Morphine helped these patients, and it had been said that "morphine exists to be given and not merely to be withheld." The increasing nursing supervision required in the terminal phases often became impossible in the patient's home; it was the duty of hospitals to readmit their patients in this phase. Surgeons often deceived the patient in the matter of diagnosis and put the general practitioner at a disadvantage. Many patients were left in ignorance to the end, but it was doubtful if this was advisable. It was a mistake not to give patients the credit for the common sense and courage they possessed. Doctors were often afraid to tell patients about their disease.

Many fallacies about cancer needed correcting. It was remarkable that many patients with cancer died with much less distress than patients with heart failure. Patients with cancer were often more content when the diagnosis was known and the relatives were spared the unhappiness of constant deceit. Dr. Abercrombie had never regretted having told a patient about cancer. The bond between the doctor and the patient was thereby strengthened and remained firm to the end.

Discussion

In the discussion that followed, Professor C. A. WELLS (Liverpool) suggested that the problem of palliating cancer had so many aspects that no one man could be expected to be familiar with all the methods or even to be competent to select the appropriate method or combination of methods in any one case. In these circumstances the difficulty might best be met by organizing a group of workers to consider jointly or in the closest possible consultation the problems involved. Indeed, he thought it probable that this type of approach was appropriate not only to the cancer problem but to a number of other states, such, for example, as arterial hypertension, in which many voices might need to be heard before an appropriate line of treatment could be decided upon and in which subsequently there might be a need for guidance from many points of view. By an extension of the same argument it was permissible to ask whether there should not be a tendency for these and other most difficult cases to move from the periphery towards the centre of various regions of surgical organization to secure for them the best advice and treatment.

Mr. MURRAY FALCONER (London) said that although hypophysectomy for paraxial tumours was in its infancy it was an operation with a low mortality and it appeared to help more than half the patients. Metastases often disappeared, but, as the follow-up periods were still short, it was not yet possible to compare it with adrenalectomy. These encouraging results made it difficult to say that there was ever a stage when treatment should be denied because the disease had become advanced and widespread.

Many other members and visitors took part in the discussion, and it was clear that varying views were held about what to tell the patient suffering from inoperable carcinoma.

LOCAL MEDICAL SOCIETIES

Liverpool Medical Institution

Addressing the Liverpool Medical Institution on December 16, 1954, on a medical pilgrimage "from the Cape to Cairo," Professor L. S. P. DAVIDSON said there were certain diseases which were much rarer in Africans than in Europeans living in the same region. They fell roughly into two large groups: (1) the so-called psychosomatic diseases such as peptic ulceration, thyrotoxicosis, essential hypertension, and rheumatoid arthritis; (2) degenerative vascular and metabolic disorders such as atheroma (and its sequence of coronary and cerebral thrombosis, and peripheral vascular disease), cholelithiasis, and diabetes mellitus. The relative rarity of these diseases might be due either to racial or constitutional causes, or to environmental causes. But, if it were true that Africans who have adopted Western methods of eating, working, and living became as liable to these conditions as Europeans, then environmental rather than racial factors would appear to be of primary aetiological importance.

Correspondence

Because of the present high cost of producing the Journal, and the great pressure on our space, correspondents are asked to keep their letters short.

Fluoridation of Public Water Supplies

SIR,—Dr. C. G. Dobbs (*Journal*, January 8, p. 105) describes the proposal to add fluoride to the water supplies in Anglesey as undoubtedly amounting to "compulsory medical treatment with a toxic substance intended to produce a physiological change in the body, to be administered indiscriminately by medically unqualified persons." He goes on: "... no individual doctor can be discovered who claims to know much about its effects, or to be able to diagnose slow chronic fluoride poisoning if it should occur. If this is the situation the 'experiment' could do widespread damage without anyone's being the wiser."

