example, a set of wire wheels that adds nothing to the efficiency of the vehicle.

Now that 80% of our total passenger transport is by road is our Government less sensitive to the welfare of its people?—I am, etc.,

WILLIAM GISSANE.

Road Injuries Research Group,
The Birmingham Accident Hospital,
Birmingham 15.

Collaborating Disciplines

SIR,—The article by Dr. John T. Scales (21 August, p. 470) is a fine review of the present trends in biological engineering and medicine, a trend made necessary by the extreme degree of specialization in all fields of endeavour and the paradoxical need for the integration of diverse scientific interests.

Another aspect of collaboration should be mentioned, because it is one in which Dr. Scales himself has played no small part. I refer to the evolution of the many-sided efforts during the past 20 years under the auspices of the British Standards Institution. The extraordinary variety and the multitude of products affecting medical and hospital practice which have been studied and standardized by groups representing industry, science, and medicine have doubtless played a part in advancing the sort of collaboration which Dr. Scales describes. Medical men have devoted much time to this work, the results of which should be better recognized by their colleagues.

Too often in the past surgeons have been temperamental in insisting upon the use of peculiar and untested materials or devices. Even now they may permit themselves, like other doctors, to be over-impressed by modern salesmanship. To-day, British Standards ensure the availability of reliable equipment because of the collaboration which has gone into its production. In one field—surgical implants—the weak link in supply may sometimes be in the failure of hospital supply officers to recognize the importance of these standards and to ensure not only that they are available but that inferior products from old stocks are not mixed with them.

In the broader field that Dr. Scales describes there are two great needs. The first is a national advisory institute for the examination, experimentation, clinical study, and approval of new designs of equipment, instruments, and materials. The second is a lexicon of terms—for an example see editorial "Surgical Implants"; *J. Bone & Surg.*, Vol. 47B, February 1965—for the illumination of engineers and biologists: the technical language of each group is difficult for the other.—I am, etc.,

Exeter.

NORMAN CAPENER.

Subdural "Haematoma" in Infancy

SIR,—I am sorry that Dr. Patricia A. Russell in her interesting paper "Subdural Haematoma in Infancy" (21 August, p. 446) uses the term haematoma, which although widely accepted in this context appears to me to be inaccurate. The nature of the subdural fluid is not described by Dr. Russell in detail, but (unless the series differs greatly from others that have been published) was probably in most cases clear and xantho-

chromic and containing much protein. In 97 cases seen in this department in the last six years only 12 had blood in the subdural fluid. The term *haematoma* seems not to be justified, although in many cases the initial lesion may have been a blood clot. There are so many unexplained aspects of this condition or group of conditions that I suggest the term *effusion* should be used when blood is not present. For example, it is known that subdural fluid collection is an infrequent complication in meningitis in the absence of trauma. Again, subdural fluid (not blood) is occasionally found a few days after birth, when it is hard to believe that a blood clot was the precursor. Unexplained also are the cases where the whole cerebrum is enveloped in subdural fluid perhaps several hundred millilitres in volume. Is it possible that a haematoma so large existed previously and yet the baby lived?

The avoidance of the term haematoma has, however, some practical importance. Its use may partly explain two misconceptions which are commonly encountered. (1) When inserting a needle beneath the dural space for diagnostic purposes the doctor unfamiliar with the condition may expect to aspirate blood. If a few millilitres are obtained the diagnosis is considered as established, even when the history of illness is so many weeks that a haematoma would long before have changed from being pure blood. (2) When yellow fluid is obtained (as is more commonly the case) any blood it contains is regarded as a natural occurrence, whereas its presence is the direct result of damage to vessels when inserting the needle.

For these and other reasons therefore I hope that the term subdural haematoma may be reserved for those cases where a collection of blood is found in the subdural space.—I am, etc.,

KENNETH TILL.

The Hospital for Sick Children,
London W.C.1.

