an unfortunate tendency visible in this unbridled enthusiasm. As in the case of hypertension it is easy to commence the patient on an antihypertensive drug and to obtain symptomatic relief. This, you will admit, is medically unsound. Unless a thorough examination of the patient is made other known causes of hypertension like unilateral kidney disease, pheochromocytoma, etc., may be easily missed and more specific treatment delayed or not given at all. Similarly in mental illnesses unless a thorough examination—psychological and *physical*—is made it is too easy to miss the underlying factors which have precipitated the attack or are responsible for the mental symptoms. Brain tumours, septic foci, toxic infective agents, Syphilis etc., can all give rise to clinical syndromes very much like those produced by the biogenetic psychoses like Schizophrenia. It would be unmedical to give blanket treatment with the tranquillisers

for temporary symptomatic relief only. Excessive claims have been made for Meprobamate and allied drugs and it is better to go slow with our therapeutic enthusiasm (Murti Rao 57).

With the advent of the psychotropic drugs like Chlorpromazine, Reserpine, etc., the need for surgical interference on the brain (lobotomy) has receded. It is only in exceptionally small number of cases where there is well established indication that lobotomy is undertaken.

Psychiatric practice implies an understanding of a constellation of factors acting from within and without the person ; the individual's adaptation to his environment more particularly the demands of the community in which he lives. Research and some degree of understanding is noticeable in various fields. In the hour at my disposal I have tried to indicate some of them.

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TOPICAL PREDNISONE AND PREDNISOLONE IN DERMATITIS

By

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PREDNISONE and Prednisolone are synthetic analogues of Cortisone and Hydro-Cortisone respectively. They have been tried extensively systemically in selected Dermatoses with favourable results. The present paper is a review of Topical application of these two drugs and a comparative study with Hydrocortisone externally. The strength used is 0·5% of Prednisone and Prednisolone and 1% of Hydrocortisone. Prednisone and Prednisolone were prepared in a tube of Massie in a strength of 0·5% and Hydrocortisone readymade ointment was used. (Cortef).

The cases selected were :—

(*a*) Atopic dermatitis

(*b*) Allergic Eczematous contact Dermatitis.

(*c*) Psoriasis and

(*d*) Seborrhoeic Dermatitis.

Cases.	Total No.	Class treated with		
		Hydrocortisone	Prednisone	Prednisolone
1, Atopic Dermatitis ..	15	5	5	5
RESULTS. ..		+++	++	++
2. Allergic Eczematous contact Dermatitis. ..	20	10	5	5
RESULTS. ..		++	+++	+++
3. Psoriasis. ..	5	2	2	1
RESULTS. ..		+	o	o
4. Seborrhoeic Dermatitis ..	3	1	1	1
RESULTS. ..		+	+	+

INDEX : 0=No improvement
+=Slight improvement
++=Moderate improvement.
+++=Good results.

As Prednisone and Prednisolone are analogues of Cortisone and Hydrocortisone respectively it has been presumed, that Prednisolone will be more effective than Prednisone. But the above results show that no difference can be noticed, between the effects of Prednisone and Prednisolone externally. Comparing the results between Hydrocortisone and Prednisone-Prednisolone the results show that Hydrocortisone is more effective.

ABSTRACTS

DIGITALIS IN CONGESTIVE HEART FAILURE.

JOHN B. HOESLEY, M.D. and LAWRENCE I. LUAN, M.D., The Medical Clinics of North America—January 1957 — Whole leaf digitalis, digitoxin and amorphous gitalin are obtained or derived from Digitalis purpurea. While Digitalis lanata is not used in its crude form as is Digitalis purpurea, several products are obtained and are available for clinical application. Digilanid is a mixture of the three natural glycosides, lanatoside A, B and C. Two preparations are derived from lanatoside A. (1) digitoxin, which is identical to that obtained from Digitalis purpurea, and (2) acetyl digitoxin, which is now also available for clinical use. Lanatoside C is a purified natural glycoside; desacetyl lanatoside C (Cedilanid D), and digoxin are derived from it.

