

others the physician to the chest department assumes this responsibility. As more physicians become experienced in this field they should assume increasing responsibility.

The report stresses the importance of co-operation by the physician to the chest department with the medical officer of health and general practitioners. Satisfactory arrangements must be made to ensure that patients with abnormal chest *x*-rays are followed up. The personal aspects of preventive work—for example, family contacts—will continue to be the responsibility of the physician to the chest department. The report concludes with the hope “that the evolution of chest clinics into Chest Departments in general hospitals will provide a basis for the best standards of service to the community by improving facilities for clinical work especially in non-tuberculous broncho-pulmonary disease while retaining the advantages which have come from the especially close association which has arisen between the hospital and the local authority services in this specialty.” This admirable report has been endorsed by the Standing Medical Advisory Committee and the Central Health Services Council and has been commended to hospital authorities by the Minister of Health.³ Its emphasis on collaboration between chest physician, family doctor, and local authority is praiseworthy.

Prophylaxis of Recurrent Headache

Migraine is a difficult condition to define, but its single most characteristic feature is that the headaches are paroxysmal, occurring in attacks separated by intervals of freedom. The value of ergotamine in the treatment of the attack has been known for many years, but a response to treatment with this drug should not be accepted as a diagnostic criterion, as it is possible that other forms of vascular headache could be similarly improved.

In a recent detailed analysis of the symptomatology and response to drug treatment of patients suffering from recurrent headache M. A. Barrie, W. R. Fox, M. Weatherall, and M. I. P. Wilkinson¹ have reviewed the treatment of 105 patients attending two headache clinics over a 15-month period. While most of these patients were probably sufferers from migraine, as their headaches were invariably paroxysmal, the authors are careful not to conclude that this was the definitive diagnosis in all cases. They classified their patients into four groups. The first contained patients suffering from hemiplegic or ophthalmoplegic migraine or both (4 cases); vascular headache was accompanied by sensory and motor phenomena which persisted during and after the headache. A second group of patients (71 cases) were suffering from classical migraine—that is, from vascular headaches with clearly defined transient visual and other sensory or motor prodromes or both. A third group (24 cases) consisted of patients with “common” migraine; these suffered from paroxysmal headache with no striking prodromes and the headache was less often unilateral than in classical migraine. A fourth and less specific group of patients (6 cases) also had paroxysmal headaches, which appeared to be a combination of vascular and tension headaches.

While the value of ergotamine in the treatment of the migraine attack itself is well established, the authors remark that the use of this drug for prophylaxis is less well founded,

and they mention in this connexion favourable reports on methysergide,²⁻⁸ a powerful serotonin antagonist.⁹ This drug, however, has a serious side-effect in causing retroperitoneal fibrosis.¹⁰ While ergotamine is believed to work through its action as a vasoconstrictor, and methysergide owing to its antagonism of serotonin, it is less easy to explain why claims have been made that ergometrine¹¹ is therapeutically effective, as it has no appreciable vasoconstrictor activity but stimulates the central sympathetic nervous system.

To compare the effectiveness of these remedies the authors conducted a trial in which each of the 105 patients was treated with coloured capsules containing ergotamine tartrate in low or high dosage (0.5 or 1.0 mg. daily), ergometrine maleate (1.0 or 2.0 mg. daily), or methysergide hydrogen maleate, again in low or high dosage (3.0 or 6.0 mg. daily). Each patient was required to take 1 capsule of the drug per day for the first two days of a trial, two a day for the next two days, and three a day for the following 24 days, and then at the end of a month was given another remedy. The effect of aspirin 300 mg. and of prochlorperazine 5 mg. on individual attacks was also tested throughout. The consumption of drugs was assessed by counting unused returned capsules. In about 40% of all the periods of treatment less than two-thirds of the prescribed medication was found to have been taken, and unfortunately each month some patients defaulted from the trial, so that only 61 completed the four-month course. There was no clear distinction between patients in the different diagnostic groups in their response to treatment. But when allowance was made for failure to take capsules it was clear that the higher doses of the ergot derivatives were more effective than the lower, as judged by the reported number and severity of attacks occurring during the period of treatment. Methysergide in higher dosage (6 mg. per day) was marginally most effective but also produced more unwanted effects, including defaulting from the trial, than any other treatment. Contrary to expectation, aspirin and prochlorperazine were indistinguishable in their effects or lack of effects in alleviating either headache or nausea and vomiting.