Reactions to Nalidixic Acid

SIR,—Early in 1965 the Committee on Safety of Drugs asked doctors to report any rashes or disturbances of the central nervous system occurring in patients who were taking nalidixic acid ("Negram"). The reports received following this request appear to confirm the first impressions that, though there seems no reasonable doubt that a causal relationship exists between the use of the drug and such reactions, the latter are transient and reversible.

It is the view of the Committee that the fear of producing these reactions in some patients need not, in the present state of knowledge, deter doctors from prescribing this drug when it is positively indicated. Nevertheless, since some of the effects may be alarming to patients, doctors might care to warn them of their possible occurrence.

When the reactions affect the nervous system they usually occur within half an hour of taking the drug and persist for two or three hours. Sometimes, however, they are first experienced after the second or third dose and increase in severity with subsequent doses. Visual disturbances, excitement, depression, confusion, and hallucinations have been reported. Headache, giddiness, drowsiness, syncope, and sensory disturbances

have also occurred in a few instances. One patient had a grand mal attack which might have been due to the drug.

The exact incidence of reactions is difficult to assess, but between May 1964 and April 1965 there were reported to the Committee 52 cases of skin rashes and 126 cases of reactions affecting the nervous system in patients being treated with nalidixic acid. Between January 1964 and February 1965 general practitioners alone issued approximately 77,000 prescriptions for the drug.

The Committee would like to thank doctors for their help and to acknowledge the co-operation of the manufacturers in the inquiry.—I am, etc.,

D. A. CAHAL,
Medical Assessor.

Committee on Safety of Drugs,
Queen Anne's Mansions,
Queen Anne's Gate,
London S.W.1.

Hyperbaric Oxygenation

SIR,—Your leading article on hyperbaric oxygenation (14 August, p. 377) succinctly summarizes the present position.

Those of us working in this field with small one-man chambers would, however, challenge your statement that larger chambers in which attendants can also be present are needed for most types of treatment other than radiotherapy.

In this unit we have been successfully treating very ill patients for gas gangrene and carbon monoxide poisoning, as well as those with chronic osteomyelitis and certain ischaemic lesions of the lower limb. In the immediate post-operative period, also, patients will accept treatment so that ischaemic skin flaps may be resuscitated and skin grafts sustained. We have found the equipment easy to use, and nurses can be trained in a few hours to pressurize patients and attend them during treatment.

Hyperbaric oxygen therapy thus becomes a practical proposition in centres where the cost of large chambers will inevitably make their use impossible.—I am, etc.,

Queen Mary's Hospital,
Roehampton,
London S.W.15.

J. D. PERRINS.

REFERENCE

- Williams, K. G., and Hopkinson, W. I., *Proceedings of Second International Congress on Hyperbaric Oxygenation*, edited by I. Ledingham, 1965, p. 373. Livingstone, London.

Unsuspected Deafness in an Immigrant Child

SIR,—The difficulty in communication with members of a community of different language may present a great problem in the diagnosis of medical disorders. This is particularly so in the case of deafness.

A Turkish Cypriot schoolgirl aged 8 years was seen at a school medical inspection in April 1964. The mother could not speak English and did not attend the interview. The child was vivacious and co-operative, with an alert and intelligent facial expression. When spoken to slowly, in simple language, she responded by making a vocal noise, and by nodding or shaking her head. She did not appear to articulate sounds, and her voice quality was abnormal in nasality and intensity. Both the headmistress and her own teacher, who were

present at the interview, were of the opinion that the child could hear and understand very simple sentences. She was said to have difficulty in expressing herself, owing to her Turkish-speaking background. Her intelligence and emotional stability were said to be at least average, and her adjustment at school appeared very satisfactory. Auriscopy showed the left drum to be normal, and the right drum retracted. Calling the child by name, with her eyes closed, or while standing behind her, on either side, produced the impression that she did not respond to or localize sounds in either ear.