Ouabain is a natural glycoside obtained from the seeds of Strophanthus gratus. Digitoxin and acetyl digitoxin are uniformly absorbed from the gastrointestinal tract. The watersoluble glycosides, including K-strophanthoside and desacetyl lanatoside C are poorly and erratically absorbed. For practical purposes, ingested digitoxin may be considered to be completely absorbed. Therefore, the effect of a given dose taken by mouth, would be approximately the same as the effect produced if a similar amount were given intravenously. The preparations which are recommended for oral use fall in the range of absorption between whole leaf digitalis, of which 20 per cent is absorbed, and digitoxin. Acetyl digitoxin (67 to 70 per cent absorbed), digoxin (50 per cent), gitalin and degilanid qualify as adequate products in this respect. Strophanthus derivatives and lanatoside C are either so largely destroyed in, or so irregularly absorbed from the gastrointestinal tract that the clinical results are variable and unreliable when these drugs are given by mouth.

Clinical Considerations

It is the most important drug in the treatment of congestive heart failure. From the clinical point of view, two considerations are of importance; (1) the minimal amount of the drug which is needed for adequate therapeutic effect, and (2) the minimal amount which will cause toxic signs or symptoms. In the usual patient with congestive heart failure digitalization can be attained with ease and safety. In progressive congestive heart failure with increasingly severe symptoms, the assurance of complete digitalization is imperative, and as a result, mild intoxication is frequently encountered.

The common causes of digitalis intoxication may be listed as follows:—

1. *Inaccurate History.* The giving of a large single amount of a glycoside to a person already on maintenance therapy is the most common cause.

2. *Inflexibility.* All patients do not require the same amounts of the drug for digitalization and maintenance, the latter may vary in the same person under different circumstances.

3. *Confusion.* One drug cannot really be substituted for another in the sense that all things are equal.

4. *Hurry.* Large initial quantities of a drug are followed by other large amounts before sufficient time has elapsed to allow for a full evalution of the effects of the preceding dose.

Gastrointestinal symptoms are common and easily recognized in man. Serious arrhythmias may be the first sign of

danger regardless of the drug used Toxicity which followed diuresis is related to potassium depleti in primarily. If signs and symptoms appear in the course of management the drug should be stopped temporarily. However, if these manifestations persist for a period exceeding three days after cessation of therapy, other causes which could account for the discomfort of the patient should be considered.

Digitalis Intoxication and the Arrhythmias

Injudicious use of digitalis may cause any type of arrhythmia, The rhythm should be determined before digitalization is begun. Premature ventricular contractions, for instance, occur commonly as a result of overdosage of digitalis; however if they are present before treatment is instituted there is a good possibility that they will disappear during therapy. Digitalis intoxication should be suspected if an arrhythmia. which was present before digitalization disappears during treatment, only to reappear later and at a time when the patient is considered to be well maintained. Toxicity should be considered as a possibility if there is a significant increase in heart rate during treatment, if there is no slowing of the ventricular rate when auricular fibrillation is present, if there is marked slowing of the ventricular rate, in an initial regular rhythm becomes irregular in any degree, or if there is a change from a previously irregular rhythm to regular with an increase in heart rate. Ventricular tachycardia, complete heart block, auricular fibrillation and chaotic heart action are not uncommonly encountered in digitalis poisoning.

Symptoms of intoxication

Gastrointestinal manifestations of toxicity are known to all, and the early loss of appetite is usually easily recognized. In the elderly, manifestations of lassitude, delerium, confusion or psychotic behaviour should be viewed suspiciously.

Determinants in successful digitalization

Digitalis glycosides have the greatest effect when the myocardium is functionally under stress while not structurally damaged to any great degree. In the absence of failure, digitalis is ineffective in increasing the output of the enlarged heart. Auricular fibrillation with a rapid ventricular rate and acute congestive heart failure are emergencies. Digitalization is imperative in such circumstances and usually may be quickly accomplished by the use of desacetyl lanatoside C; 0·8 mg. may be given initially intravenously and followed by 0·2 mg. every two to four hours thereafter. Digitalis may or may not be of benefit in chronic cor pulmonale. Rapid digitalization should be avoided, however, because of the danger of further increasing the pulmonary arterial pressure. In cirrhosis of the liver with edema, congestive failure may be overlooked, and the patient may not respond in a satisfactory manner until digitalization is undertaken. If active rheumatic carditis be complicated by heart failure, digitalis is not only effective but may be life-saving.

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THE MILD ENDOGENOUS DEPRESSION

The British Medical Journal-January 5, 1957—In a recent paper (Watts, 1956) it was suggested that not more than one-quarter of the cases occurring reached the psychiatrist and that the diseases was essentially one of general practice. It is probably one of the most common misdiagnoses being labelled either an anxiety state or an organic illness. Twenty years ago, at the very end of a list possible aetiologies, one found "hysteria". This clause should be amended to "anxiety states, *endogenous depression*, and other psychiatric disorders."

