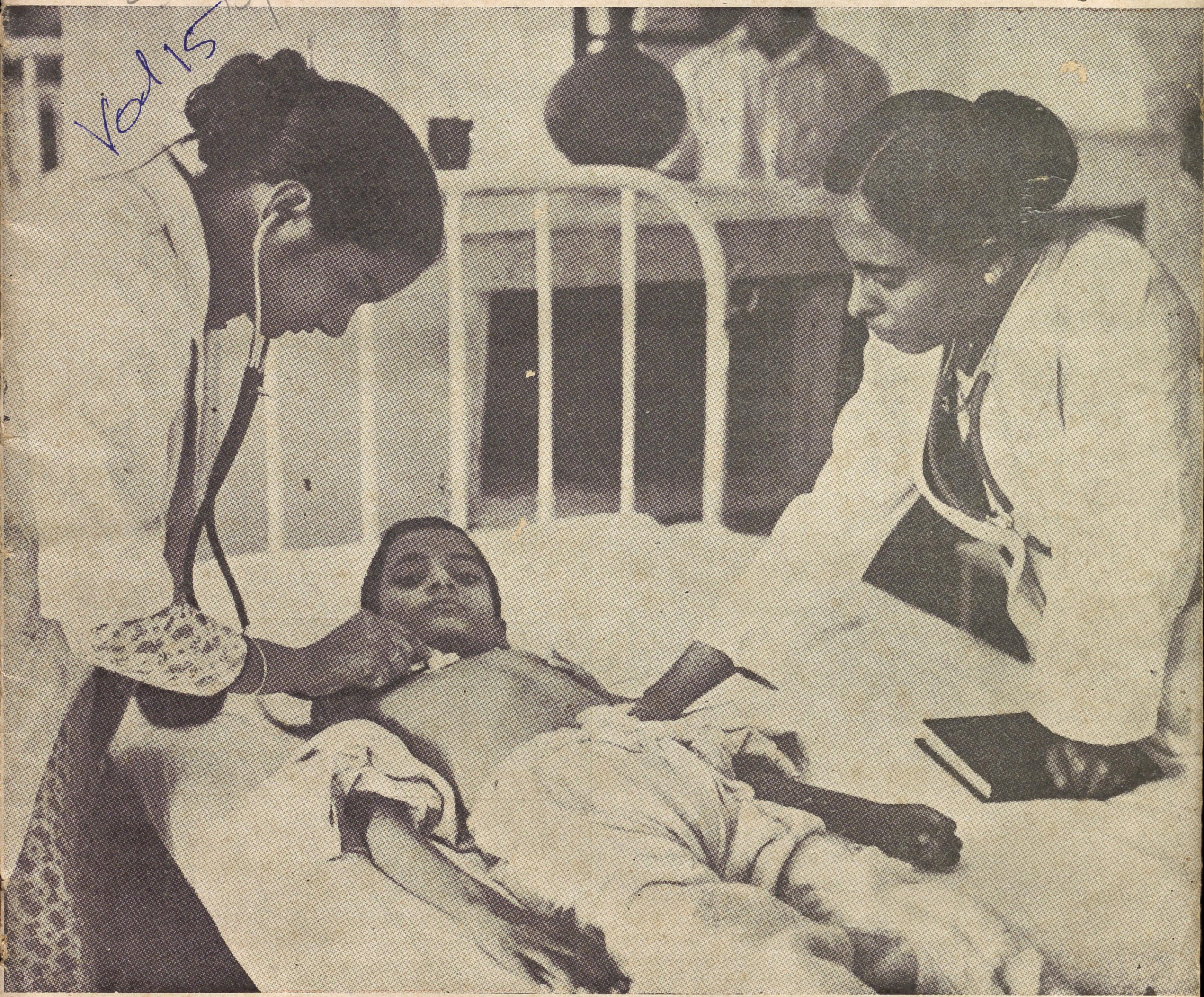
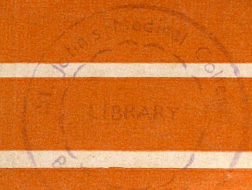


Swasth hind



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Swasth hind

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Our Cover

Health care of a child requires special training. A paediatrician deals with an individual growing continuously who differs from adults in many aspects of anatomy, physiology, pathology and even psychology. Thus the training of a paediatrician becomes an important aspect of medical education if we are to safeguard the interest of this large section of the community on whose proper growth and development depends the future of our nation. (Please see page 46).

HEALTH OF THE TOTAL MAN

Researches at the National Institute of Occupational Health will contribute to the solution of many problems of business and industry, and will help to develop human tasks and working environment so that work performance is improved. Industrialists and philanthropists can very usefully contribute to the development of an Institute like this, said Shri K.K. Shah, Minister for Health, Family Planning, Works, Housing and Urban Development, in his inaugural address at the Occupational Health Research Institute, Ahmedabad on 8 November, 1970. The Institute has been redesignated as National Institute of Occupational Health.

K. K. SHAH

WITH the changing concepts of medical care—especially in a welfare society like ours—from the individual's duty to look after himself to the responsibility of the society to look after the individual, the term 'health' has now attained wider dimensions. If we speak of health of mankind, we must think health of the 'total man'—to make man happy and safe. Control of health meaning, promotion of health, prevention and treatment of disease, and rehabilitation of the disabled should be the ultimate objectives.

Environmental Pollution

A feature of medical progress in recent years is the recognition of the fact that environment plays an important role in maintenance of health and production of disease. Man has always been responsible for so-called 'environmental stresses', but in recent years due to population explosion and the rapidly increasing industrialization with consequent rural-urban shifts, the environmental pollutions have attained health risks which can no longer be ignored.

Environmental factors determining community well-being have to be constantly assessed.

As a developing society which is soon anticipating the benefits of a developed society, we also have to pay the price of development—the pollution problems causing environmental disruption. Let us learn from the more advanced industrialized countries, and try and close the gap between the polluted and the safe environment. The return would be rewarding—improved health of the people. The most important factor in production leading to rise in the gross national production and income is the improvement in the health of its labour force. Institutes like the Occupational Health Research Institute at Ahmedabad whose researches are directed to the studies on the existing and potentially harmful environmental factors have a very useful place in the health-care programmes of the country, as they would help in providing the answer to the problem of "fitting the environment to the man". These are not new concepts because references to different vocations and trades and the hazards these carry are mentioned in the *Agnivesa Samhita* and *Susruta Samhita*.

The Health Ministry is alive to this problem, and is taking steps seeking to reduce water and air pollution and its deleterious effects. A bill to this effect has been introduced in the Parliament. Polluted water is still taking a heavy toll with diseases caused by microbiological infections, *e.g.*, typhoid and cholera. Air pollution caused by motor vehicle exhausts, smoke from factories, burning fuels, and refuse disposal is responsible for respiratory diseases like common cold, bronchitis and emphysema. High incidence of cancer of the lung in some of the Western countries is known to be related not only to smoking but also to smoke polluted air.

Research Work Needed

Side by side with the legislative control, research on the effects of air pollution on health and economy is essential. Plans are being formulated to establish an Air Pollution Research Unit in the Occupational Health Research Institute to carry out intensive studies on variety of biological problems as affecting human health. The WHO as a part of its efforts of global strategy against air pollution by setting international centres for measuring air pollution by installing air pollution monitoring devices is setting up one such centre at Nagpur.

I do not decry fundamental research as I think it is essential for any successful developmental research, but I would plead for the latter, as it is the applied research which can be translated to the human benefit. It is gratifying to note that collaborative projects for some important subjects like toxicity of DDT among spray men in malaria eradication programme, byssinosis in textile workers, and dust diseases of lung in mica processing industries are being developed with the help of WHO.

Agricultural Health Research

An Agricultural Health Research Unit is also being planned at this Institute, a subject which has been very much neglected in this country, where 80 per cent of our population lives in the villages, majority of whom are agricultural labourers. Their health should be our primary concern and any study at the Occupational Health Research Institute providing for better health of agriculturists would be a national gain.

In the matter of health and hygiene in factories and mines our pressing need is to acquaint the management especially among smaller firms with the importance of constant active direction of the factories' health programmes. In this effort we need the cooperation not only of the management but also the workers. It is hoped that Occupational Health Research Institute will do all this by providing good, sound and reasonable technical and advisory service to the industry. The Institute should determine the areas in factory health and hygiene programmes in which deficiency of knowledge is apparent and which merits further study and exploration.

Occupational Health Education

It will be of much use if the Institute incorporates occupational health education in its teaching programmes. It will also provide to industry information on harmful environmental agents, their effects and methods of control or avoidance. Our immediate objective should be to increase our efforts to indoctrinate labour and management with a knowledge of occupational health by encouraging scientific innovations at all levels of working places in small and big factories and mines.

For the research workers in occupational health, the factory-floor is the most important laboratory for research. In biological sciences we should lay more stress on the importance of field work and environmental studies in factories and mines. The Institute will do well to determine priorities and programmes in research in these places on the basis of hard indigenous thinking and needs, and not follow the fashion set by other countries.

The aim of this Institute should be to make the medical students receptive to new scientific and technological developments to serve the needs of health promotion of the community through its teaching programmes. The improvement of the level of health of factory workers can lead to spectacular increase in productivity, increased industrial output and raising the standards of living of the rural and urban workers. Industries in the country will, through this Institute, gain in the advantage of expert technical and medical advice in their development with consequent benefit to their economics as a whole. □

The modern epidemic

Ischaemic

Heart

Disease

PROF J. LENEGRE

Heart disease, particularly ischaemic heart disease, strikes more and more frequently in all age-groups. Its causes may be more or less accidental, or may be the consequence of years and accumulated neglect. It is often predictable and avoidable on the one hand, and curable on the other. Treatment may bring about a more or less complete cure or may limit or postpone the ill-effects and keep the disease under control for many years. This calls for education not only of the public but also of doctors, whose medical training may not always have prepared them to undertake the modern and sometimes "revolutionary" treatment called for in these cases.