Some days later the headmistress mentioned that on a previous day she had repeatedly called after the child, who was going home from school, and the child had remained unaware of her. This was the first time that any member of the teaching staff had suspected deafness during the six months in which the child was at school.

The mother later attended for interview, and was accompanied by an English-speaking Turkish Cypriot friend. Deafness was said to have been first suspected by both parents at the age of 4 years, when there was no progress in speech development. It was said that the child's speech, even in Turkish, was very restricted.

The child was later tested at a special audiology unit and it was clear from the audiogram that she had a high frequency loss of hearing, with a fairly severe superimposed conductive loss.

The child was recommended for a school for deaf children, and some months later was seen to be using headphones, with an amplifier, for school lessons, and was using hearing-aids at other times. She had fitted in well at the school and was making some progress despite the language difficulty.

It is unusual to see a child with bilateral undetected deafness at the age of 8 years. The diagnosis at this age may be overlooked because of the assumption that the condition would have been discovered earlier.

It was initially thought that the Turkish-speaking background of the child, and not deafness, was the cause of lack of comprehension of speech. In addition, the high intelligence of the child had enabled her to develop the art of lip reading and of interpreting facial expression.

I would like to thank Dr. L. Fisch, consultant otologist, for his help with this child.

—I am, etc.,

London S.W.3.

J. J. TROY.

Scared to Death?

SIR,—I read with interest the account of the woman reported by Dr. Elkington and his colleagues (7 August, p. 363) who accurately forecast her own death at the age of 43. However, one is left wondering why a fortune-teller should impart such devastating information to so young a child which was to make such a terrible and lasting impression upon her.

Her case reminded me of the instances of "angor animi" which were reported in this journal last year,¹⁻³ though in these patients awareness of "impending dissolution" was of a much shorter duration.

I well remember seeing another patient in 1952 in his early 40's, who I have little doubt had some foreknowledge of his imminent demise. On admission to hospital he was extremely agitated, overbreathing excessively, and appeared to be suffering from cardiac asthma. There was no significant previous medical history. He was sitting up in bed all the time struggling for breath, clutching on to me and another doctor shouting,

"Doctor, doctor, I am going to die, I am going to die, please don't let me die, please don't let me die, please, please. . . ." He repeated this over and over again and caused much commotion in the ward. With great difficulty we administered oxygen and intravenous aminophylline, but perhaps mistakenly withheld morphine, fearing that this might depress his respiration. Thereafter we just stood back and watched him helplessly while he cried out. Suddenly he stopped and slumped down in the bed. He was dead half an hour after admission. Curiously, a most careful necropsy revealed no abnormalities whatsoever and there was no evidence of pulmonary oedema. We were all of the opinion that he had died of fright.

It would be interesting to know much more about the personality of Dr. Elkington's patient, perhaps from relatives or friends, and about the nature of her anxiety during the preceding three years; also whether she was often depressed or had ever made a suicidal attempt. Furthermore, it is possible that were she a hysterical manipulative type her psychological symptoms, stress incontinence and reaction to it, leading to surgery and its attendant complications, might have resulted from her own unconscious efforts to pre-determine her demise at the appointed time, having reflected endlessly upon the admonitions of her soothsayer. Hysterical mechanisms of this kind are not uncommon and have been lucidly elaborated by Menninger,⁴ particularly in patients who undergo repeated operations ("polysurgery," "polysurgical addiction," "Munchausen syndrome").^{5,6} Such patients may readily transfer responsibility for their own actions on to another party, the surgeon, who may thereby be unwittingly and quite easily drawn into the patient's scheme of things.

Nevertheless, the problems presented by this patient and which occupy the fringe territory of medicine and psychiatry are of considerable scientific interest, and much more research is needed. Perhaps the boundaries of western psychiatry should now begin to be extended to include some of the phenomena of extra-sensory perception?—I am, etc.,

Shelton Hospital,
Shrewsbury, Shropshire.

