I have not found that nicotine aggravates the symptoms of Parkinsonism. In Case 1 diethazine appeared to have no effect: in Cases 2 and 3 it aggravated the ataxia. Case 3 actually had to retire to bed for a few days with severe ataxia, and he considered that diethazine was more harmful than nicotine. Although nicotine has no known therapeutic value its usefulness as a pharmacological "tool" has long been appreciated. The observations here recorded suggest that the effects of the drug on the central nervous system in health and disease require further examination.

Summary

An account is given of four patients with spinocerebellar ataxia who complained of the adverse effect of tobacco-smoking on their disability. The diagnosis in the first three patients is one of progressive spinocerebellar degeneration; the fourth has disseminated sclerosis.

The correctness of their observations was confirmed. Tobacco-smoking had a striking effect on the dysarthria and on the ataxia of the lower limbs in Cases 1 and 3. In Cases 2 and 4 speech was not affected, but ataxia was noticeably increased.

These effects were also produced in each patient by the intravenous injection of nicotine acid tartrate.

It is suggested that they are brought about by some action of nicotine on the central nervous system which may involve disturbance of synaptic transmission of nerve impulses.

Tobacco-smoking and intravenous nicotine had no harmful effect in eight other patients with progressive spinocerebellar degeneration. They were also harmless in 20 patients suffering from various organic diseases of the brain and spinal cord.

I wish to thank Dr. E. Payne for carrying out many of the control tests and Drs. G. Howells, A. L. Lewis, and C. Pallis for their assistance in recording the observations.

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FORTY YEARS ON

A G.P.'s RETROSPECT AND REVIEW

BY

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With the lapse of forty years since qualification one is tempted to look back and try to assess the development of medical knowledge and practice in its impact on the general practitioner, and, at the same time, to attempt to see in proper perspective the progress and retrogressions in the various branches of medicine; for not all change is for the better, and occasionally it is definitely and demonstrably for the worse. Such a review must necessarily be incomplete, and even fragmentary; but it may be of interest, and just possibly of use.

It is perhaps a little obvious, but it is true, to claim that, in spite of certain regrettable tendencies, progress in the healing art has at least proceeded *pari passu* with, and has often excelled, that in other fields, and one remembers with gratitude that in spite of almost kaleidoscopic change the great fundamental principles taught in our student days remain unshaken, and as applicable now as they were then.

A Sound Medical Philosophy

When Sir Robert Hutchison (1928) wrote his matchless little trilogy of 50 pages—*The Principles of Diagnosis, Prognosis, and Treatment*—he provided the student and the practitioner for all time with a medical philosophy so sound that adherence to it would provide the means of avoiding many of the varied pitfalls of the practice of medicine. For in these days the enormous developments in the diagnostic field and the innumerable drugs which pour from the analytical laboratories put a strain on the judgment of the practitioner that has never been experienced before in such intensity.

To take one danger as an example—the temptation to a short-cut in diagnosis by ordering a roving inquiry into the blood, the urine, and the excretions generally, and perhaps elaborate x-ray investigations without a careful history, and without a thorough clinical examination. Probably we have all been guilty of this at times, and one or two lucky hits may lead us further astray; for, just as Sir Robert Hutchison says, "If you once get into the habit of guessing you are diagnostically damned"—so is the man who forms the habit of expecting the laboratory and the x-ray room to save him from those clinical observations and investigations that are an essential preliminary before any elaborate procedures can be justified.

I remember so well how a young woman whom I had attended for a difficult labour, complicated by hydrocephalus and hydramnios, fell into the hands of a pathologist (a relative) who, after the most involved laboratory investigations of almost every conceivable secretion and excretion but without proper clinical examination, issued a report with the diagnosis of intestinal toxæmia and endocrine insufficiency (these at the time were fashionable names for non-existent clinical conditions). What the patient was really suffering from was physical and mental exhaustion following a difficult labour, ending in a stillborn baby, and a mitral stenosis which was the only organic condition present, and this was omitted from the report.

