DR. WOOD: This is certainly a logical drug combination to me. The anti-inflammatory effects of azathioprine are valuable but it is doubtful if the immunosuppressive action plays any useful part.

DR. PETRIE: Another allergic reaction, which seems to be similar to that involved in serum sickness, is responsible for drug fever. We had an example recently of a patient whose fever persisted after clinical and radiological recovery from pneumonia. The fever fell only when the penicillin was stopped (Fig. 3).

STUDENT: Is drug fever common?

DR. WOOD: Probably much commoner than is recognized. It is easy to miss.

(Part II of this article will appear in next week's *B.M.J.*)

# *The Forgotten*

## IV—A Man with Motor Neurone Disease

FROM A SPECIAL CORRESPONDENT

Motor neurone disease is not common and it has been said that many general practitioners will never encounter a case of their own. Many of those who do are oppressed by the hopelessness of a condition for which no medical treatment is available. The patient, who is usually a man, becomes aware that his paralysis is increasing and that nothing is being done for him; and his fears that he will eventually be completely helpless will have to be confirmed. There are often some years of increasing invalidism, during which he and his family are faced with mounting strain, and the purpose of this article is to indicate some of the problems and also some of the sources of help that are available if energy and imagination are brought to bear. The most important point about the management of these patients is that unless relief is brought about speedily the patient's condition will have deteriorated past the point where he will be able to use the means that have been provided. Many patients with motor neurone disease spend their last years waiting for one thing or another, which arrives only when it is too late to be of value.

Mr. G.H. was a 36-year-old skilled mechanic who at the beginning of 1964 sold his home and emigrated with his wife and three young sons. In July he was diagnosed as having motor neurone disease and was repatriated. He had no home in England and he and his family stayed with different relatives. They had no claim on the borough where they had previously lived to house them, and the borough in which they were staying had no responsibility for someone who was not living in rented accommodation. Even so, when it was obvious that the family would have to be taken into care unless something was done, they were housed by the local authority. While the family was setting up house again Mr. G.H. was sent for a holiday in a home run by the Women's Royal Voluntary Service.

By now he needed a wheelchair, and when an effort was made to get him back to work with his old firm it was found that the premises were quite unsuitable for a handicapped man, and he was referred to the disablement resettlement officer. It was realized that he was too ill for retraining but he was recommended for assessment by an industrial rehabilitation unit. He never got there, because by the time a vacancy arose he was too ill to take it. He was recommended for a course in typing by the British Council for Rehabilitation; the local authority paid his fees and an electric machine was quickly forthcoming (I.B.M. can sometimes supply reconditioned machines at low cost very quickly for the physically handicapped). This was the only piece of apparatus which arrived in time to be of use to Mr. G. H., who found it a great stimulus.

### Frustration and Despair

This was a very hard time for him and his wife. Mr. G.H. knew he was progressing to total paralysis and his frustration and despair overflowed into violence—both verbal and physical. He used to strike at his wife with his crutch and drive his wheelchair at her. Such reactions are in some degree not at all uncommon; they may be shown even by intelligent and normally sensitive men. Mrs. G.H., burdened with nursing duties and family care, was wretched and it took much time and effort to enable them to understand and tolerate each other. A holiday was arranged for the whole family under the auspices of the Shaftesbury Society.

Sexual relations were another difficult problem. Many textbooks say that sexual powers are usually lost, but medical social workers believe this is far from being the case, and that if doctors gave their patients the opportunity they would reveal a great deal of tension and anxiety on this score. Men may retain their potency when they have lost much of the power in their skeletal muscles, and it needs great mutual understanding if marital relations are to be maintained. Mrs. G.H. broke down under the mental and physical strain she was enduring, and her husband was placed temporarily in a Cheshire Home to give her a short respite. While he was away she was aware that his presence was a strain on the children, who behaved much better when he was not there. Application was made for his admission to a local authority home for the young chronic sick—Mr. G.H. was still in his 30s—but the waiting list was two years and it was realized that he would not live that long. The regional hospital board, which had an enlightened policy about its chronic sick, was also approached, but the waiting list for a bed was just as long.

It was now felt that every effort must be made to make life tolerable at home. The Samaritan Society of the National Hospital for Nervous Diseases paid the television rental and arranged another holiday. The occupational therapist obtained ball-bearing arm supports so that he could continue to use his typewriter and feed himself to some extent. An Invacar had been ordered, but when it came he was no longer fit to drive it. Finally, an electric wheelchair which can be operated by anyone who can move a finger or blow through a tube was ordered. It took eight months to arrive, and when it came Mr. G.H. was dying.

Many sources of help are available if they are sought. The

Chartered Society of Queen Square* has a pension fund for people with chronic nervous diseases, but application must be accompanied by a report from a medical social worker. Local authorities will sometimes put in a shower in a bathroom, or even in a pantry. but the time taken in obtaining and passing estimates before work is begun is often too long for the patient with motor neurone disease. Help must not only be imaginative, but supplied faster than the paralysis can advance.