ISCHAEMIC disease (from the Greek iskhaimos—literally "that which stops the blood") occurs when the supply of blood to part of the body is considerably reduced or cut off. If the channel of an artery supplying a tissue or an organ is narrowed to less than half its normal capacity or even more serious, if it is blocked completely, then the nutrition of that tissue or organ will be compromised and its function impaired. When there is major interference with the blood supply, the cells of the bloodless or ischaemic area die (this is known as necrosis or necrobiosis) and are replaced by an "infarct", which in turn becomes fibrosed, the dead tissue being replaced by a scar. When this occurs in the brain it is known as softening of the brain and often leads to paralysis on one side the body (hemiplegia). When the legs are affected, gangrene of the feet or the toes may ensue.

The most common of all the ischaemic diseases is, however, ischaemic disease of the heart. The term covers those diseases or the orders which result from a major reduction in the blood supply to all or part of the heart. This may be brought on by various diseases and by various mechanisms. For example a narrowing of the aortic orifice may interfere with the flow of blood to the coronary arteries which supply the heart walls and muscles, or a syphilitic inflammation of the aorta may leave a fibrosed aortic place which forms a diaphragm, or curtain, across the orifice of one of these arteries, blocking it completely. In almost 90 per cent of cases, however, ischaemic heart disease is due to atherosclerosis, a general disease of the walls of the large arteries which shows a marked tendency to attack the arteries forming the coronary tree.

The direct causes of atherosclerosis remain a mystery but an increasing number of facts about the disease are known.

Coronary atherosclerosis is far more common in men than in women, but while almost all patients under the age of 40 are men, this ceases to be true as people grow older; from 60 on, and more particularly after 70, it strikes equally at both sexes. Thus women are in general affected later in life than men.

It occurs more frequently with age. Coronary atherosclerosis before the age of 20 is most unusual and is fairly uncommon up to the age of 40. Between 45 and 50, there is a substantial increase, most cases occurring between 50 and 80.

— It runs in certain families whose members, particularly the males, may for generation after generation be the unfortunate victims of the disease.

It figures high on the list of causes of death. In industrialized countries such as the USA or Great Britain, coronary atherosclerosis is by far the most frequent cause of death. It is responsible for 50 to 60 per cent of all deaths from cardiovascular disease, which itself accounts for more than half the total number of deaths. Coronary atherosclerosis kills three out of every thousand inhabitants of these two countries every year, not to speak of the one million work-days lost annually in the United States alone. The figures for Canada, Australia, the Federal Republic of Germany and the Scandinavian countries are proportionally almost as high. In these countries it is the number one health problem—a plague of modern society. The same applies to France possibly to a lesser degree.

However in spite of the frequency of cardiovascular diseases, the efforts made at prevention remain far below what is required. If the same effort were made in France for example, to prevent cardiovascular diseases as is made for tuberculosis or cancer, mortality would indisputably decline.

Discovering the Truth

Over the last twenty years, doctors have been making a great effort to find out how atherosclerosis in general, and heart disease due to coronary atherosclerosis in particular, develops. Although they still have not found the whole "scientific truth" about the direct causes of the disease, they are getting nearer to it and have brought to light a certain number of "clues" to the mystery.

Since certain families show a marked predisposition to coronary atherosclerosis, hereditary or genetic factors have been suspected. Heredity most probably influences the disease in a variety of ways. Metabolic and enzymatic disorders, such as familial hypercholesterolemia (excess of cholesterol in the blood) or diabetes mellitus and some endocrine defects, may all play their part. However, it is unlikely that the heredity factor is a simple mechanism of gene mutation or translocation.

Statistics show us that arterial hypertension is a predisposing factor: at least 25 per cent of men

and 50 per cent of women with coronary heart disease suffer from high blood pressure. Even a mild degree of hypertension in an adult may have serious consequences.

In the same way diabetes can be said to predispose to atherosclerosis. Typical diabetes mellitus is actually present in over 10 per cent of patients suffering from coronary heart disease. Paradiabetic conditions, where one of the parents, usually the mother has a history of diabetes and/or the results given by blood sugar tests are clearly abnormal, are even more frequent. Hidden defects in sugar metabolism are often found in association with abnormalities of fat metabolism. Thus, some patients should follow a "diabetic" diet and cut out simple sugars and fruit so as to lower abnormally high blood levels of cholesterol, triglycerides or lipids.

A theory that hypercholesterolemia may be responsible for coronary atherosclerosis has been gaining ground over the last fifty years. More and more frequent reports have appeared of its co-existence with other diseases of a completely different nature such as diabetes. All these diseases, however, have a common denominator—a permanently raised blood cholesterol level. Even when other disease is not present, patients suffering from coronary atherosclerosis are found to have a higher blood cholesterol level than normal healthy individuals of the same age. The incidence of coronary heart disease varies widely from country to country but epidemiological studies show that such factors as race climate and geographical situation are less closely related to its distribution than diet and the level of economic development.

Obesity, or excess fat, is almost invariably due to overeating, although in some cases another factor may operate—such as an inherited family tendency to put on weight more easily when calorie intake is high. In certain individuals every calorie in excess of the number required to satisfy the body's metabolic requirements is stored in the form of fat and leads slowly but surely to increasing obesity. The significance of obesity in coronary heart disease has been variously assessed. It may not be the main factor but there is no doubt that it plays some part. This is borne out both by the statistical tables compiled by life insurance companies, which show how

life expectancy falls as body weight increases, and by clinical studies, some of which have shown that deaths from cardiovascular disease are twice as frequent among those who are overweight as among comparable individuals whose weight is normal (60 per cent as against 30 to 35 per cent).

Other factors have been suspected of causing coronary atherosclerosis among them cigarette smoking especially when the smoke is inhaled. Almost all the statistics agree that mortality from various diseases is much greater among smokers than among non-smokers. This is true for bronchopulmonary cancer, chronic bronchitis, ischaemic diseases of the lower limbs and although perhaps to a lesser degree myocardial infarction (coronary thrombosis).

Sedentary habits, the stress and strain of modern life, and some psychological and emotional factors may also play a part, though this is not yet fully proved and requires further study.

Disease of the Century

The very fact that coronary heart disease strikes more frequently in nations that are economically rich and whose populations are predominantly sedentary and well-fed has led to atherosclerosis in general and coronary atherosclerosis in particular, being considered as a disease of the privileged—the price we pay for belonging to what has rightly been called the “consumer society”.

What then, lies behind this steep increase in coronary heart disease? It has sometimes been alleged that the increase is more apparent than real since, with the improved diagnostic methods at our disposal, it is possible to diagnose forms of the disease today which at one time would not have been recognized. It has also been said that the increased incidence of the disease in the second half of life is due, above all, to the fact that we live longer than we used to. Indeed, the proportion of deaths from cardiovascular disease in the total of deaths is, depending on the country, from 21 to 37 per cent among male deaths at about age forty, 33 to 51 per cent at about fifty, 39 to 57 per cent at about sixty and 48 to 62 per cent at seventy. There is thus some truth in these allegations, but Osler, who a century ago in one year met only rare cases of angina pectoris among his numerous patients, was as capable of diagnosing it as we are today. Moreover it is difficult to explain away the increasing number of cases

among younger people (under 40). Comprehensive analysis of all the circumstances in which coronary heart disease makes its appearance and of the various other disorders associated with it confirms the existence of a certain number of factors whose influence is undeniably harmful. They have been called the “factors of risk”. These factors have been closely studied and their “pathogenic power” measured. The Framingham prospective study shows that when several factors of risk are present at the same time the chances of developing the disease are considerably increased.

Obviously these findings are of more than academic interest. They provide practical guidelines for the preventive and therapeutic measures to be taken.

While we have only a sketchy knowledge of the direct causes of atherosclerosis we do know quite a lot about the histological structure of the lesions associated with it. They consist of diffuse and segmentary changes in the arteries, remarkable in that they show a predilection for the male sex and the middle-aged. The first anatomic changes occur early in life, from 10 or 20 onwards. The yellowish fatty streaks, or striae, which appear in the internal lining of the artery are small at first and remain inactive for many years—almost indefinitely in most cases. With the passing of time, slowly and imperceptibly, the lesions develop, showing a preference for certain regions and particularly for the arteries forming the coronary tree. Within these regions, they most frequently attack the point at which the main body of an artery divides or curves. In these “chosen” areas, the insoluble lipid substances circulating in the blood (cholesterol and fatty acids) are precipitated on to the internal wall of the artery and form circumscribed yellowish deposits which it turns are soon covered by a gradually thickening fibrous shell. Thus an atherosclerotic plaque or stenosis is formed which infiltrates deeply into the arterial wall eroding or compressing the middle muscular coat of the artery and, even more serious, bulging out into the blood channel, which becomes progressively narrower as the atherosclerotic plaque grows larger.

Narrowing Arteries

This stenosis, or narrowing of the arteries progresses very slowly. The failing blood supply is

to a certain extent compensated for by a supplementary or anastomotic circulatory system as those coronary arteries which remain open respond to the appeal for blood from the ischaemic areas of the heart muscle whose normal supply has been diminished by the growing stenosis.

These stenoses usually begin to interfere with functioning and nutrition of the myocardium, to cause accidents and to give rise to clinical complications between the ages of 50 and 70. The normally slow course of the disease—progression as the arteries narrow alternating with regression as the supplementary anastomotic circulation comes to the aid of the failing heart—may be accelerated by the formation of a coronary thrombosis. A clot of blood suddenly forms around or near an atherosclerotic plaque, completely blocking the artery, and the supplementary circulation is unable to meet the extra demand for blood. That part of the myocardium which depends on the blocked coronary artery becomes acutely anaemic and the incident usually ends in a classic case of myocardial infarction. This can be defined as complete ischaemia of a well defined area of the heart wall—usually part of the wall of the left ventricle. The stricken area ceases to contract, fails to assist the ventricular pump in its work, degenerates and, over a period of several months is transformed into a fibroid scar, incapable of taking any further part in the working of the heart.

The clinical signs of the disease and the electrocardiogram findings usually reflect broadly the changes taking place in the coronary arteries and the myocardium. Thanks to coronary arteriography, we can today observe and follow these changes.