As a member of the independent mission which investigated American experience with fluoridation and reported to the Ministry of Health, the Medical Research Council, and other interested bodies, perhaps I may be allowed to comment. The mission, in its report,¹ felt justified in drawing four main conclusions. First, there is abundant evidence, from Britain as well as America, that lifelong consumption of water containing fluorides at levels around 1 part per million results in a substantial reduction of the incidence of dental caries in children, and probably in adults also; in view of the prevalence of the disease, the shortage of dental manpower, and the absence of any other practicable preventive measure, the benefits of fluoridation (adding fluoride at a level of 1 p.p.m. to waters not naturally so endowed) are of great value. Secondly, there is no scientific evidence whatsoever that fluoridation involves any danger to health, and very considerable evidence that it is harmless. Thirdly, the amounts of fluoride added to water can be controlled very accurately. Fourthly, evidence derived from the millions of people in Britain and abroad, who use waters containing about 1 p.p.m. of fluoride, naturally present, is wholly reassuring both as to the absence of danger and as to the benefits resulting. It may be noted here that one of the earliest British reports² on dental benefits related to children evacuated during the war from a natural-fluoride area; the school dentist in the reception area was impressed by the fact that they had "remarkably good teeth—much better than those of the local children."

Dr. Dobbs uses the term "medical treatment" for a measure which does not *cure* dental caries but helps to prevent it. I will not indulge in what he calls "verbal quibbling," but it seems necessary to remark that, in the lay press, he has written: "The compulsory mass-medication of people via the public water-supply is the sort of thing which has not been tolerated by civilized European opinion, or practised in Europe, so far as I know, outside the concentration camp (at least until very recently)." This is the kind of highly coloured and unscientific language which is best avoided in debating the factual merits of a case. The ethics of compulsion, of course, are always good for heated argument, as is shown by the whole history of advance in public health; in the present instance, I should like to make it clear that no alternative to public water supplies as a vehicle for fluorides can at present be advocated on technical grounds or on those of safety.

It seems scarcely necessary to point out that fluorides will not be "administered indiscriminately by medically unqualified persons." The word "indiscriminately" ill describes a process which will be conducted with strict administrative, mechanical, and chemical controls, and supervision will, of course, include that of the medical officer of health. Variations in the amounts of fluoridated water ingested by individual consumers are known to be without significance for health, within the very wide range of climates in the North American continent. Variations of consumption are

almost certainly less in this country, and the question of individual intakes of fluorides has been closely examined. There is no risk that, in the unprecedented event of fluoridation causing damage to health, this will occur "without anyone's being the wiser." The arrangements in Anglesey and other areas where the water is about to be fluoridated will be subject to regular scrutiny by doctors and dentists who know the signs of fluorosis. It is not surprising that Dr. Dobbs's medical friends are a little hazy about this condition, and about fluoridation generally; fluorosis is a rarity, and all of us would have to plead incomplete acquaintance with much of the recent medical literature.

Finally, lest judgment be clouded by charges of "mass-medication" or by dark hints about undiscovered but imminent hazards to health, it is well to reflect that in fluoridation we have a public health measure which has been studied and documented with unusual care and completeness; and that we in Britain have previously hesitated unwisely—for example, in relation to diphtheria immunization.—I am, etc.,

Aberdeen.

A. M. THOMSON.

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- ¹ *The Fluoridation of Domestic Water Supplies in North America as a Means of Controlling Dental Caries*, Report of the United Kingdom Mission, 1953. H.M.S.O., London.
- ² Weaver, R. (1944). *Brit. dent. J.*, 76, 29.

Early Diagnosis of Spinal Tumours

SIR,—Drs. H. J. G. Bloom, H. Ellis, and W. B. Jennett (*Journal*, January 1, p. 10) have made a useful contribution to this important condition, which can often be so tragic if the diagnosis is not early. As they clearly indicate, their material is selected, all the cases being Service personnel. Thus the incidence of various tumour types is different to most published figures. They rightly state that this accounts for the absence of meningiomas in their series. But one cannot agree with them that spinal meningiomas are only twice as common in women as men—they quote Learmonth.¹ Elsberg² pointed out that nearly all spinal meningiomas occur in women, and in my series³ of 59 cases 85% were in women and over 90% were seen in patients over 35 years of age.

They give little credit to the part played by radiology in the diagnosis of spinal tumours. While they say that the plain x rays of 44% of their cases showed appearances suggestive of spinal tumour, they make no mention of the fact that a *specific* diagnosis can often be made. This applies particularly to neurofibromas, the most important spinal tumours (apart from meningiomas), in that removal so often effects a complete cure. In my series of 53 spinal neurofibromas, no less than 45% showed plain x-ray changes enabling a specific diagnosis to be made. The most important sign is, of course, widening of the exit foramen. Bloom, Ellis, and Jennett had 15 neurofibromas, of which 7 are listed as having plain x-ray changes (47%). This correlates well with my figures, but the important point is that a specific diagnosis of neurofibroma can so often be made. The significance of normal plain x rays in a case of spinal neurofibroma is readily appreciated by considering the anatomical conditions. If the tumour has not invaded the exit foramen and is therefore probably entirely intradural, then the plain x rays are likely to be negative, since the tumour normally produces signs of cord compression before it is large enough to splay the pedicles. The differentiation from meningioma can then only be made statistically by considering the age and sex of the patient, although a very high C.S.F. protein will favour neurofibroma.