Table presenting symptoms in 100 cases

Depression	9	Muscular pains	2
Cough	8	Injury	2
Run down	7	Strange behaviour	2
Insomnia	7	Palpitations	1
Headache	6	Tinnitus	1
Vague complaints	4	Globus hystericus	1
Dyspepsia	4	Urticaria	1
Nervousness	4	Tremor	1
Tight feeling in chest	4	Tonsillitis	1
Giddiness	4	Pseudocyesis	1
Pain in chest	4	Bad Smell in nose	1
Pain in back	3	Piles	1
Belching of wind	3	Diarrhoea	1
Pregnancy	3	Constipation	1
Attempted suicide	3	Haematemesis	1
Vaginal bleeding	3	Collapse	1
Dysuria	2	Dysphagia	1
Fainting	2		

A. Overt Depression

This kind of case is often presented in general practice and a constant attender at the surgery with vague complaints which have no adequate physical basis. He tends to exchange symptoms for another and his outlook is irrational. Then just as suddenly as he started his trips to the surgery, they cease, and once again he becomes the perfect patient, requiring no attention.

B. Depression disguised as an Anxiety State.

A man of 31 was passed on to me as a psychiatric case. His story was that while working a crane, a giddy feeling came over him and he had palpitations. He felt very frightened and thought he might drop dead. He had been sleeping badly for some time before this attack. He was complaining of headaches and vertigo, and my first diagnosis was one of anxiety state, and he was unresponsive to psychotherapy. Attention was then turned to probe for depressive feelings. Inquiry showed that he was in very low spirits and often wished he was dead. He felt it was all his own fault that he had allowed himself to slip and he had distinct ideas of guilt. Powers of concentration had gone. The world, he said, looked different, a less pleasant place than it had been. He was referred to a psychiatrist, who agreed with the diagnosis, and he entered a mental hospital as a voluntary patient

C. The depressive equivalent

The type of case in which the depression stimulates an organic illness was called by Kraines (1943) a depressive equivalent. These may stimulating gastric carcinoma.

Symptomatology

The severe depression is expressed in the triad of symptoms – namely, difficulty in thinking, depression, and psychomotor retardation with mild cases they have to be sought for.

1. Difficulty in thinking

This is expressed in the patient with mild depression in two different ways. First, as a feeling of tiredness and exhaustion. The second way in which this basic symptom is expressed is an illogical approach to the problem. One man blamed a quarrel with the foreman for his troubles. An engineer blamed worry over a haulage cable which he had not tested to his satisfaction, The mind of the anxious patient is rational and he can follow with interest a logical argument. That of the depressed patient is irrational. His thoughts and ideas are repetitive. He will say the same thing over again, and ask the same questions; he makes no progress superficial psychotherapy.

2. Depression.

The victim of a mild depression does not look depressed, but he will readily admit he feels in low spirits. The sense of humour goes. He feels isolated and

misunderstood. The patient who used to work to a background of wireless programmes now switches the set off. The row made by his children upsets him in a way it never used to.

a. *Suicidal ideas.* In a depressive with suicidal feelings the depression is not mild, but even in the mild cases the seeds of the suicidal urge may be evident. This is expressed first as a fear of dying. Every time the phone rings I feel it is bad news. If a true suicidal urge is suspected the patient should be sent to a mental hospital for treatment.

b. *Phobias and Obsessions.* A fear of venereal disease is a not uncommon symptom of depression. The phobia which persists may become an obsession, so that the patient can think of nothing else. The obsession may be about disease, as in a case of cancerophobia, or it may be about some misdeed, as in the case of a mother who felt she had killed her child.

c. *Insomnia.* The is one form or another is an essential feature of endogenous depression. The most common form is that the patient awakens in the early hours, this is by no means always true. Nor the patient finds difficulty in getting off to sleep, and once asleep, sleeps only fitfully, to wake in the morning more exhausted than when he went to bed. Bad dreams occurred in 21% of the cases.

3. Psychomotor Retardation

The pianist never opens her piano, and the keen gardener lets his weeds grow unheeded The tidy person tends to neglect personal hygiene and look unkempt, but with mild depression this is not likely to be marked.