First Signs

When the progressive stenosis, or even occlusion, of the coronary arteries reaches a stage where the anastomotic circulation is no longer able to compensate fully, any occasion when the heart is called upon to increase its output may reveal the anaemic or ischaemic state of the myocardium. This usually happens when the patient makes a physical effort, particularly when he is walking. After he has walked a short distance, a hundred yards or less, especially if the weather is cold or the pace too rapid, if the road is steep or if he has just eaten a heavy meal, the coro-

nary insufficiency betrays its presence by a transient pain in the chest. This pain, known as an angina pectoris, comes on suddenly, varies in its intensity, and is usually felt in the midline of the anterior wall of the chest, the retrosternal region. It brings with it a feeling of constriction of the chest, without breathlessness, but unpleasant enough to cause the sufferer to come to a halt or, at least, to slow down considerably. It goes as quickly as it comes—usually in less than two minutes. Its passing is often accompanied by stomach gurglings or by belching of wind, which leads the patient to think mistakenly that he is suffering from indigestion—especially if he has just eaten. Although the pain usually comes on while the patient is walking it may also appear for no apparent reason when he is at rest. It varies in frequency, some patients suffering several attacks in one day, others only two or three in a month. In the intervals between these brief attacks, which never last for more than five to ten minutes, the patient is not conscious of any difficulty or discomfort and usually claims to feel very well.

Between the attacks medical examination often reveals no signs of abnormality, the heart appearing normal to auscultation and to X-ray examination. The most accurate diagnostic tool at our disposal is the electrocardiogram. In one-third of cases, it shows abnormalities suggestive of chronic coronary insufficiency, sub-endocardiac lesions or sub-epicardiac ischaemia; in a further third, the electrocardiogram is not absolutely normal but the irregularities are slight and non-typical; in the remaining third an electrocardiogram taken at rest is quite normal. Whenever the electrocardiogram is normal, negative or difficult to interpret it is advisable to give the patient a controlled exercise tolerance test, after which the electrocardiogram will usually reveal the typical irregularities of a transitory, acute, coronary insufficiency.

This test often brings on an attack of pain which, however, disappears spontaneously within a few minutes—even more rapidly with the help of a tablet of nitroglycerine.

In certain cases, coronary arteriography is indicated and may be helpful. A catheter is introduced into a peripheral artery such as the femoral or the

brachial artery and is passed as far as the orifice of the coronary arteries. The coronary arteries are rendered opaque by an injection of a fluid containing iodine and any stenoses, obstructions or abnormalities become visible.

Sudden Heart Attacks

When the arteries become so narrow that the flow of blood to the ischaemic areas approaches the absolute minimum necessary to maintain the action of the heart muscle—usually so pressing in its demands for oxygen—the blood supply to the affected areas becomes very uncertain. Anginal pain becomes more or less continuous, coming on after ever slighter exertion and sometimes even when the patient is at rest. The deterioration in the patient's condition is apparent in an increase in the frequency intensity and duration of the attacks and, sometimes, even by definitive changes in the electrocardiogram. The patient is then living under a constant threat of myocardial infarction. In these circumstances, any one of many "incidents" may cause the blood supply, and therefore the oxygenation and nutrition of the myocardium, to fall below the minimum vital level and bring on a heart attack. The immediate cause may be unaccustomed physical effort (though this is rare) or a violent emotion such as anger. A meal that is too heavy or too rich in fatty foods may affect the blood supply in various ways. It may precipitate an attack by upsetting the water-salt balance in the blood, by increasing the work load on the heart, or by modifying the blood chemistry and causing a sudden rise in the level of triglycerides and fatty acids. Heavy cigarette smoking with inhalation and widely varying intercurrent "incidents", such as an attack of another unconnected illness—influenza, for instance, accidental injury or a surgical operation may also trigger an attack.

In most cases, however, a major heart attack occurs suddenly and without warning. It may surprise the victim at his work, while he is resting or, without apparent reason, in bed at night. These cases of unexpected myocardial infarction, particularly when there are no premonitory signs such as recurrence of pre-existing anginal pain, are usually due to coronary artery thrombosis. Whether preceded by a recrudescence of anginal pain (in 40 per cent of cases) or apparently linked with an "incident"

such as those described above (less than 10 per cent of cases) or striking suddenly and without warning, the heart attack is characterized by a violent bout of pain which spreads to the whole of the thorax, often radiates along the arms, and lasts not minutes, but hours. The immediate risk to a patient suffering such a major attack is even greater than was once thought. Recent prospective epidemiological studies show that the victim often dies within an hour or two of its onset. If he survives this first critical period, myocardial infarction usually develops within the next few days—a consequence of the partial destruction of a segment of the wall of the left ventricle. Once the pain has subsided, the arterial blood pressure falls and there is usually a transient rise in temperature to about 38 or 39 degrees Centigrade (100 to 101 degrees Fahrenheit). Blood tests carried out in the first few days after an attack show abnormal amounts of certain substances (enzymes), indicating that some degeneration of the cardiac muscle cells has taken place. Their presence and the characteristic cyclical irregularities of successive electrocardiograms confirm the diagnosis. There is nothing to do but to put the patient to bed for three weeks or so with appropriate treatment and wait patiently for the damaged cardiac tissue to heal.

Thus, death from myocardial infarction may be immediate, occurring before the infarct has had time to form, or it may occur after several hours or days in cases where the infarct is so large that it interferes irremediably with heart function or when it is accompanied by rhythmic complications such as ventricular tachycardia (excessive rapid heart beats, at more than 120 to the minute) or heart-block bradycardia (less than 50 beats to the minute). The first days and particularly the first hours after the cardiac accident being the most dangerous, it is of the utmost importance to establish an early diagnosis and to begin suitable treatment without delay. In this way it may be possible to avoid some of the "illegitimate" deaths which sometimes occur even when the cardiac damage is not particularly extensive. This calls for well-organized facilities for the immediate transfer of urgent cases to hospitals where they can be treated in intensive care units.

In the majority of cases, the patient can be expected to survive the dangers of the first few days and



normally the infarct will cicatrize within a few months. In more than 50 per cent of cases, although the electrocardiogram still shows the presence of a scar, clinical recovery is complete. The patient is soon able to resume his normal life and is almost always able to return to full-time work in his former occupation after about three months. If, however, he has suffered several such attacks, the prognosis is somewhat less favourable. A second or third myocardial infarction in a heart already damaged by previous infarcts is more serious. The immediate risk of heart failure is greater and, in the long term, functional recovery is less certain and sometimes less than complete. In 15 per cent of cases, according to some studies, atherosclerosis, even when severe enough to interfere with cardiac function, causes no symptoms and the patient feels no pain. These asymptomatic forms of the disease may be responsible for some cases of sudden death or progressive heart failure whose origin would remain unrecognized without a systematic search for coronary atherosclerosis, this being, after all, one of the most frequent causes of primary cardiac insufficiency in middle age.

Heart Attacks Can be Foreseen and Treated

Although it is so obviously "public health enemy number one", heart disease in general, and heart attacks resulting from atheroma of the coronary arteries in particular, do not always receive the systematic treatment they require. This is probably because it is looked on by many as part of the inexorable running-out of a human life. Nothing could be further from the truth. Heart disease, particularly ischaemic heart disease, strikes more and more frequently in all age groups. Its causes may be more or less accidental, or may be the consequence of years of accumulated neglect. It is often predictable and avoidable on the one hand, and curable on the other. Treatment may bring about a more or less complete cure or may limit or postpone the ill-effects and keep the disease under control for many years.

Much of this treatment becomes a matter of extreme urgency when there is a major heart attack and, as is often the case, the patient's life is in immediate danger. Every minute counts and it is vital that the incipient heart attack be recognized as such right from the outset.

This calls for education not only of the public but also of doctors, whose medical training may not always have prepared them to undertake the modern and sometimes "revolutionary" treatment called for in these cases. The classical treatment of the heart attack which forbade moving the patient during the acute stage and insisted on his being treated "in situ" (that is, in his own home) is losing ground. This was perhaps logical in the days when treatment of myocardial infarct was almost all "wait and see". Now, however, we know that the first few hours are by far the most dangerous and during these first few hours "illegitimate" deaths may occur, not as the result of irreversible cardiac damage, but following a sudden rhythmic "accident" such as ventricular fibrillation or cardiac arrest. Such tragic mishaps, against which we are impotent owing to a lack of suitable equipment when the patient is treated at home, are often remediable if treated in centres specializing in the handling of heart disease, where "reanimation" and "defibrillation" are common practice.

In view of the immediate risk the patient should immediately be transferred to one of these specialized "coronary units". Therefore, in addition to the re-education of the public and doctors, it is essential to organize a special ambulance service to provide immediate intensive care and to be capable of going into action as rapidly as a fire engine, and to set up special units in most hospitals for the treatment of heart attacks. These suggestions are not entirely novel—such centres have been in operation in hospitals in many of the world's cities for years. Any large modern hospital should find it possible to meet the cost of such a unit without overstraining its budget.

Heart attacks and myocardial infarction usually follow an uncomplicated course. If there are no complications, treatment is limited to continuous venous infusion of heparin (an anti-coagulant) while a close watch is kept on cardiac rhythm and arterial blood pressure. If the severe initial attack of pain does not pass spontaneously, sedatives will bring rapid relief. Once the crisis is over, convalescence begins—usually after a few days. Rest in bed for about three weeks remains the standard and logical treatment for recent myocardial infarction.

(Contd. on page 48)

All the health units, health centres, dispensaries and hospitals in Ladakh have qualified doctors... A distinguishing feature here is the creation of a medical complex around each dispensary...

HEALTH SERVICES IN LADAKH

THE remote, inaccessible and extremely cold regions of Ladakh District of Jammu and Kashmir State have received medical facilities, on an unprecedented scale, from the State Government in the past few years, according to Dr S.M. Gupta, District Medical Officer of Ladakh, Leh in an interview to Shri O.P. Sharma of the State Health Education Bureau recently. A few years ago, there were meagre treatment facilities in Kargil and Leh hospitals but now, there is a network of dispensaries and first aid centres.

There is one doctor for about 3,800 population and one bed in medical institutions for 700 persons. This picture is quite bright as compared to other districts of the State. The *per capita* expenditure on drugs is also higher than elsewhere in the State. Specialized services have also been introduced now. There are two main hospitals, one primary health centre, three health units, ten dispensaries and eleven first aid centres in the Ladakh area run by the State Government. Under the indigenous system called *Amchi*, 20 dispensaries are operating there. The general health standard of Ladakhi people is good with low morbidity and mortality rates. Number of older people, over 80 or even 100 years is greater here than elsewhere in Jammu and Kashmir State.

