

by N. J. Eastman.³ The mild hypertension and albuminuria found in most patients with abruptio placentae are imputed to reactions to the loss of blood, but Eastman reported that in 94 out of his 200 patients hypertension preceded the placental separation.

Drs. Hibbard and Hibbard also found that the victims of abruptio placentae were marked by poor performance in pregnancy and labour, being prone to undergo premature labours, bear underweight babies, and suffer recurrent abruption. They were further impressed by the poor social and nutritional condition of the women in their series. An association between anaemia, megaloblastic erythropoiesis, and abruptio placentae had been postulated by B. Hourihane, C. V. Coyle, and M. I. Drury in 1960.⁴ They reported that accidental haemorrhage had occurred in 13 out of 95 patients with megaloblastic anaemia; while C. V. Coyle and F. Geoghegan⁵ found megaloblastic erythropoiesis on marrow biopsy in 35 out of 77 women with accidental haemorrhage. As in Great Britain megaloblastic erythropoiesis in pregnancy results from deficiency of folic acid, Drs. Hibbard and Hibbard assessed the folic-acid status of 73 patients with abruptio placentae by testing the urinary excretion of formiminoglutamic acid. All but one of the 73 tests indicated deficiency of folic acid and in about two-thirds of these cases marrow biopsy showed megaloblastic erythropoiesis. The authors conclude that there is a consistent relationship between abruptio placentae and deficiency of folic acid and, to a lesser degree, megaloblastic erythropoiesis, but they do not deny the possibility that both abruption and deficiency of folic acid might have a common cause. However, the picture is somewhat hazy because other workers have concluded that the urinary excretion of formiminoglutamic acid is an unsatisfactory test for deficiency of folic acid in pregnancy and is within normal limits in half the patients with megaloblastic anaemia in pregnancy.^{6,7} Nevertheless this does not affect the constructive suggestion by Drs. Hibbard and Hibbard that a clinical trial of treatment with folic acid throughout pregnancy deserves serious consideration. Special attention should be given to women with a high risk of abruptio placentae—namely, those who have borne several babies and those with anaemia, multiple pregnancy, or bad obstetric history including abruptio placentae. These women exposed to a risk greater than average would have to be closely supervised to see not only that they were taking the folic acid but that it was being absorbed and utilized.

ARTERIAL BRUITS IN ANAEMIA

Cardiac and vascular murmurs are commonly heard in anaemic patients. This is because the cardiac output is high and possibly also because the viscosity of the blood is low. The classic example of a vascular bruit is the venous hum in the neck or "bruit de diable." It is a systolic or continuous murmur heard over the internal jugular bulb, and sometimes by its radiation to the chest it mimics the murmur caused by a patent ductus.

Drs. R. T. Wales and E. A. Martin, of the Adelaide Hospital, Dublin, draw attention in the *B.M.J.* this week

(page 1444) to the occurrence of murmurs over the arteries in anaemic patients. An erroneous diagnosis of intracranial angioma in a patient with carotid bruits due to anaemia led them to investigate the subject, and they then studied 20 patients with a haemoglobin level under 60%. In 12 of these patients there were murmurs in the neck, usually bilateral and heard at all levels. Occasionally the bruit was confined to the supraclavicular area or was heard only at the level of the thyroid cartilage. The murmur was always systolic and usually low-pitched and blowing, but in a quarter of the patients it was higher pitched and harsh; in four the murmur was loud. The possibility that the murmur was conducted upwards from the aortic valve was considered but thought unlikely, since a murmur over the aortic area was heard in only four of the twelve, and even in them the bruit was loudest in the neck. Murmurs over arteries elsewhere in the body were rare in these anaemic patients, but a femoral bruit was heard in one and an abdominal bruit in another.

This article is helpful in two ways. First, the finding of a systolic murmur in the neck may be a useful clue to the recognition of anaemia. Secondly, when a patient is known to be anaemic, bruits over the carotid arteries should not be taken to indicate the presence of arterial stenosis or of angioma.

NUTRITION RESEARCH IN INDIA

It is not commonly realized how many problems of human diets and their influence on health remain unexplored. The importance of their exploration is illustrated by the progressive discrepancy between food production and the world's food requirements. Confident planning for the supply of foods of the right kinds and in sufficient amounts on a vast scale requires much more precise knowledge than is at present available. Those who are aware of this, especially those who want to help in some way, may wish to know more about the kind of investigations which could be useful. A particularly good source of information is the annual report of the Nutrition Research Laboratories of the Indian Council of Medical Research. The latest has now been circulated and deserves to be widely read.¹

Research into nutrition eventually leads to changes in the kinds of food which people eat, and research is indeed necessary in order to keep such changes on as scientific a basis as possible. The need to extend scientific work into everyday human life is obviously well recognized by the Indian workers. In the unit at Hyderabad is a Division of Field Studies consisting of fourteen members, among whom are sociologists and medical graduates.

Among the many investigations being made in the Hyderabad laboratories are included those on dietary calcium requirements, human growth, energy metabolism, diet and blood-cholesterol levels, pellagra, and iron losses as a result of pregnancy. Each programme seems to be yielding new information, some at least of which may have wide application outside India. One discovery is that treatment of human subjects with phthalylsulphathiazole leads to a decrease in the amount of faecal nitrogen and an increase in the proportionate amount of urinary

¹ Indian Council of Medical Research. Annual Report for the Period October 1, 1961, to September 30, 1962, of the Nutrition Research Laboratories. Hyderabad (Deccan). 1962.

nitrogen in the form of urea. This would imply better utilization of dietary protein after administration of the drug. This might be due to an effect on human metabolism, but an alternative explanation would be that the sulphathiazole changes the intestinal bacterial flora. Since the flora can be influenced by the nature of the diet the fact that it plays a part in the utilization by man of dietary protein is very interesting. This kind of observation emphasizes that the nutritional properties of a diet are determined by factors in addition to the chemical composition of its components.