* Chartered Society of Queen Square, 11 Queen Court, Queen Square, London W.C.1.

# Any Questions?

*We publish below a selection of questions and answers of general interest*

## Arias-Stella Reaction

*What is the Arias-Stella reaction?*

Arias-Stella[1] described atypical focal adenomatous changes in the endometrium associated with the presence of chorionic tissue. These changes may be found in intrauterine pregnancy, extrauterine pregnancy, and also in cases of hydatidiform mole and choriocarcinoma. The histology is well described in the standard text books, and shows a mixed atypical pattern with proliferative as well as secretory gland changes. There may be nuclear hypertrophy and hyperchromasia, and sometimes the atypical appearances are so marked that confusion with adenocarcinoma is a remote possibility.

The frequency with which this phenomenon is reported by pathologists seems to vary from 10-70%, the frequency probably being related to individual interpretation of the pathology. It has been suggested[2] that the presence of the Arias-Stella phenomenon may be of diagnostic value in cases of ectopic pregnancy, but this value must be limited, particularly since there is now a suggestion that a similar reaction may be produced in patients taking combined oral contraceptives.

1 Arias-Stella, J., *Archives of Pathology*, 1954, **58**, 112.
2 Azzopardi, J. G., and Zayid, I., *Journal of Clinical Pathology*, 1967, **20**, 731.

## Thalassaemia Minor

*What intercurrent illnesses does thalassaemia minor predispose to?*

Carl H. Smith[1] writes: "Patients with thalassaemia minor live normally regardless of the mild anaemia." I do not think that these patients are more liable than any others to intercurrent illnesses. The condition is usually found when a routine blood count is done or some other relative is being looked at. Even if they have rather low haemoglobin—down to, say, 10 g—they are quite accustomed to the condition and can deal with ordinary illnesses and even pregnancy quite normally.

1 Smith, Carl H., *Blood Diseases of Infancy and Childhood*, 2nd edn. St. Louis, Mosby, 1966.

## Impotence and Lead Casting

*Several men working in lead casting are exposed to very intense, dry heat in a rather poorly ventilated factory for several hours daily. The use of a silicone spray intermittently is also necessary. Can either factor be the cause of the impotence of which they complain?*

There is no reliable evidence that exposure to lead, to intense, dry heat, or to air contamination from the use of a silicone spray can be the cause of impotence.

## Calorie Requirements

*What is the daily calorie requirements in the diets of (1) sedentary workers; (2) manual workers? What foods must be included in order to supply enough essential vitamins and minerals?*

According to a Department of Health report[1] a sedentary man weighing 65 kg and aged 18-35 years needs 2,700 kcal daily, raised to 3,000 if he is moderately active, and to 3,600 if he is very active. Women weighing 55 kg need 2,200 kcal in most occupations, but 2,500 if very active. In both sexes calorific requirements are slightly decreased in old age, but in early childhood are almost double, per kg body weight, the requirements at maturity.

A good mixed diet can be expected to supply adequate intakes of all vitamins and minerals. Foods that should be included are milk (vitamin A, riboflavine, calcium), green vegetables (vitamin A as carotene, vitamin C, folic acid, calcium, iron), meat (thiamine, nicotinic acid, vitamin $B_{12}$, iron), white bread (fortified with thiamine, nicotinic acid, calcium and iron), wholemeal bread (thiamine, nicotinic acid, vitamin E, iron), butter or margarine (vitamins A and D), potatoes (vitamin C), citrus fruits (vitamin C), fish (iodine), and tea (fluorine and manganese). Liver is a storehouse of vitamins, particularly A and $B_{12}$. It is a good habit to include it in the menu once a week.

Special attention to the iron intake may be necessary in pregnant women and adolescent girls. The calcium and vitamin D intakes need attention when bone growth is rapid, and again in old age. Cod-liver oil or preparations containing the vitamin may be indicated, but should not be given in grossly excessive amounts. Vitamin C (ascorbic acid) may be obtained much more cheaply in tablet form from pharmacists than as natural food, and may be a useful adjuvant in seasons when fruit is expensive.

1 *Recommended Intakes of Nutrients for the United Kingdom, Public Health and Medical Subjects*, Report No. 120, Department of Health and Social Security. London, H.M.S.O., 1969.

## Serum Proteins and Oral Contraceptives

*What is the significance of an abnormal electrophoretic pattern of the serum proteins in a woman aged 36 taking an oral contraceptive and who seems healthy?*

It is difficult to give an adequate answer without more information about the specific abnormalities seen on electrophoresis, but changes do occur in the plasma proteins of women taking oral contraceptives.[1 2] In general these consist of increased amounts of carrier proteins, of some of the proteins concerned in blood clotting, of immunoglobulins, and sometimes a slight fall in plasma albumin. It is still a matter for debate whether such changes are pathological or not.

1 Horne, C. H. W., Howie, P. W., Weir, R. J., and Goudie, R. B., *Lancet*, 1970, **1**, 49.
2 *Lancet*, 1970, **1**, 72.