Q. Could you please draw a comparative picture of existing medical facilities with those prevailing in the past, say a decade ago?

A: There were hardly two dispensaries; one at Leh and the other at Kargil. Another dispensary was functioning under the community development department. But the real medical facilities were very meagre indeed.

But now the picture has changed completely with great strides in extension of health services in Ladakh District. There are more dispensaries and hospitals and first aid centres. This is peculiar to this area where the population is thin and scattered; it is not desirable to have full-fledged primary health centre in a block. Instead, it is more feasible to open dispensaries or first aid centres in each village. The district hospital at Leh with 40-bed strength has X-ray arrangements for surgery, dental unit, V.D. clinic and M.C.H. services. A surgeon and anaesthetist have recently joined, and, a gynaecologist and a radiologist are likely to be posted shortly. Similarly in Kargil, in the second main town of Ladakh, there is 20-bed hospital with full facilities.

A T.B. clinic at Titichumik, seven kilometres from Kargil, has also started functioning. A local

doctor with specialized training at Bangalore and New Delhi has joined the clinic.

Medical facilities have also been extended to the rural areas of Ladakh District. One Primary Health Centre at Drass is an addition with full complement of staff. Three sub-centres are being added to it shortly.

Q: Are these medical institutions manned by qualified doctors and do you think adequate drugs are provided to the hospitals and dispensaries in the Ladakh region?

A: Now with the posting of fresh batch of doctors, all the health units, health centres, dispensaries and hospitals have qualified doctors. Trained staff is in position in the first aid centres.

A distinguishing feature here is the creation of a medical complex around each dispensary whereby a doctor of the nearest dispensary has to visit every week the first aid centre in his area. Thus the people in the remote villages too shall have the services of a doctor at their disposal. But under the scheme, due to lack of means of communication and the difficult terrain, the doctors of Padam (Zanskar) Diskit (Nobra valley) are to pay monthly visits. And in future too whenever any new first aid centre is opened, it shall be similarly attached to the nearest dispensary.

The position of drugs in the hospitals and dispensaries here is much better than any other part of the State, considering the population ratio and the per capita expenditure.

Q: Now can you tell something about the general health standard of the people here?

A: The general health standard of the people in Ladakh is quite good. With the advancement of age, falling of hair, teeth and loss of vision is much less common here than in any other part of the State. Number of persons of 80 years or even 100 years of age per thousand population is more here, though no specific survey has been conducted.

Q: What are the diseases prevalent in the area?

A: The Ladakh area is the highest plateau in the world and is having extreme cold weather. The common diseases are collagen group of diseases, such as rheumatism and rheumatoid arthritis and peptic ulcer. During extreme cold, there

are more cases of influenza, cold catarrh and pneumonia. In some areas goitre cases also occur. Anaemia and nutritional-deficiency diseases are as well common.

Q: Besides all the curative services being provided I think it is very essential to educate the people here about the various preventive steps against some common diseases and root out misconceptions about their causes and cure?

A: Surely, the importance of the preventive aspect of health is fully realized and due importance laid on it. Whatever, possible within our means, is being done.

The State Health Education Bureau has initiated a vigorous drive for education here through film shows, group meetings, exhibitions, short-term training courses and distribution of literature last year. Ladakh school children have been immunized against some common fatal diseases. Multivitamin tablets have also been distributed among them. School Health Scheme has been working here for promotion and preservation of health of school children. Besides, about 2.5 lakh vitamin tablets from Red Cross Society, Leh are also being distributed among school children.

Q: How is the family planning campaign catching up in the Ladakh District which has predominantly Buddhist and Muslim population? Do you feel the response of the people, in general, is favourable to the programme?

A: The family planning programme could not be undertaken in a big way here. The population in Ladakh is scattered over a vast inapproachable villages. Actually there is only one family planning centre functioning at Leh consisting of one Extension Educator and a computer only. Unfortunately this centre too has been bifurcated and the computer deputed to Kargil hospital. I am working as District Family Planning Officer as well. Conventional contraceptives are in demand. We have meagre facilities for IUCD and sterilization. A proposal has been submitted to the Government for two family planning centres at Leh and Kargil. The response among the educated, whether Buddhist or Muslim, is good but among the illiterates it has yet to make headway. However, we have made a start now. □

RED CROSS—

Mission

With

A

Purpose

MAJOR-GENERAL S.S. MAITRA

The Indian Red Cross Society celebrated its Golden Jubilee on 5 November, 1970. The Indian Red Cross can look back with satisfaction on its record of service particularly of its activities to provide succour to those affected by natural or man-made calamities.

The Posts and Telegraphs Department has brought out a Special Stamp to commemorate the Golden Jubilee of the Indian Red Cross. The Stamp was released by the President, Shri V. V. Giri, who also inaugurated the Golden Jubilee Celebrations.

THE Red Cross is a mission. It is a movement too. Above all, it is a great idea. But it is only part of the sum total of the originator's ideas. "What I want is a general mobilization of all the charities of the world; I want an organization which will be confined neither to England nor to any other country, but which will automatically go into action in every conflict anywhere", said Henry Dunant, the illustrious founder of the Red Cross. This was the basic idea he evolved from his experience—the idea of one humanity and one international organization for administration of humanitarian services.

While his idea of an international neutral humanitarian force to act in times of conflict found practical expression in the creation of the International Committee of the Red Cross (ICRC), his concern for peace-time work found meaningful expression with the founding, though long after his death, of the League of Red Cross Societies. Dunant had pointedly expressed, more than once, his concern for administrative effectiveness of this mission of mercy—the International Red Cross.

The International Red Cross is an organized collectivity of three separate organizations of the same family, each with a distinctly defined object, purpose, role, sphere and activities. The ICRC, based on the principles of humanity, solidarity and universality, is exercised more particularly in times of wars, conflicts and disturbances—primarily in support of the sick and wounded combatants, prisoners of war and civilian suffer-

ers. In peace time, it helps to prepare National Societies for the activities they may be called upon to undertake in war emergencies and endeavours constantly to bring about improvement in the Geneva Conventions and to make them better known. Again, it is the neutral intermediary in the event of conflicts. It is, in fact, the trustee of the Red Cross movements.

National Societies

There are National Red Cross Societies in 114 States at the moment. These States are signatories to the Geneva Conventions. No country may have more than one national society. These societies are recognized by their governments as voluntary aid societies—auxiliaries—for the benefit of the armed forces and the civilian population. Organized according to local needs though enjoying autonomy, which enables them to carry out activities in conformity with the principles of the Red Cross, they are independent of each other. However, they are united in that, they have a single ideal and follow the same principles.

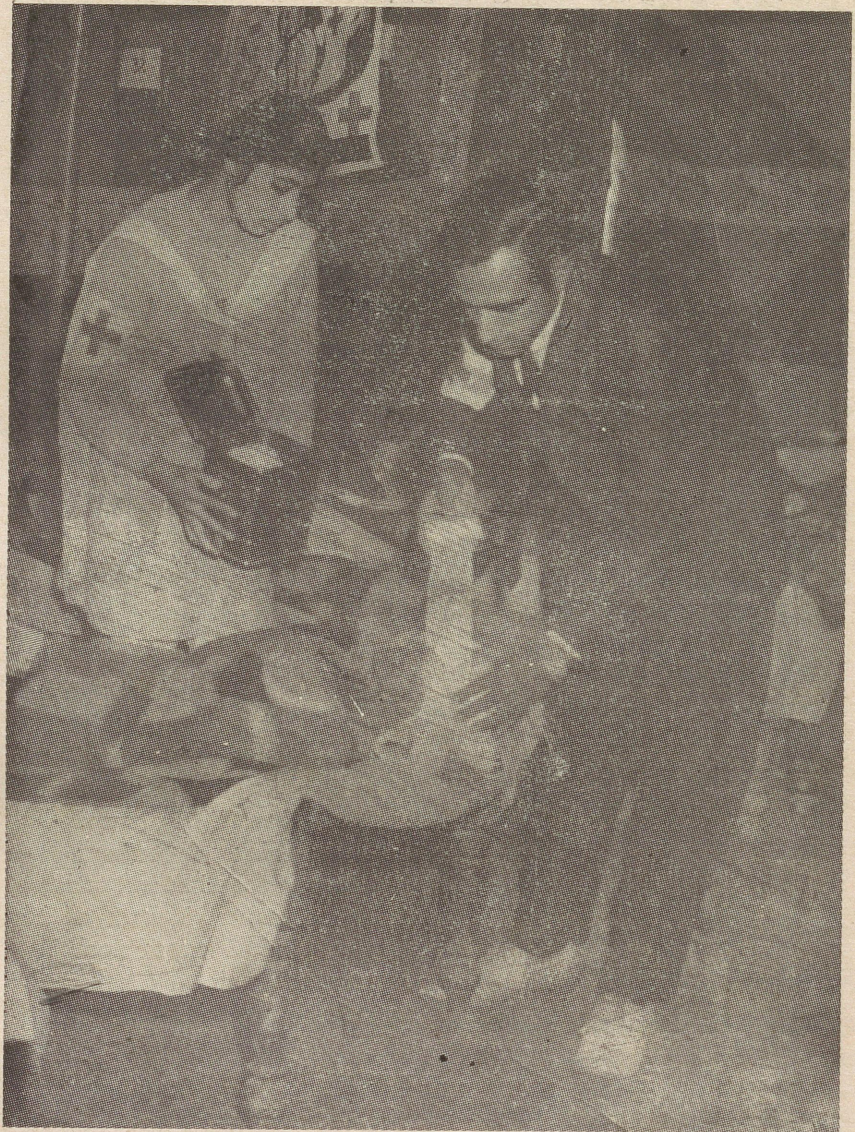
The League of Red Cross Societies is the federation of the National Red Cross Societies. It is a permanent organ of liaison, coordination and study among the National Societies. It collaborates with them in their activities, particularly in the sphere of improvement of health, prevention of disease and mitigation of suffering.