X-ray investigations, though more and more reliable, can still be misleading, and experience seems to show that where the clinical indications point strongly in one direction and the x-ray result in another it is still generally safer to follow the former to a conclusion than to be overruled by the latter. Some years ago I was called to an old lady of 80 who had fallen down three stairs, at the foot of which

she was lying. The right foot was everted, and, though there was no shortening, clinically the diagnosis of intracapsular fracture of the neck of the femur seemed reasonably certain. Fortunately (or unfortunately), "portable x-ray apparatus" was in the district, and an excellent x-ray picture was taken of both hips, and this failed to reveal any bony injury. A few days later shortening became obvious and a further x-ray film revealed a fracture, and gross displacement had occurred, as, satisfied too easily by the first x-ray examination, I had taken no steps to prevent it.

Developments in Medicine

As students many of us probably believed, 40 years ago, that advances in medicinal treatment would be slow and unspectacular and that progress in surgery would be as rapid and startling as it had been in the previous 40 years. While the latter is possibly true, it might well be claimed that medicine has, in fact, stolen the limelight. When one remembers the discovery of liver in the treatment of pernicious anaemia, insulin in diabetes, and the revolution in the treatment of the acute infections by penicillin and the sulphonamides, and the ever-growing list of potent antibiotics, it is difficult to remember in detail some of the conditions, like the pneumonias, where one had to stand by almost (as it seemed) a spectator and watch the dread battle, with ability to render only what often amounted to symptomatic relief, or little more. But with all the new remedies (and their number is in itself an embarrassment) it still remains true that an essential preliminary to their use is a proper attempt at a diagnosis, and too early a resort to them may complicate the evidence and even endanger the ultimate issue. We can all probably recall cases where we have succeeded in rendering a deep abscess sterile by the use of antibiotics, whereas the necessity for the earlier evacuation of pus might have been quite obvious, if we had not been so much inclined to expect the drugs to perform impossibilities.

Pernicious Anaemia in the Aged

One thing has particularly impressed itself on me in practice and that is the danger of overlooking that insidious disease pernicious anaemia in the aged, and I often have a fear that I may have done so. Two cases illustrate this well; both came to light in the summer of 1948, and both patients are alive and well at the time of writing.

Case 1.—A man aged 74 in July, 1948, was attending a local hospital regularly as a "diabetic," and, according to my notes, he had had a harmless glycosuria for twenty years. I had not seen him for some time and was startled at his poor colour and general appearance. The possible presence of malignant disease almost suggested itself, and seemed to be confirmed when a search revealed a large hard swelling in the scrotum. This, however, on transillumination proved to be a tense hydrocele. It was then that the possibility of pernicious anaemia presented, and as the patient's condition had rapidly deteriorated I did an immediate blood count. This showed: R.B.C., 880,000; Hb, 36%; C.I., 2. Large and repeated dosage with "anahaemin" was followed by an astonishing recovery. In six weeks he had every appearance of health, and with 2 ml. of anahaemin monthly, at the age of 80, he does five days' work a week as a gardener. The most recent blood count showed: R.B.C., 5,380,000; Hb, 122%; C.I., 1.15.

Case 2.—A woman aged 85 in August, 1948, had increasing dyspnoea, a loud systolic murmur at the apex, and B.P. 185/95. A diagnosis of cardiac failure seemed likely, especially as some basal pulmonary oedema developed. Increasing pallor, however, led me to do a blood count. This showed: R.B.C., 1,120,000; Hb, 36%; C.I., 1.6. An intensive course of anahaemin was followed by fortnightly doses of 2 ml. to the present time. At the age of nearly 92 she still cooks for the family. A recent blood count showed: R.B.C., 4,280,000; Hb, 78%; C.I., 0.92. The significance of these two cases lies in the fact that in both an alternative diagnosis seemed at first more likely, especially in view of their advanced ages.

One is apt as a student to get the impression that disease will, with wide variations, remain true to a pattern described in the standard textbooks, and it is more than a little disconcerting to find that disease changes in character and incidence as time goes on. Thus rickets and chlorosis

seem largely to have disappeared in this country, and scarlet fever has completely changed in its clinical manifestations in the last 100 years. My father told me that in his early years of practice the commonest cause of sudden death in children was scarlet fever (presumably haemorrhagic). Personally, I can remember only one fatal case—from broncho-pneumonia as a complication.