The Nutrition Research Laboratories in India have a long and distinguished history. The present report shows that they continue to flourish.

ALCOHOL AND THE THIRST CENTRE

The dehydrating action of alcoholic drinks has been recognized for centuries and was generally believed to be due either to the large volume of fluid ingested—for instance, beer—or to specific diuretic flavouring agents such as juniper in gin. But it has since been shown experimentally that the diuretic action is directly related to the amount of alcohol consumed when varying amounts are given in the same volume of fluid.¹

There are three important ways by which the rate of flow of urine can be increased. The first is by osmosis. Any substance which is filtered at the glomeruli and not appreciably reabsorbed by the tubules will set a limit to the amount of water which can be reabsorbed against the osmotic gradient and so carry away more water in the urine. The second is the diuresis induced by mercurials and chlorothiazide compounds. These selectively inhibit the reabsorption of sodium by the tubule cells, and since the kidney is unable to excrete sodium in concentrated form more water is carried away. Thirdly there is direct control of reabsorption of water by the antidiuretic hormone (A.D.H.). When this hormone is lacking, as in diabetes insipidus, a continuous fast flow of very dilute urine occurs.

The dilute fast-flowing urine induced by ingestion of alcohol is indistinguishable from that due to ingestion of water, and it is now accepted that the diuresis is due to the depressant action of alcohol on the hypothalamic centres responsible for controlling the output of A.D.H. from the post-pituitary gland. Under normal conditions the reduction in the osmotic concentration of the plasma after ingestion of water stops the output of A.D.H., with resulting diuresis, while an increase in osmotic concentration (dehydration) stimulates output of A.D.H. A recent report² shows, however, that after ingestion of alcohol the diuresis continues in spite of the resultant increase in osmotic concentration of the plasma. On the other hand, in 18 out of 20 subjects examined no diuresis occurred if salt was ingested with the alcohol. Yet the amount of salt given was insufficient to raise the osmotic concentration of the plasma to the maximum attained after diuresis due to alcohol alone.

This antagonism between the inhibitory action of alcohol and the osmotic concentration of plasma in stimulating output of A.D.H. has hitherto received little attention.

From the observations reported it would seem that the rate of increase of the osmotic concentration of the plasma may be one factor concerned, or alternatively that the precise timing of stimulation and inhibition on the hypothalamic centres may be of importance.

The osmotic concentration of the plasma of chronic alcoholic patients on admission to hospital was even higher than that of the experimental group, though none of them showed any sign of thirst while the concentration of alcohol in the blood was raised. Nor did the subjects receiving salt with alcohol feel thirsty, which suggests that alcohol also inhibits the "thirst centre."

ROYAL SOCIETY'S HOUSE

Since 1778 the Government has provided rent-free rooms for the Royal Society, first at Somerset House, later at Burlington House. This accommodation is no longer sufficient. The Society's activities have increased enormously. To-day it has over one hundred committees, and where in 1873 there were two permanent staff there are now 70. Any chance of expanding northwards was lost when in the last century Burlington Gardens was developed as halls for the University of London, later occupied by the Civil Service Commission. The pressure on space has continued relentlessly, and a change of house is long overdue.

It is heartening, therefore, to learn that, at last, the Royal Society is to have proper accommodation. A move to Nos. 6-9 Carlton House Terrace, formerly the home of the Foreign Office, is now almost certain to take place. Despite a previous Treasury refusal for assistance less than two years ago, the Government has agreed to provide the rental and "associated maintenance" for these houses on the basis of a 99-year lease. Announcing this in the House of Commons on November 28, Mr. J. Boyd-Carpenter, Chief Secretary to the Treasury, said it would cost about £45,000 per annum. (He valued the present free accommodation in Burlington House at £18,000 a year.) The abrupt change in Government responsiveness resulted, according to Sir Howard Florey, P.R.S., in his anniversary address to the Society on November 30, from a lunch-time conversation at Oxford—a reminder to Fellows, he said, that "apparently trivial events can affect their corporate life just as much as their experimental results." Shortly afterwards the Nuffield Foundation made a magnificent offer of £250,000 towards the estimated £500,000 for transforming the interior of the Carlton Terrace houses. The Royal Society was then able to tell the Treasury that it would raise a substantial sum for the capital alterations. In the meantime the Wolfson Trust gave £50,000 and the Wellcome Trust £60,000, and there was other support. Rather more than £100,000 remains to be raised. In announcing the Government decision to help, Mr. Boyd-Carpenter said: "Her Majesty's Government is glad to be associated with these efforts to provide dignified and appropriate accommodation for the future for the Royal Society, a body to which this country and humanity as a whole owe so much."

Correction.—In the annotation "Questions of Cost" (November 30, p. 1356) it was wrongly stated that "The Royal Free showed a much bigger increase than the average on its direct expenditure, particularly on catering." The word should have been "indirect."

¹ Eggleton, M. G., *J. Physiol. (Lond.)*, 1942, 101, 172.

² Roberts, K. E., *Arch. Intern. Med.*, 1963, 112, 154.