What is peculiar of any voluntary action is even more so of any Red Cross action. This, in simple words, may be said to be the human touch or approach. There is difference between State administration and Red Cross administra-

tion. While the former generally acts on the dictum "greatest good of the largest possible number", Red Cross like any other human welfare organization, seeks to help "each according to his need". The element of promptness is very pronounced in Red Cross work. Accidents may happen to individuals all of a sudden. Nature's fury may descend on some particular area causing death, disease and devastation. Many other types of calamities may occur. In all such situations, Red Cross is to the fore without unavoidable delay and without recourse to red-tape or unnecessary formality. This is one important fact of Red Cross work.

Let us for a moment turn to our National Red Cross. The Indian Red Cross Society provides a meeting ground between officials and non-officials for voluntary service. It is unique in that unlike other welfare organizations, it is free to act as it likes though born out of State enactment with its roles and functions pre-fixed, it has well defined fields of work. There is little chance of duplication or overlapping. Also, its services do not suffer from lack of co-ordination.

As Red Cross services are dynamic, the administrative procedures and methodology grow in relation to changing needs. The depth and degree of these changes are assessed before policies are formulated and administered. The functional role of research and training is also paramount. Whatever be the role of a Red Cross worker, he is invariably part of the administrative machinery. He must not only have basic grounding, but also



An eye relief camp organized by the Indian Red Cross.

sound knowledge and understanding of Red Cross concepts—principles and philosophy, procedures and problems of organization, management and administration. He has to be familiar with the relationship between the Red Cross principles and their application.

Coordination plays a big role in Red Cross administration. On this aspect, the League of Red Cross

Societies lays special emphasis, playing its own important role at the international plane. At the national level, it is for the national societies to look after this important aspect. Red Cross had perfected and expanded its work with the passage of time. It has one basic pattern the world over, though methods and procedures may slightly differ according to

Red Cross Symbolizes Humanism

—V.V. GIRI

"The Red Cross movement symbolizes some of the finest aspirations of the human mind and gives us hope about the future of humanity. Though the Red Cross was primarily intended to alleviate the sufferings of the wounded on the battle-field, it gradually spread its activities to many new fields and has evolved an extensive peacetime programme as well.

The appeal of the Red Cross movement is universal because it is based on human fellowship. To us in India, the ideal of oneness of humanity forms the bed-rock of our age-old culture. Our saints and seers have repeated this message time and again. I have always believed that humanism is the highest form of religion. To love and serve one's fellow human-beings irrespective of caste, colour or creed is the best way to serve God. All the great religions preach compassion as a true sign of religion. The Red Cross movement is based on the spirit of compassion and universalism. If this spirit permeates our activities many of the problems that defy solution could easily be solved.

I am particularly happy that Indian Red Cross has been devoting a good deal of attention to work in the sphere of maternity and child welfare, family planning, home nursing, blood-bank, etc. The ambulance wing has also been doing fine work. Our people are wide awake and their demand for a better and richer life is irresistible. Health care has to be spread to our remotest villages. I would like on this occasion to emphasize that the quality of medical facilities we give to our people need not necessarily depend on the money that we spend on hospital buildings, equipment, furniture, etc. We must reduce our overhead expenditure to the barest minimum, and concentrate on providing effective medical relief in simple and austere surroundings. I have seen a number of well-run co-operative hospitals being housed in thatched sheds in the countryside. The experiment of well-equipped mobile vans going to remote villages has also been tried with success in a number of places, and I would like this to be extended all over the country. Our aim should be that nobody is denied medical care when he needs it."

(Excerpts from the inaugural address at the Golden Jubilee Celebrations of the Indian Red Cross Society at New Delhi on 5 November, 1970.)

local needs. It is considered an essential organization for any progressive country. With 230 million people owing allegiance to it, it has a truly global base. It is aptly described as a kind of

UN in the social sphere. No doubt, against the mandate that the UN enjoys, it has only a voluntary status. But this has an advantage in that it is never suspect in the eyes of the people. □

COUNT BERNADOTTE MEDAL FOR SHRI K.K. SHAH

Sir Geoffrey Newman-morris, Vice-Chairman of the League of Red Cross Societies announced in New Delhi on 7 November, 1970 that the League has decided to award the coveted Count Bernadotte Medal to Shri K.K. Shah, Union Minister for Health, Family Planning, Works, Housing and Urban Development. Sir Geoffrey Newman-morris was speaking at the concluding session of the Golden Jubilee Celebrations of the Indian Red Cross Society.

The Medal is the highest honour awarded to eminent world citizens in recognition of their social services and has been given only to a few persons so far.

Relief material being distributed at a Red Cross Emergency Relief Centre.



A good paediatrician must be a friend, philosopher and a guide to the family of an ailing child. Unless he attempts to approach the problems of a child on this broader and natural basis, he will be only a specialist in the diseases of children rather than a specialist for children.

TRAINING OF A PAEDIATRICIAN

DR (MISS) S. GUPTA

CCARE of a child from birth to maturity poses many problems which are different when compared to general medicine as applied to adults. The paediatrician deals with an individual growing continuously—who differs from his adult counterpart in many aspects of anatomy, physiology, pathology and even psychology.

Pattern of Training

The pattern of training of any category of personnel will depend on the needs of the community. This applies to paediatricians as well. In India 47 per cent of the population is below 18 years and out of which as much as 41.8 per cent is below 14 years of age. Considering this fact it becomes an important aspect of national planning, if we are to safeguard the interest of this large section of the community.

Knowledge about the normal paediatrics is of utmost importance. This includes growth and development. It is necessary that the doctor knows what constitutes adequate achievements at successive age levels for children of different body types and capabilities, with or without obvious physical or mental handicaps. This becomes essential when one realizes the fact that the period of rapid growth in infants and children will alter the norms at each

stage of development and that it is the rate of growth in that particular child rather than isolated observations on growth and development which are helpful in assessment.

Nutrition

A clear understanding about the fundamentals of nutrition is essential for skillful supervision of the health of children. Today in the country 40 per cent of the diseases of children are primarily due to malnutrition, and nutrition and infection together comprise 90 per cent of the total diseases of children. Thus nutrition directly or indirectly is responsible for a very large morbidity in our child population. Unfortunately nutrition is not being given a due place of importance in medical teaching today. A few lectures or lecture demonstrations that are given are far from sufficient. It should comprise a well organized part of teaching by competent persons and frequent exercises by students, on this important subject are necessary. Practical demonstrations on the preparation of infant food are of utmost importance.

Psychological Development

Normal psychological development pattern must be understood if deviations are to be detected and

diagnosed. Psychic development takes place after birth and is determined by the environment. This could be favourable as well as unfavourable. Many variations are possible within the accepted norms. The fact that what may be considered abnormal for an older child may be normal for a younger one. It is, therefore, necessary for the paediatric physician to acquaint himself with the psychological patterns at various ages.

It has become all the more necessary to practise preventive paediatrics because of the increased stress on family planning. Prevention of illness in children has various aspects, viz., (a) promotion of general health, nutrition, hygiene, etc., (b) prevention of specific diseases by immunizations, (c) early diagnosis of a symptomatic disease by regular check-ups, (d) early diagnosis and treatment of symptomatic diseases so as to minimise sequel, (e) prevention of further disability in a known case of chronic illness, and (f) prevention of psychological disorders by providing healthy

Time has come when the paediatricians must reach their patients rather than patients reaching them.

environments for the growth of a child. It is necessary that the physician dealing with children should equip himself with knowledge about the preventive aspects of paediatrics. He must know what immunizations can be given and at what age. He must also familiarize himself with the indications, contra-indications and complications of each one. He must be prepared to spend time with the parents to talk and explain to them the various procedures involved.

Reaching the Patient

Besides this, a knowledge of the common disorders which affect infants and children and their therapy will have to be a major part of the training. A training in clinical wards and out-patient departments, where the doctor can get an insight in the medical problems of children and also the facilities to treat under supervision is very important. Further he should also be given training in the community by making him participate at the urban and rural

centres. This latter part of the training which is lacking today is of utmost importance especially, when paediatrics is a community medicine. No doctor of children, therefore, can afford to sit in the hospital alone. Time has come when paediatricians must reach their patients rather than patients reaching them. Since sickness may be a bait for preventive and promotive services, the paediatric physician should have competence, patience and tact to deal with the sick child and the family.

Postgraduate training in the art of healing children had been introduced recently. The training for Diploma substitutes the deficiency in the undergraduate curriculum. Further training for higher specialization will need study in few more aspects which are peculiar to paediatrics.

Genetic counselling is part of the duties of a paediatrician. He has to advise if a mother with a child with Down's syndrome or with rare in-born error of metabolism or with microcephaly should have another child or not.

Rehabilitation of the Handicapped

He should also have some training in the rehabilitation of physically and mentally retarded children. This will basically involve assessment of the disability as the first step, and further the capacity to work as part of the team with other specialists and paramedical workers. If team spirit is needed in any branch of medicine, paediatrics with its multifaceted duties and dimensions offers the widest scope.

The fact that many disease-producing organisms have different reactions in children as compared to grown-ups, makes it necessary for the paediatric physician to be well-versed with not only the usual but the unusual manifestations of disease in children. Besides, a paediatrician must be trained in the art of dealing with a sick child. He must learn the value of patience. This will pay dividends not only in case of the sick children but also in healthy children with psychological problems. Giving the child time to freeing him from adult anxieties is extremely important. Other qualities which he must learn are: faith in the child's ability to solve his own problems and also to see his problems through his own eyes. □

ISCHAEMIC HEART DISEASE—(Contd. from page 40)

This allows the damaged tissue of the heart wall to begin its process of cicatrization and consolidation. Physical activity should be resumed very slowly and progressively, and it will be at least three weeks longer if the infarct is severe—before re-education and re-adaptation enable the patient to reintegrate fully into his family and professional life and to resume all his social activities. In the great majority of cases, recovery from a first attack of myocardial infarction is complete and the patient may even be permitted to practise certain sports, provided that he is careful and that they cause him no physical discomfort or other difficulty. Whether or not anticoagulant treatment should be continued must be decided in the light of the condition of each individual patient.