Again, myelography gets little credit. They say, "Although myelography is by no means always necessary for the detection of a spinal tumour, it is invaluable in accurate localization, and may be the only way in which a neoplasm can be excluded in suspicious cases. . . . The myelogram may also suggest whether the neoplasm is intramedullary or extramedullary. . . ." No one will disagree with these remarks, but what an understatement. One should be able to differentiate extramedullary-intradural lesions from those which are extradural. Such differentiation often takes one

much nearer to the pathological diagnosis. Furthermore, the surgeon wants to know the relation of an intradural-extramedullary tumour to the cord—right or left, behind or in front, the last situation being the most unpleasant. Four angiomas are included in the series. How were they diagnosed? Myelography is the only certain method short of surgery or necropsy. The myelographic picture is absolutely characteristic, and should save the patient an operation which never causes improvement and sometimes initiates deterioration.—I am, etc.,

London, W.1.

J. W. D. BULL.

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- ¹ *Brit. J. Surg.*, 1927, 14, 397.
- ² *Bull. neurol. Inst. N.Y.*, 1934, 3, 124.
- ³ *Acta radiol. (Stockh.)*, 1953, 40, 283.

Tuberculous Patients in General Hospitals

SIR,—Dr. Peter Stradling (*Journal*, December 18, 1954, p. 1483) has completely "missed the boat" about my whole letter (*Journal*, November 20, 1954, p. 1227). He overlooks the elementary principle that, generally speaking, before any campaign is carried out it is invariably preceded by intensive detailed and careful planning. He also wants to know "where is the money to build such sanatoria?" The answer is simple—from the very same sources which have unlimited supplies of money for war and the fearful destruction and devastation that accompanies it. It is amazing when it comes to the health and well-being of the nation how every obstacle is put in its way.

If Dr. J. Robertson Sinton (*Journal*, December 11, 1954, p. 1418) had read my letter carefully he would have appreciated that, because of my sincere and earnest desire that human beings should be treated like human beings and not like cattle, I want fully equipped sanatoria to be built throughout the country. Complacency and lack of enthusiasm have no place in dealing with such a serious malady. It has been proved in the Scandinavian countries that where there is adequate sanatorium accommodation and mass immunization with B.C.G. the number of tuberculosis patients has been greatly reduced. In my opinion, this is an example which Great Britain might well follow.

In answer to Dr. R. Lester Black, we must take a long-term policy in so far as the tuberculosis patient is concerned, and face up to the realization that, despite chemotherapy, etc., and provision of a couple of wards in general hospitals, the actual number of notified tuberculosis patients has in point of fact increased. In my view the dominant criterion of tuberculosis is not the death rate but the numbers of tuberculosis patients. In any case, as general practitioners know only too well, is not there a big enough waiting-list in general hospitals without taking away a further two wards?

May I conclude by saying that tuberculosis is a subject in which there has always been ample room for argument, but one fact is beyond dispute: without the tubercle bacillus there is no tuberculosis, and for medical men to have the temerity to state that the way things are at present there is no real danger of infection to the nursing staff, etc., through constant contact with tuberculosis patients is fanciful rather than factual. If I have set some of my professional colleagues thinking, then that could be the first real step in Britain's resurgence on the whole question of tuberculosis.—I am, etc.,

Glasgow, S.W.3.

ARNOLD B. COWAN.

Negative Tuberculin Test and Positive X-ray

SIR,—In 1949 all schoolchildren in Lewis were tuberculin tested and non-reactors had B.C.G. (if desired). A very high positivity rate was found. The local chest physician kindly x-rayed several hundred reactors and reported on them, and in many instances there was radiological evidence of definite intra-thoracic tuberculosis and bed rest was ordered.

A re-survey of all schoolchildren in 1954 yielded some interesting information: (1) A very considerable proportion of those showing radiological signs were now non-reactors. Had all positive reactors been x-rayed more such