Treatment of the mild depression

The factors which should make the general practitioner pass a depressive case on to the psychiatrist are twofold. First, if he can detect a suicidal urge, or symptoms such as agitation or delusions are emerging then the depression is no longer mild, and E. C. T. is probably indicated. Secondly, if the illness lasts more than three months, advice should be sought. If these two points are borne in mind the treatment of the mild types of depression is safe and simple and within the scope of general practice. The most important factor in treatment is to establish a good rapport. The patient is so often spurned and imsunderstood, especially by well-meaning relatives, that it is a great relief for him to find a sympathetic ear. The doctor who can assure him he is suffering from a common and well-understood disease makes him feel less lonely. If added to this the practitioner can show real interest and encourage him to come again once or twice each week, the patient is greatly relieved. To find himself the centre of interest and understanding is a pleasant surprise in the grey world of depression.

Symptomatic treatment. For the yearly-waking types butobarbitone, 3–6 gr. (0·2–0 4g) is indicated. For those who have difficulty in dropping off to sleep the quick-acting barbiturates such as quinalbarbitone, $1\frac{1}{2}$–$4\frac{1}{2}$ gr. (0·1–0. 3g.) should be given. The general insomnia or fitful sleep needs a mixture of both. Hypnotics should be looked on as a temporary measure, and if a habit is being formed the patient should be switched to the safer and less appetizing chloral hydrate 30 gr. (2 g). The drugs need only be prescribed in small quantities to last three or four days. As euphoriants, and dispellers of the morning headache the amphetamine group of drugs are still the most useful. They can be used in combination with barbiturates or aspirin in certain cases. Light work or work devoid of responsibility, is to be encouraged, but the patient should not be physically exhausted by his labours. A change of scenery or company may help.

ORAL ADMINISTRATION OF PENICILLIN

The British Medical Journal January 5, 1957 – The object of this paper is to compare the serum levels and urinary excretion rates obtained with phenoxymethyl penecillin (distaquaine V) and benzathine penicillin (penidural) given orally, with crystalline penicillin G, and procaine penicillin (Cavloprocil) given by intramuscular injection.

The results obtained clearly indicate that oral penicillin is no substitute for parenteral therapy when consistently high levels are required. Where oral therapy is indicated phenoxymethyl penicillin gives adequate and reliable blood levels. Benzathine penicillin appears to give disappointing results in adults, and it is probably of more value in children.

* * *

THERAPEUTICS IN NASAL OBSTRUCTION IN INFANTS

When the nostrils are obstructed, small infants cannot breath well through the nose; they swallow air and colicky symptoms follow. Occasionally the common cold with nasal obstruction must be differentiated from intussusception. Relief may be obtained with one or a combination of the following. Normal saline vasoconstrictors, suction.

Normal saline is *dropped* into the nostril with the head tilted back and may be followed with vasoconstrictors about 10 to 15 minutes later. The solution must not be forced into the nostril.

The vaso constrictors need not be preceded by saline if the discharge is thin. The hand administering the drops to the child should rest on the infants head and 3 or 4 drops are to be administered. The hands must be restrained above the head so as to fix the head by its own hands. The family drop bottle should be discarded and each child must have its own bottle for use and after use the bottle should be discarded to prevent contamination and reinfection. The use of spray bottles and atomisors are not good to use for infants since the dose administered will be variable and may sometimes produce toxic symptoms due to overdosage. Oily nose drops should not be used for fear of producing a lipid pneuminia.

Suction of the nose should be gentle and a negative pressure of about 50 to 100 m.m. of water pressure may be used. Postural drainage is oftentimes rewarding. The child should be placed on its face to facilitate drainage and the volume of secretions that comes out is surprising.

—Paediatric clinic of N. America February 1957.

THERAPY OF COUGH

Cough may be due to either upper respiratory pathology or lower respiratory causes or both.

Symptomatic measures are almost the same.— Vapour, nose drops, suction, anti tussive drugs; and postural drainage. Dripping from the upper respiratory tract to bed produces no cough; but if the secretions fall to the nasopharynx and pharynx cough may be produced.

Steam vapour and water mist may be very soothing. The source of steam must not be any where near the reach of the baby so as to prevent the baby getting scalded or burnt by the source of heat, Volatile agents not enough to saturate the vapour can be used to have their placebo effect.

The division of cough medication into the various types of expectorants is not needed or even advantageous. The dictum in dosage must be enough, but not too much"

Paediatric clinic of N. America. February 1957.