It should not be forgotten, however, that even when "cured" myocardial infarction should never be taken lightly. An infarct even when healed, or indeed any anginal pain, however brief, coming on spontaneously or during exercise, may signal the presence of coronary atherosclerosis and indicate that certain precautionary measures should be taken. The patient should be asked to avoid any physical effort which causes him discomfort and particularly any movement which brings on anginal pain. If pain does occur, a tablet of nitroglycerine should be crushed in the mouth without delay. This drug is harmless when taken in the recommended dosage and its effect is little short of miraculous. It may cause a headache in 5 to 10 per cent of cases (disagreeable but transient). It is erroneously believed by many that nitroglycerine loses its powers if taken frequently; on the contrary, it continues to be effective indefinitely. Of all the drugs known today it is the most reliable, the most rapid and the most spectacular in its results: in 90 per cent of cases it relieves the pain of angina pectoris in less than one minute. No other drug can do this.

Other drugs, generally thought to be capable of dilating the coronary arteries, diminishing the labouring of the heart, or improving the metabolism of the myocardium by reducing its oxygen (and therefore blood) requirements, may be used with varying success to complete the treatment. There is a long list of products recommended to ward off the ill effects of coronary atherosclerosis; the

most frequently used are the nitrate derivatives, the mono-amine-oxidase inhibitors and the drugs known as the Beta-blocking agents.

Treatment by Graft

American surgeons have recently perfected a satisfactory surgical method of restoring the blood supply to ischaemic regions of the myocardium in cases where angina pectoris proves resistant to medical treatment alone. The presence of these bloodless areas, indicated by irregularities in the electrocardiogram, is confirmed by coronary arteriography, which also shows the exact location of coronary stenoses and occlusions.

The affected areas can then be revascularized by a graft. A long segment of the internal saphenous vein is taken from the thigh and one end of it is implanted at the beginning of the aorta, the other end being grafted on to a peripheral sector of the coronary artery beyond the point where it is blocked by the obstruction or obstructions. This operation, logical and simple to perform and involving very little risk, has proved to be extremely effective in controlling anginal pain, but it is essentially a palliative measure and does not cure the coronary atherosclerosis itself.

Any treatment must include advice on principles of general health and on the diet to be followed. This is of the greatest importance both to those patients who already suffer from the effects of the disease and to those who, though apparently in good health, are "at risk" in the sense that various clinical and biological tests reveal them to be affected by one or more of the "factors of risk".

In either case the patient should be advised to take dietetic and hygienic measures which may halt the progress of the developing atherosclerosis. The most important of these preventive measures are to give up smoking (in some patients smoking is one of the most important aggravating factors and should be stopped completely and permanently); to lead a reasonably active life, avoiding sedentary occupations and taking sufficient exercise to keep the muscles in good order; last but not least, to adopt a diet, designed to counteract any metabolic disorder which may be discovered by careful biological checks. →

DRUGS AND DREAMS

SCIENTISTS have discovered some interesting facts about the effects of drugs on dreams. Much of this new information comes from a laboratory in the Department of Psychiatry at Edinburgh University which pioneered the work in this field. The team started their experiments on some milder drugs and the effects of these on dreaming has led to some worrying conclusions. The scientists fed barbiturates to three young male volunteers and asked them to report on the contents of their dreams. The very evident changes in dream content were measured on what is called the Foulkes scale. This rates dreams according to how abstract they are, from completely abstract at one end of the scale to fully life-like hallucinations at the other.

The results showed quite clearly that the drugs made dream experiences more cerebral and abstract and less hallucinatory. Indeed, dreaming involving any sexual content stopped completely under the influence of barbiturates but recommenced immediately they were withdrawn. The concern, implicit in the results, is that there is now a good deal of evidence to show that regular normal dreaming is necessary for full mental health. Investigations are to continue to find out just how harmful barbiturates may be to health by impairing normal dreaming.

The "hard" drug heroin is also known to have strong effects upon dreaming. The Edinburgh team, using themselves as guinea pigs, employed heroin

for one week and then studied the effects which this brief indulgence had upon their dreaming patterns over a much longer period. It emerged that, when the drug was withdrawn, dreaming took more than two months to become normal. During that time, the proportion of dreaming time spent in what scientists refer to as "paradoxical" sleep, marked by rapid eye movements and changes in electrical brain rhythms, went up by as much as 50 per cent beyond normal. This was compared with other evidence, for instance, that available from people who had attempted suicide by taking an overdose of drugs. Although all other mental and physical activities in these cases appeared fully normal within four days, dreaming took six to eight weeks to return to a normal pattern. The scientists have put forward a theory to explain these results. It is that, during paradoxical sleep, the brain is actually repairing itself from physical injury caused by drugs, and that this renewal period is lengthened when drug damage makes extra repairs necessary. Dreamless sleep, by contrast, is the period when the body as opposed to the brain is undergoing repair. This is supported by recent Japanese and American work, which has shown that the amount of growth hormone (the pituitary-produced substance which encourages growth of the body) in the blood increases during ordinary dreamless sleep but is drastically reduced during paradoxical sleep.

—*Spectrum, British Science News, 1970/74.*

In conclusion, it can be affirmed that in most cases it is better to prevent than to cure. This underlines the need to set up special centres for the diagnosis and prevention of atherosclerotic disease in general and ischaemic heart disease in particular. Our present knowledge of the "factors of risk" is such that a relatively simple examination should enable us to find those populations, or those individuals in a population, who are carriers of one or more of these

factors. Those at risk should then be given all the advice we are able to offer them in the light of our knowledge of the factors predisposing them to coronary artery disease. If this advice is carefully followed, it is to be hoped that within the next few years there will be a dramatic fall in the number of victims of heart disease, and particularly of heart disease due to coronary atherosclerosis.

Courtesy: World Health, August-September, 1970.

ON FAMILY PLANNING

MASS EDUCATION IN F.P.

A FAMILY PLANNING publicity campaign was launched in Dharmapuri District, Tamil Nadu, on 20 August, 1970. A large number of volunteers, school teachers, nurses, health visitors, auxiliary-nurse-midwives, doctors and block development workers marched on the main street of Dharmapuri town. A tableau depicting the importance of family planning was also taken out.

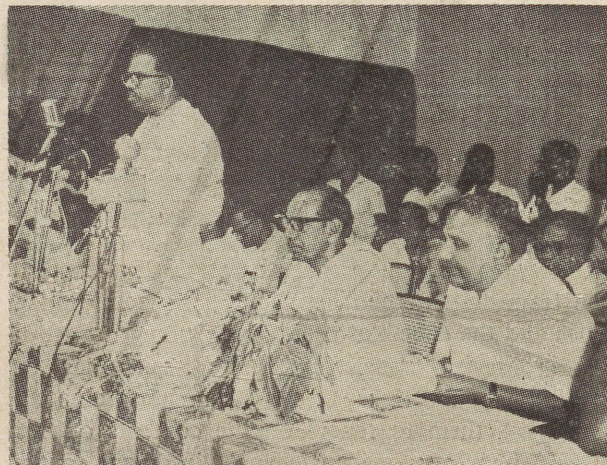
This programme was inaugurated by Shri J.A. Ambasankar, Secretary, Health and Family Planning, Tamil Nadu.

A Family Planning Seminar was also organized on the occasion. The participants of the seminar included officials, Members of Parliament, Members of Legislative Assembly, Chairman of Panchayat Union, Social Workers and Family Planning Field Workers. Four groups discussed the service programme, mass media programme, and the coordination of work on family planning with other agencies.

Shri V.R. Nedunchezian, Tamil Nadu Minister of Health and Education, who released the Souvenir on Family Planning emphasized that doctors should take more interest in implementing the programme. It was high time that the population should be controlled and that the programme should be made a people's programme. The mothers should set an example in adopting the family planning methods.

Shri Ambasankar, said that the family planning programme could be implemented with the help of the volunteers of the Prosperity Brigade. Shri P. Sankaran, Collector, who welcomed the guests pointed out that Dharmapuri District was progressing

Shri V. R. Nedunchezian, Tamil Nadu Minister of Health and Education, speaking at a public meeting (top). Women Family planning workers going in a procession in Dharmapuri town in Tamil Nadu to spread the message of family planning (centre). A view of another family planning procession (bottom).



well in family planning as well as in other developmental activities. He said that the family planning programme would be carried out more vigorously so as to improve the conditions of the people both socially and economically.

An Exhibition organized in this connection was opened by Shri M. Kamalanathan, M.P.

PROGRESS OF F.P. IN SRIKAKULAM

SRIKAKULAM District of Andhra Pradesh stood first in the State for 1969-70 in promoting family planning programme. 22,413 sterilization operations were performed and 628 loops were inserted during the year. The District also received the State trophy for having done 4,640 sterilizations, the highest performance during the Family Planning Fortnight in September, 1970.

Dr P. Atchutarao, Medical Officer, Primary Health Centre, Kavity, stood first in the District for having done 1,604 sterilization operations.

Dr K. Kannaiah, Medical Officer Taluk Hospital, Itchapuram, was adjudged second. He did 1,161 sterilization operations.

Dr P. Suryarao, Medical Officer, Taluk Hospital, Patha Patnam, did 1,002 sterilization operations and stood third.

Education Programme

Filmshows, exhibitions, group meetings and individual contacts were organized. Five hundred and ten wall paintings were done. 200 metallic tablets on buses and 366 plates on Rikshaws were also fixed. Hand bags and balloons were also pressed into services.

Fifty four sarees with family planning symbol were distributed to the women who underwent tubectomy operations.

The District Mass Education and Information Wing has also started mailing information letters to the village leaders who can help promote the family planning programme in the rural areas.

MARRIAGE GUIDANCE CENTRE

A "Marriage Guidance-cum-Information Centre", set up by the Bombay Municipal Corporation at a specially constructed gypsy hut at Chowpatty, Bombay, was inaugurated by Dr Rafiq Zakaria, Health Minister, Maharashtra, on 20 September, 1970.

Dr Zakaria said that an integrated programme of marriage guidance and medical check-up would promote a healthy atmosphere in every home. It was an essential feature of the comprehensive family planning programme.

Dr B.N. Purandare, honorary adviser on family planning to the Government of Maharashtra, said that similar centres should be set up at as many places as possible in the State after assessing the effectiveness of the Bombay Centre.