Therapeutics

A wise teacher of therapeutics used to advise us, in regard to new drugs, to be two or three years behind the times. More and more one can discern the value of that advice, especially in these days. As an example it may be worth while to call to mind a substance called cinchophen. It was introduced with the usual flourish, and was alleged to cure gout almost overnight. As colchicum always seemed to deal with gout as efficiently as it had already done for several hundred years, it seemed reasonable to refrain from the immediate use of cinchophen. Within a few months reports began to come in of cases of acute yellow atrophy of the liver and consequent fatalities from the use of the new drug. Cinchophen soon faded out of employment, and indeed students in these days have possibly never even heard of it. Mention might be made in this connexion of sulphamerazine, the dangers of which are now well known but which were not recognized for some little time after its introduction.

Some drugs, though of great therapeutic value, tend to be used too early, too readily, and with great prodigality, like chloramphenicol when it was first introduced. An impression got about that it had superseded penicillin, and it was used for quite trivial conditions. Soon after its introduction the profession was flooded with literature advancing extravagant claims for the new drug. One of these said, "As soon as clinical or x-ray diagnosis of pneumonia has been made, it is advantageous to start treatment with chloromycetin." Fortunately, within a few days of this claim an authoritative report by a subcommittee of the Medical Research Council made it clear beyond argument that "penicillin was just as good or possibly better than either aureomycin or chloromycetin in the treatment of clinical pneumonia." The subcommittee also pointed out that it was decidedly safer. Now at last its limitations and dangers are recognized, but not before enormous expenditure has been incurred and probably a number of lives have been lost by its indiscriminate use. Gairdner (1954) reported a case of death from chloramphenicol where a "modest amount" had been given for two periods of only four days with a six-month interval between. This, of course, does not imply any criticism of its use in that particular case.

More than once it has been my experience to be called to see patients who were already treating themselves, or their relatives, with sulphonamides because they had been encouraged to do so by their previous medical attendant in some other district, who, presumably by some exercise of second sight, had made a diagnosis of an ailment which was to occur in the future, and had provided a surplus of sulphonamide tablets to be used at the patient's discretion (or the lack of it). It is always repugnant to criticize even an unknown colleague, but to condone in any terms such a practice would surely be nothing less than cant.

Preventive Medicine

In the field of preventive medicine the general practitioner still has a part to play, though there appears to be a tendency for the public health authorities to take over more and more responsibility for it. There is, however, one disease in which any improvement in the remarkably constant mortality rate must come through the general practitioner, and that is tetanus. It may surprise some to know that in this country the death rate from diphtheria is now considerably less than half that from tetanus. Many parents seem very willing to have their children immunized with a triple antigen—against diphtheria, pertussis, and tetanus—and the introduction of tetanus toxoid does not seem to have any undesirable effect so far as my own experience

goes. In regard to the older population, a selective active immunization of those particularly exposed to injuries contaminated with soil seems well worth while. In this connexion farmers and gardeners obviously come to mind, and schools where rugby football is played. It must be remembered, of course, that during their military service most men, and probably some women, are actively immunized against tetanus, and this in time may well bring down the mortality rate.

Developments in Surgery

Though developments have been startling in nearly every branch of surgery, their impact on general practice has been less, for obvious reasons. In fact, the general practitioner, thanks to the antibiotics and chiefly to penicillin, has been able to render diseases like osteomyelitis and suppurative mastoiditis comparative rarities, and has often been able to obviate even a consideration of surgical intervention.

Perhaps the most striking thing in regard to surgery is the tendency for surgeons to become more and more highly specialized, and the great general surgeon is becoming gradually more difficult to find, or so it seems. When one comes to minor surgery there is little doubt that, for various reasons, less of it comes the way of the general practitioner than formerly, and more finds its way to the out-patient department of the hospitals. Those practitioners who are fortunate enough to be attached to cottage hospitals can derive much benefit in this respect, and in all sorts of ways. It cannot be too strongly emphasized that part-time hospital work for the general practitioner is a vital factor in keeping him clinically alive.

Developments in Anaesthesia

In the field of anaesthesia the developments have been truly revolutionary, and here again there is a tendency towards specialization, and, though the general practitioner is called upon less often than formerly to give anaesthetics, it is perhaps all the more important that he should be proficient in sound and simple methods when he is required as an anaesthetist.