This careful analysis shows the difficulties which arise in assessing the effects of drugs given either prophylactically or for individual attacks in a disorder so much influenced by subjective factors as migraine. Perhaps it may be said that the periods of treatment with individual drugs were too short. It would nevertheless appear that regular treatment with ergotamine tartrate may, over a period of a few weeks, be effective in reducing the severity and frequency of attacks of migraine and that methysergide is probably more effective still. But the latter drug is more likely to cause unwanted side-effects even when given for only four weeks, in which period presumably the risk of retroperitoneal fibrosis would be unlikely to arise.

¹ Barrie, M. A., Fox, W. R., Weatherall, M., and Wilkinson, M. I. P., *Quart. J. Med.*, 1968, 37, 319.

² Graham, J. R., *New Engl. J. Med.*, 1960, 263, 1273.

³ Ostfeld, A. M., *J. Amer. med. Ass.*, 1960, 174, 1188.

⁴ Friedman, A. P., and Losin, S., *Arch. Neurol.*, 1961, 4, 241.

⁵ Curran, D. A., and Lance, J. W., *J. Neurol. Neurosurg. Psychiat.*, 1964, 27, 463.

⁶ Southwell, N., Williams, J. D., and Mackenzie, I., *Lancet*, 1964, 1, 523.

⁷ Smyth, V. O. G., *Lancet*, 1964, 1, 1046.

⁸ Shekelle, R. B., and Ostfeld, A. M., *Clin. Pharmacol. Therap.*, 1964, 5, 201.

⁹ Cerletti, A., and Doepfner, W., *J. Pharmacol. exp. Therap.*, 1958, 122, 124.

¹⁰ *Brit. med. J.*, 1966, 1, 755.

¹¹ Thistlethwaite, H., *Brit. med. J.*, 1945, 2, 784.

Plainly the ideal migraine prophylactic is not yet available, and further careful and comprehensive studies of this type, with longer periods of treatment, will be required. But it is worth noting that attacks of migraine increasing in frequency, particularly in female patients in middle age, may sometimes be greatly lessened by the administration of anti-depressive and tranquillizing drugs. The factors precipitating the attacks need careful study in each patient before the prophylactic remedy most likely to be effective in any individual can be chosen. This trial underlines the fact that there is much more to the treatment of migraine and of related forms of paroxysmal headache than the administration of drugs for the relief of the single attack.

Asthma from Aspirin

Asthmatics who are sensitive to aspirin constitute a characteristic clinical group.¹ They have generally suffered from rhinitis and nasal polyposis for several years before the onset of their asthma, which may follow nasal polypectomy. The asthma usually starts in middle life and tends to become chronic shortly after its onset.² It precedes the development of intolerance to aspirin by months or years, though rarely aspirin may have provoked the first asthmatic spasm.

The aspirin-induced asthma attack is characterized by the onset of symptoms within 20 minutes of taking the drug and by its severe, prolonged, and occasionally fatal nature.^{3 4} Angioneurotic oedema and urticaria may also occur. The asthma of aspirin-sensitive subjects usually persists whether or not aspirin is ingested. Some authorities think that these patients have a particularly poor prognosis,⁵ but long-term treatment with small doses of corticosteroids may be successful in controlling their disease.