J. C. BARKER.

REFERENCES

- 1 Barker, J. C., *Brit. med. J.*, 1964, 2, 688.
- 2 Morrison, J. M., *ibid.*, 1964, 2, 949.
- 3 Woolich, J. G., *ibid.*, 1964, 2, 1141.
- 4 Menninger, K. A., *Man Against Himself*, 1938, Part IV, p. 259. Rupert Hart-Davis, London.
- 5 Asher, R., *Lancet*, 1951, 1, 339.
- 6 Barker, J. C., *J. ment. Sci.*, 1962, 108, 167.

SIR,—I was very interested to read the letter under the above heading (7 August, p. 363). The case may represent a version of voodoo death. Voodoo-like suggestion caused the development of a previously non-existent and eventually fatal episode. The suggestion implanted into the patient's mind at the age of 5 that she would die when she was 43 triggered off the mechanism of her post-operative collapse.

A number of observers in independent reports¹ gathered from various parts of the world admit that there are instances indicating that the belief that one has been subjected to spells of sorcery, and in consequence is inevitably condemned to death, does actually result in death in the course of time. This phenomenon is characteristically noted

among the primitive human beings. Some, however, believe that it may exist in our cultured society. A persistent state of fear can end the life of man. Fear is one of the most deeply rooted and dominant emotions. Associated with it are profound physiological disturbances, widespread throughout the organism.

One of these is the overaction of the sympathetic nervous system, which exercises control over the internal organs and also the blood-vessels. If the state of perturbation due to fear continues uncontrolled for a considerable period very serious results may ensue. There is a gradual fall in the blood-pressure towards the end, which is due to a reduction of the volume of the circulating blood. Deterioration, therefore, occurs in the heart and also in the nerve centres, which held the blood-vessels in moderate contraction. The very organs which are necessary for the maintenance of an adequate circulation are damaged. The gradual reduction of the blood volume is due to the action of the sympathetic nervous system in causing a persistent constriction of the small arterioles. The very thin walls of the capillaries are sensitive to oxygen want, and become more and more permeable to the fluid part of the blood. The plasma therefore escapes into the perivascular spaces. The loss of fluid excites the sympathetic nervous system; thus a vicious circle is set up. A state of shock is produced by the continuous outpouring of adrenaline characterized by a rapid pulse and haemoconcentration. The heart is beating faster and faster, finally getting into a state of constant contraction and death in systole. The post-mortem examinations in such cases usually reveal nothing definite which could account for the fatal outcome.

A case of death from a voodoo-like suggestion was reported by Mathis.² A man aged 53, in a civilized community, developed as a result of a voodoo-like suggestion a previously non-existent and eventually fatal illness. It was unfortunate that in the "Labrador" case the fear of the patient was not known at the time of the operation. Fear expressed by a patient about the result of an operation is a reason why some surgeons would refuse to operate.³ A suggestion implanted into a human mind can persist for many years. It has been found that some post-hypnotic suggestions can last effectively for many years. If the suggestion of "Death at 43" could have been removed by counter-suggestion before the operation, the fatal issue could have been avoided.

"Scared to Death" is not an idle saying. A feeling "I am afraid I am going to die" may actually result in death. The anxiety is not removed even when the patient is anaesthetized. Although asleep, the patient is still suffering from anxiety.—I am, etc.,

London S.E.25.

A. FRY.

REFERENCES

- 1 Cannon, W. B., *Psychosom. Med.*, 1957, 19, 182.
- 2 Mathis, J. L., *ibid.*, 1964, 28, 107.
- 3 Finney, J. M. T., *Ann. Surg.*, 1934, 100, 746.

"Early, Curable Stage" of Rheumatoid Arthritis

SIR,—It was not my intention to instruct Dr. John W. Todd how to treat the "early curable stage of rheumatoid arthritis," but to point out that a great deal can be done now to mitigate the crippling effects of arthritis.

In his second letter (24 July, p. 234) Dr. Todd challenges me with "What is the proper advice?" to the patient and his doctor.