There can be no question that many of the advances in surgery have been made possible only by the discovery and skilful use of new anaesthetics and the introduction of complicated anaesthetic machines, though the very elaboration of these has its dangers. It is indeed open to doubt whether the introduction of many of the modern anaesthetic agents have contributed notably to the safety of the patient so far as the anaesthetic is concerned, and it is significant that 56 deaths from regurgitation and vomiting form the "largest single definite group" in an analysis of 232 deaths associated with anaesthesia (*Anaesthesia*, 1952). Even this is far less startling than the much greater relative proportion of fatalities from aspiration of vomit in forceps deliveries. The reason for this is quite clear, and is discussed at some length later. For my own part, leaving aside the question of hospital work and of nitrous oxide for minor surgery and dental extractions, I believe that the general practitioner in domiciliary work would be wise to rely for adults on open ether preceded by atropine and perhaps slow induction with a minimal amount of an intravenous barbiturate, and on open ether preceded by atropine and vinyl ether for children. There are two points in regard to the barbiturates. I believe strongly that the demands one occasionally gets from a dentist for a rapid "knock-out" dose of barbiturate should be stoutly resisted: after all, *he* is not chiefly responsible for the outcome of the anaesthetic. The other point is that I regret the virtual disappearance of hexobarbitone, which always seemed to me the safest of the intravenous barbiturates. It is a strange fact that, in spite of all the new anaesthetics, open ether, and open ether alone, is still the safest of them all.

Developments in Obstetrics and Gynaecology

It would perhaps be unfair to expect equally great developments in all specialties; and it is a little difficult to see such

great progress in obstetrics and gynaecology, as in other fields, at any rate from the point of view of general practice. There are the hormones, of course, but it would be easy to exaggerate their importance. They have not yet succeeded in determining sex, and, though the female may be made more masculine, nobody has yet succeeded in rendering the male parturient, and for this, at least, we may be thankful. Mention might be made of radiological pelvimetry, but much of the credit for this must go to the radiologists.

A reference was made above to certain "regrettable tendencies," and it is in the realm of obstetrics that the most glaring example of this has occurred. Someone once somewhat unkindly described a gynaecologist as "a physician who attempts to cut a straight line with a curved pair of scissors." There may be an element of truth in this, but it is a harmless occupation compared with that of the obstetrician who inflicts the lithotomy position for forceps delivery, under general anaesthesia, on a patient who is unprepared for the anaesthetic; and yet that is what has been happening for some years to an increasing extent, with the consequent occurrence of fatalities from aspiration of vomit. For patients in labour are hardly ever properly prepared for anaesthesia—in contrast to gynaecological patients, who nearly always are.

In 1950 Professor Jeffcoate stated categorically that "the lithotomy position is best for all operative deliveries." At the time this pronouncement was challenged, especially from the general practitioner's point of view, on account of "the very real risk of inhalation asphyxia or pneumonia." During the last ten years numerous fatalities have been recorded from aspiration of vomit during forceps delivery, including a series reported by Professor Jeffcoate (1953), where no less than half the fatalities associated with forceps delivery were due to this cause. In these cases and in those reported by Parker (1954) it is not denied that the lithotomy position was used. In others which come within my own knowledge this also was the case. Those who were brought up in the use of the lateral position, and who practise it, know that fatalities from this cause just do not occur—the law of gravity takes care of that—whereas in hospital, particularly, the patient who vomits in the lithotomy position under general anaesthesia is almost literally in a death trap because of the very rigid fixation secured by the lithotomy supports. It may well be asked, on the other hand, whether anyone could produce records of a series of fatalities, or even of one single fatality, from aspiration of vomit when the patient has been delivered in the lateral position.

It may be taken that when death occurs from aspiration of vomit (and this cause would appear to account for about half the anaesthetic fatalities in forceps delivery) the lithotomy position has been used and is primarily responsible. We in the profession know this, and know also that it is avoidable. The practice of using and teaching the lithotomy position for delivery appeared insidiously as a bad habit—for it is little more—and the sooner it is abandoned the better, as such a formidable indictment can be brought against it. It is indeed high time that those responsible for the teaching of obstetrics should revert to the proved safety of the lateral position, for few things are so tragic as a maternal death.