Dr D.N. Pai, Special Officer, family planning, Bombay Municipal Corporation, said that the whole family should be encouraged to visit that 'health resort' on the sea shore.

The centre would remain open every day between 6 and 8 P.M.

AWARDS FOR BEST MOTIVATORS

DR B.S. SURTHY, Additional Director of Medical and Health Services, Andhra Pradesh called upon the medical officers to work "with dedication and devotion to make the family planning programme a success".

Dr Surthy was addressing a conference of Medical Officers of the primary health centres at Nellore on 4 November, 1970. He also awarded prizes to family planning workers for the best motivational work.

Shri N. Vithoba Rao former Family Planning Health Inspector, Primary Health Centre, Yellayapalem and at present Block Extension Educator, Varigonda, was awarded 1st prize, a gold medal and cash award of Rs 300.

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The Director

Central Health Education Bureau, Kotla Marg, New Delhi-1.

Shri K.V. Narasaiah, Family Planning Health Inspector, Podalakur was awarded the second prize, a silver cup and Rs 200 cash.

Dr Surthy commended the good performance of Dr Md. Ismail Basha, Medical Officer, Primary Health Centre, Kamepalli who had promoted 270 sterilizations during the Family Planning Fortnight in September last.

SPECIAL LEAVE FOR STERILIZATION

THE Union Government have decided that the whole-time casual labour working in Central industrial and non-industrial undertakings shall get special casual leave up to six days for undergoing sterilization.

This will be subject to one condition that they should have been working for at least six months prior to sterilization and should be likely to remain in service for another three months.

One day's casual leave will be granted to female workers accepting IUCD insertions.

In addition special casual leave upto a maximum of 14 working days will be given to workers undergoing tubectomy.

AID FOR FAMILY PLANNING IN FINLAND

THE Government of Finland has for the first time included support for international population programmes in its budget proposals to the Finnish Diet for the year 1971, and has named the IPPF as one of the organizations concerned.

The Government proposal to provide assistance to developing countries is in-line with the traditional Finnish attitudes on the importance of family planning as a factor in social welfare policies.—*IPP News*, October, 1970.

F.P. PROGRESS IN RURAL AREAS

BY the end of 1969-70, 5.202 million births have been averted under the Family Planning Programme. The birth rate has come down from 41.7 in 1960-61 to 38.3 per thousand of population in 1969-70.

This information was given in Lok Sabha by Shri B.S. Murthy, Minister of State for

FAMILY PLANNING AWARD TO CHEB

The Central Health Education Bureau, Directorate General of Health Services, Union Ministry of Health and Family Planning, was awarded a prize for "the excellent family planning work in the Pataudi Block" of Gurgaon District of Haryana.

The Rural Field Study and Demonstration Centre of the Bureau is functioning in the Block since April, 1970.

One hundred and eighteen sterilizations were done during September, 1970 Family Planning Fortnight. This is the first time that such a high number of sterilizations has been achieved in the Pataudi Block.

Pataudi Block has stood first in family planning in the District of Gurgaon during the period April to October, 1970 and the District itself has secured the first place in the entire State.

The prize, a wall clock, was given away by the State Health Minister, Shri Kurshid Ahmad, on November 20, 1970, at Gurgaon. Dr K. S. Sinha, Chief of the Rural F.S.D.C., received the prize on behalf of the Central Health Education Bureau.

Health and Family Planning, Works, Housing and Urban Development on 16 November, 1970.

The Minister also revealed that the progress made in the rural areas has been steady. In case of IUCD insertions, proportionate achievement of rural areas has gone up to 60.7 per cent in 1969-70 from 59.6 per cent in 1966-67. As regards sterilization the figures are 60.2 and 57.7 per cent respectively.

Around the states

PUNJAB

Ayurvedic Congress at Patiala

"THE more I have studied the problems of Ayurveda, the more I have been convinced that Ayurveda deserves to be given a genuine chance to develop along its own genius and fundamentals, as its potential to benefit the country and even mankind as a whole is very vast. Its medicines do not produce side effects and the cures affected by them are more stable and abiding in nature" said Shri K.K. Shah, Minister of Health, Family Planning, Works, Housing and Urban Development at the Ayurvedic Congress held at Patiala on 7 November, 1970.

"The current consensus of opinion among the medical historians of the world is that not only Ayurveda is the earliest well-organized medical system the world has seen, but it is also credited with having shed its lustre on almost every ancient medical system of any importance", he said.

He added that a number of Government Committees, such as Sir Joseph Bhole Committee, the Chopra Committee, the Udupa and the Vyas Committees, and many others, constituted periodically by the Central and the State Governments in their respective reports, conceded that over 75 per cent of Indian population still resort to Ayurveda for their medical needs. It was this aspect of Ayurveda, namely, its extensive benefits and service to the people of India today, rather than Ayurveda alive during vacillations of time and its glorious achievement of yesterday that have particularly impressed him.

"Whether the well wishers of Ayurveda like it or not, the exigencies of the times demand that this great science should be presented to the world in a language which the world of today understands and with proofs which should penetrate the critical and skeptical minds of today", he said.

February 1971

TAMIL NADU

Health Educators' and Health Officers' Seminar

THE first Seminar of the Health Educators and Health Officers of Tamil Nadu organized by the Tamil Nadu Health Education Bureau was held at Madras from 16 to 19 March, 1970. Over 70 participants drawn from the State Directorate of Health Services and Family Planning, medical colleges in the State, State Health Education Bureau, District Health Offices, Gandhigram Institute of Rural Health and Family Planning, Central Health Education Bureau, etc. deliberated at length on the health education problems at the district, block and village levels. New ideas to strengthen the health programme in the State through the modern health education techniques came up at the Seminar.

The Seminar had set the following broad objectives:

1. To strengthen health education activities to support the health programmes.
2. To review and get an understanding of modern health education concepts and methods.
3. To work in small groups to produce a plan of strengthening a few health programmes with adequate health education supports.

The assistance of health education resources in the State and the Centre was taken to plan the Seminar. Four Officers including the Director from the Gandhigram Institute of Rural Health and Family Planning, assisted in conducting the Seminar. Five Committees:—Planning Committee, Technical Papers Committee, Transport Committee, Exhibition and Entertainment Committee and the Accommodation and Boarding Committee were set up for the efficient functioning of the Seminar. An evaluation of the Seminar was also planned and implemented.

The Inauguration

Shri V.R. Neduncheziyan, State Minister for Health, inaugurated the Seminar on 16 March, 1970. He said that the emergence of general health services charged with the broader responsibilities of preventing diseases and promoting health had a direct effect in developing health education.

Shri J.A. Ambasankar, Secretary, Health and Family Planning, said that health education programme

should take up a new direction to make the community accept public health programmes.

Dr B. S. Sehgal, Director, Central Health Education Bureau commended the Government of Tamil Nadu and the State Health Education Bureau for the work done in health education.

Opening Session

Shri Ambasankar, presided over the opening session. He said that the Seminar would help health educators share experiences. This exchange of ideas should help formulate a plan of action for the successful implementation of all health programmes, especially the family planning programme, he added.

Dr (Mrs) H.M. Sharma, Director of Health Services and Family Planning said that the health education should act as a liaison between the community and the services.

Dr S. Subbiah, Assistant Director In-charge, State Health Education Bureau outlined the objectives of the Seminar.

The following session, a plenary discussion, presided over by Shri K.A. Pisharoti, Head of the Community Health Department of the Institute of Rural Health and Family Planning, was devoted to a review of the seminar programme and formation of a Steering Committee and an Evaluation Committee.

In the afternoon, Shri G. Kittu Rao, Technical Officer, brought out the salient aspects of group discussion as educational technique. Thereafter, the participants broke into three different groups to discuss the subjects assigned to them.

Prevention Aspect of Hospitals Stressed

A THREE-DAY national hospital convention was held on 21 September, 1970 at the Vellore Christian Medical College, Vellore on the newly-emerging concept of a hospital as a part and parcel of the community.

Some 400 delegates, most of them dedicated sisters, from all over the country attended the convention organized by the Catholic Hospital Association of India, representing some 630 hospitals with 47,000 beds, and 600 dispensaries.

Dr L. Monteiro, Dean of St. John's Medical College, Bangalore said no longer should the hospital activities be limited to its four walls.

"The effective hospital in the community has to be responsive to the health needs of society. It must be as much concerned and committed to prevention, rehabilitation, chronic disease care and ambulance services as with the needs of the hospital, acute cases and in-patient care", he said.

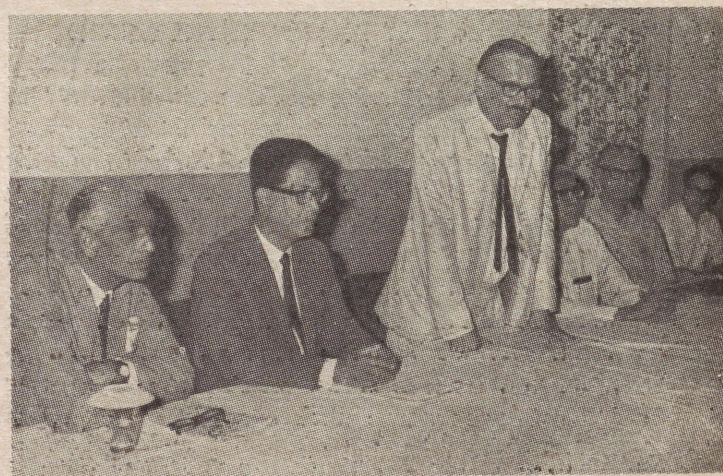
"In view of the problem of shortage of trained doctors, nurses and other hospital staff and resources the goals might not be achieved in the near future", he said. "But, while being conscious of our deficiencies, we need not lose heart."

Dr J.K.G. Webb, Director of the Christian Medical College and Hospital, noted that the Vellore Hospital had recognized the need of taking hospital services to the rural community right from the time it was started as a small clinic.