M. Samter and R. F. Beers^{6 7} have studied 182 aspirin-sensitive subjects and have found a low incidence of atopy. Few of their patients had positive skin tests to common allergens, and correlation between exposure to allergens and symptoms was rare; their asthma was of the intrinsic type. These acetylsalicylic-acid sensitive patients showed no adverse reactions when given sodium salicylate, salicylic esters, choline salicylate, thioaspirin, or N-acetyl-*p*-aminophenol. Therefore intolerance to aspirin is not intolerance to salicylates generally. Moreover, several chemicals that are structurally unrelated to aspirin can induce "aspirin-like" symptoms in these patients on their first exposure. These chemicals include indomethacin, amidopyrine, and tartrazine, the last being a yellow colouring matter contained in some foodstuffs. The structural dissimilarity of these compounds is so pronounced that an immunological cross-reactivity is, in the opinion of Samter and Beers, most unlikely. The substances inducing aspirin-like reactions have one characteristic in common—namely, they are peripheral analgesics. These authors suggest that the reactions are

mediated by non-immunological mechanisms in which these peripheral analgesics act on peripheral chemoreceptors in nasal and bronchial mucosa. These receptors, because of disease, react abnormally to stimuli and initiate a series of reflexes producing nasal and bronchial symptoms. This hypothesis merits further investigation.

The diagnosis of aspirin-sensitivity should be made from the patient's history. Skin tests with aspirin are unhelpful and sometimes dangerous, serological tests cannot detect aspirin intolerance, and provocation tests may be very hazardous. Aspirin-intolerant patients must scrupulously avoid aspirin and must also be warned against using proprietary mixtures which may contain it.

Teachers' Pay

Most medical teachers will welcome the Government's decision to accept the major recommendations in the report¹ by the National Board for Prices and Incomes on the pay of university teachers. At last clinical teachers with consultant responsibility are to be paid at consultant rates, though the Board seems to be confused about the definition of consultant responsibility, as it suggests that non-medical staff could be granted consultant status. While consultant status implies full clinical responsibility for patients, it must be limited to those who are medically qualified. Clearly further negotiations will be needed on this point, since scientists working alongside doctors should be paid the rate for the job. No rise is recommended for clinical teachers without honorary consultant contracts, but the report suggests that the universities and the Health Departments should review the use of honorary hospital appointments, and it may be that all clinical teachers could be linked to the N.H.S. hospital scales of pay. The more controversial recommendations in the report, in which discretionary awards are suggested for outstanding teachers and new "distinction" awards for professors, apply only to preclinical staff and have not yet been accepted by the Government. The changes in the scale of salaries for assistant lecturers and lecturers give immediate and, for the most part, small increases to staff in these grades, but the reduction in the number of increments gives additional long-term benefits.

The report has had a hostile reception from senior university staff, who resent the Board's assumption that its power to advise on pay gives it a right to influence policy. Interference with the development of a profession by bodies appointed to adjudicate on pay is no novelty for doctors. The Kindersley Review Body, in its seventh report,² used financial incentives to make general practice more attractive and to encourage the growth of practice in groups. The decision by the P.I.B. to encourage a move towards teaching and away from research is just another example of this sort of thinking. Doctors should join their university colleagues in asserting the need for universities to retain independence of action in deciding broad questions of policy.

¹ Leeuwen, W. S. van, *Munch. med. Wschr.*, 1928, 75, 1588.

² Friedlaender, S., and Feinberg, S. M., *Ann intern. Med.*, 1947, 26, 734.

³ Miller, F. F., *J. Okla. med. Ass.*, 1967, 60, 122.

⁴ Prickman, L. E., and Buchstein, H. F., *J. Amer. med. Ass.*, 1937, 108, 445.

⁵ Walton, C. H. A., and Randle, D. L., *Canad. med. Ass. J.*, 1957, 76, 1016.

⁶ Samter, M., and Beers, R. F., *Ann. intern. Med.*, 1968, 68, 975.

⁷ Samter, M., and Beers, R. F., *J. Allergy*, 1967, 40, 281.

¹ National Board for Prices and Incomes. *First Report on Standing Reference on the Pay of University Teachers in Great Britain*, 1968. H.M.S.O.

² Review Body on Doctors' and Dentists' Remuneration. *Seventh Report*, 1966. H.M.S.O.