WEST BENGAL

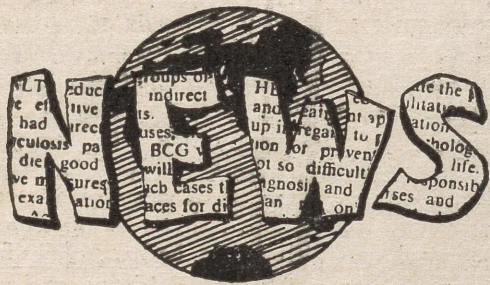
Intensifying Efforts for TB Control

SHRI A.N. KIDWAI, Adviser to the Governor of West Bengal, asked the voluntary organizations on 2 October, 1970 not to think of relaxing their efforts for the succour of T.B. sufferers in view of the potent threat of the fell disease continuing to take its heavy toll particularly from among the vulnerable sections of the community during the years to come.



Shri A. N. Kidwai, Adviser to the Governor of West Bengal speaking at the Annual General Meeting of the Tuberculosis Relief Association on 2 October, 1970 held at Calcutta.

(Continued on page 58)



REDUCE INFANT MORTALITY

DR M. G. CANDAU, Director General of the World Health Organization, said that the family planning programme would be successful if the health infrastructure was strengthened to take care of the mother and the child.

Children, Dr Candau said, were considered as a form of 'life insurance' and there was greater chance of the people accepting family planning if the infant mortality was reduced.

An atmosphere of confidence that their children would live should be created among the people rather than telling them to have one or two children.

Dr Candau was addressing a Press Conference on 24 November, 1970 in New Delhi during his short visit to India.

Dr Candau commended India's efforts to popularize family planning in the country and said that it was necessary to continue the efforts.

"You must work hard. In the next four or five years you will be able to see the result." Family planning was social problem and social change could be realized only slowly.

Dr Candau in his chat with reporters touched upon the several health problems around the world and the activities of the World Health Organization in the global fight against diseases.

The Director General did not think that malaria was coming back. There had been some setbacks in some countries and that was because the governments were not taking efforts to sustain the programme achievements.

There was also the problem of mosquitoes developing resistance to the insecticide.



Shri K. K. Shah, Union Minister of Health, Family Planning, Works, Housing and Urban Development, in conversation with Dr M.G. Candau, Director General of World Health Organization, when the latter called on him in New Delhi on 24 November, 1970.

The WHO Chief assured that his organization could help various governments in this regard but "cannot take up responsibility for running the programme".

Green revolution could not materialize if malaria was not eradicated, Dr Candau warned. He referred to the controversy on the use of DDT and said the insecticide should be used with discretion. Its use could not be completely stopped until new alternative was found.

Dr Candau felt that the shortage of manpower was the biggest problem facing many countries. There were countries where there was one doctor for 100,000 population.

He was against creating different categories of doctors. Increasing the number of paramedical personnel could help solve the problem to an extent.

Dr Candau was emphatic that doctors should work in the community so that they could adapt their work to the needs of the people they were serving. He welcomed the reorientation of medical education to the needs of the community.

Dr Candau was in favour of integrating the indigenous systems of medicine with modern system on "scientific basis". Hence, there was need

for a dialogue between the two systems. The WHO, he said, would assist research projects in this regard.

Dr Candau said that health education of the public was an important factor in the fight against health problems. The people have to be educated about the programme and with a better standard of education, health status of the community would improve, he said.

During his short visit to the capital, Dr Candau met the Prime Minister, Shrimati Indira Gandhi and had general discussions with her on health problems of the country.

He also met Shri K.K. Shah, Minister for Health, Family Planning, Works, Housing and Urban Development. A number of subjects including the production of smallpox vaccine to make the country self-sufficient, extension of rural health services, family planning and reorientation of medical education came up for discussion during his meeting with the Union Minister.

RELIGION NO BAR TO FAMILY PLANNING

DR A. M. SARDARI, Iran's Deputy Minister for Health and Family Planning, said in New Delhi on 10 November, 1970 that religion was not against family planning in Iran. Any doubts on this score had been cleared by statements of religious leaders. The grand *mufti* had even declared termination of pregnancy ethical provided it was performed within hundred days of conception. The subject of family planning was introduced in the speeches at Ramzan prayers.

Dr Sardari was addressing a press conference at the conclusion of his three-week visit to India. During his stay in this country, the Iranian Minister visited various Family Planning Centres and leading medical institutions.

Dr Sardari said that family planning programme in his country was three years old and that the response of the people was "very encouraging within this short span of time".

A large number of women were taking the family planning services. His country recommended only two children for a family. The sale of contraceptives increased by 30 times more than it was at the beginning of the programme. Pill had greater acceptability. Research work was going on on abortion as a family limiting method.

Dr Sardari added that Iran had studied family planning programme of India, Pakistan and some South American countries so that his country could benefit from their experience. The Iranian Minister said that he was very much impressed with the network of Primary Health Centres and sub-Centres.

The idea of integrating family planning with the general health services was commendable. Dr Sardari also commended India's post-martum programme.

Dr Sardari met the Union Health Minister, Shri K. K. Shah, on 9 November, 1970. The two Ministers discussed the possibilities of increasing the co-operation between India and Iran in the field of health and family planning. Shri Shah said that India would be willing to send medical personnel to Iran, if that country required.

DECLINING DEATH RATES IN DEVELOPED COUNTRIES SHOW REVERSE TREND

THE fall in the crude death rates of developed countries has shown a tendency to slow down in the last 10 years. Some countries have experienced a check in the rate of decline and in some cases there has been a slight rise. Most countries of the world have enjoyed a period of sharply falling crude death rates for at least a part of the past 150 years. Although a declining mortality trend has been almost universal there are considerable differences in the background of the declines from country to country. Generally speaking the decline was associated not only with medical progress but with other factors such as general improvements in the level of living.

With the exception of the Federal Republic of Germany, the Netherlands and England and Wales reported a general drop in mortality between 1950 and 1955. During the period 1955-60, eight countries

already noted a slight rise in mortality rates, and this trend became more noticeable between 1960 and 1969 when 16 countries marked a rise.

Mortality by Sex

Two interesting phenomena have been reported in recent years in relation to mortality by sex. "In the developed countries although mortality has generally continued to decline for females at all ages, male mortality rates have shown a cessation of the decline, particularly at ages beyond 45 years". The differential mortality trends by sex seem to be particularly associated with heart disease, chronic respiratory diseases and lung cancer.

The distribution of mortality by cause varies considerably by age, sex and country. In developed countries cardiovascular diseases and cancer remain the principal causes of mortality. Automobile accidents have become an increasing important cause of death during the past few decades in almost all industrialized countries. Suicide is more commonly reported as a cause of death than formerly and rates show a tendency to rise in some of the developed countries. Much of the variation in reported mortality from this cause may be due to variation in administrative and legal practice. In addition to its importance for measuring health conditions in the population and the impact of the health services, the analysis of trends and levels of mortality is necessary for making demographic projections. It is essential information for any measurement of population growth and is valuable for research in the field of public health.

—UN Weekly Newsletter, 6 November, 1970.

CEREBROVASCULAR DISEASE

CEREBROVASCULAR disease which results in "strokes" causing paralysis of one or more parts of the body is the third leading cause of death in 54 out of the 57 countries where national statistics for international use are available. It is surpassed only by ischaemic heart disease and cancer.

In 1966, almost one million people in these countries alone died from cerebrovascular disease.

The incidence of this disease is increasing in most countries simultaneously with increase in

longevity of the population, and is commonly found in all parts of the world. In India, the incidence of "strokes" is more than that of heart attacks.

There is no great difference in incidence as between men and women. However, different rates of mortality and morbidity have been noted in countries with different natural and cultural environments.

In the age group of 55-64 years, its rate and frequency is higher in Japan, Taiwan, Mauritius, Trinidad and Tobago, Portugal, Bulgaria, Malta, Scotland and Chile.

It is lowest in Central America, the Philippines and Thailand.

Even within the same country regional differences have been found. For example, in Japan it occurs most frequently in the northern parts of Honshu island. In the USA it appears mostly in South-eastern states and is more frequent among negroes than among whites.

It is estimated that about four million people in the world survive after "stroke". Annually two to five white Americans and three to ten Japanese out of 1,000 middle-aged people are affected.

Hypertension is the most common cause of "stroke" in most countries.

—Heart News, November 1970.

SWASTH HIND

APRIL 1971

Special World Health Day Number

Theme : A full life despite diabetes

This Special Number covers various aspects of diabetes by experts in the field.

AROUND THE STATES—(continued from page 54)

The Adviser to the Governor who was speaking as the chief guest at the annual general meeting of the Tuberculosis Relief Association (TRA) at its Chest Hospital premises at 7, Biresh Guha Street, said that a sizeable section of the population still living in overcrowded houses and suffering from malnutrition and under-nourishment constituted the vulnerable section to tuberculosis.

Shri Kidwai said that the Government would not slacken its policy of fighting the fell disease and was in agreement with the experts that so long as the present overcrowded State was not mitigated the disease would continue to remain in an endemic form for some more years.

He congratulated the workers fighting the disease and donors who strengthened the anti-TB efforts in this State. The Government, he said, wanted to help them substantially in their endeavours.

Government Help Urged

Welcoming the gathering Dr H.S. Chakravorty, President of the TRA, pleaded that the Government should come effectively to the help of voluntary bodies doing anti-TB work who had been facing a heavy deficit on account of rise in the cost of materials and food.

Dr A. Sengupta, Hony. General Secretary, pointed out in his annual report that of the 4,182 new cases examined at the Association clinics 47.1 per cent was found to be suffering from pulmonary tuberculosis.

WORLD HEART CAMPAIGN 1972

The delegates to the General Assembly of the International Society of Cardiology and the International Cardiology Federation, held in London from 6 to 10 September, 1970 were informed that a World Heart Campaign of Information and Education will be organized in 1972.

The aim of this campaign is to focus the attention of the public all over the world to the risk of cardiovascular and cerebrovascular disease.

The World Health Organization will dedicate its World Health Day in 1972 to the Heart.

Dr A.K. Nandy said that lack of proper housing and malnutrition had complicated the problem of TB in the State. He appealed to people to do everything in their power to strengthen the anti-TB efforts in the State.

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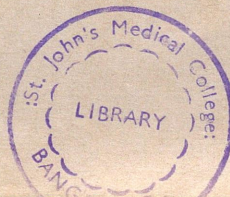
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