Influence of Legislation

No review of 40 years of general practice would be complete without some reference to national insurance legislation. The temptation is to omit any discussion for fear of a charge of political bias; for any opinion must be purely personal, and is likely to be regarded as controversial. It does rather seem, however, that the grave fears which were expressed regarding the destruction of the freedom of the general practitioner have not materialized to any great extent. On the other hand (and here again is a personal opinion), the destruction of the voluntary hospital system is nothing less than a national disaster, and it cannot be denied that hospital expenditure has enormously increased under regional control.

The voluntary hospital system brought out all that was best in the public at large and in the medical profession, and so far as the patients are concerned it only needed subsidizing and co-ordinating for it to have survived and continued its honourable and beneficent course, side by side with an inevitably increasing number of State hospitals.

Maternity Medical Service and Laboratory Services

When one considers the new maternity medical service, as it affects the general practitioner, it is idle to deny that it places a premium on inadequate and incomplete service, for when only the two paltry minimum antenatal services are rendered the safety of the patient is by no means assured. So far as the doctor is concerned, if he yields to the temptation to be content with the minimum service to the patient, he may be unable to detect some of the serious complications of pregnancy, and still less will he be fitted to deal with the possible complications of labour. At its best the scheme does not encourage good work, and at its worst it is a travesty of the art of obstetrics. It is true, however, that the new maternity service is restrictive only by implication, and if the practitioner disregards the insidious enticements of pecuniary considerations there is nothing to prevent him from giving a full and complete service, though he may be forgiven for looking somewhat ruefully at the financial reward if he does.

When one comes to the laboratory service it must be admitted that it is much easier for the general practitioner to get investigations done than it was before 1948. Whether the accuracy of the results is as impeccable as before is open to doubt, but one has to remember the enormous increase in the amount of the work and in the complexities of the investigations. Thus it is not always safe to place absolute reliance upon a laboratory report even if it is positive, and much less if it is negative. It is most disconcerting to find, for example, that a blood Wassermann reaction returned as positive was ultimately proved conclusively to have been a mistake.

Conclusions

There does not seem to be any reason to suppose that, in this country at any rate, general practice is ever likely to be discarded, and there is certainly no cause for the general practitioner to labour under any sense of inferiority. Indeed, with specialization becoming more and more intense, a general outlook with a wide and balanced view is more than ever necessary. On the other hand, the colossal advances in almost every branch of medicine make it increasingly difficult for the general practitioner to keep abreast of the times, and it is all the more important to develop in practice sound methods in diagnosis, and to use well-proved methods in treatment. He need not imagine that it is his duty to inflict on his patients every new drug as it arrives, flaunted by all the ingenuity of modern advertisement, but rather it is his function to protect them from too easy a resort to untried remedies.

More than ever is it necessary in this distracting age to develop and maintain a sense of discrimination and a degree of equanimity which will prevent the foolish retort and action, for few things are more damaging to doctor and patient than the angry word. Fortunately the day is often saved by a sense of humour which, as Sir Robert Hutchison says, "helps us to bear with the vagaries of our patients, and still more with those of their relatives, and to derive amusement instead of annoyance from the eccentricities of our colleagues."

Beneath the crest of my old hospital are the words *Nihil humani a me alienum puto*, and when one remembers that the origin of our hospitals was essentially a religious foundation and pre-eminently Christian it is not difficult to see how the voluntary system arose, but although, through a misguided appreciation of values, that system has been destroyed, the voluntary spirit remains. If this can be preserved, in a somewhat materialistic age, then we need not

despair; for the future of medicine is full of hope, and the general practitioner, fortified by so much that is worthy in the traditions and teaching of the past, can go forward confidently towards the great achievements that assuredly lie ahead in the art and practice of Medicine.

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HEREDITARY DEAFNESS IN FAMILY WITH EAR-PITS (FISTULA AURIS CONGENITA)

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The ear-pit, or pre-auricular sinus, is a hereditary abnormality that is quite common in this country. Ewing (1946) found pits in 0.9% of the 3,500 British Service men he examined; Onodi (1918) found a somewhat similar incidence in Germany; Fournier's survey in a French garrison (1919) revealed a much smaller incidence, but in parts of Asia and of Africa some 5 to 10% of people may show the defect (Aird, 1946).

The pit may be on one or both ears; it is usually on the margin of the helix just above the tragus, but it may be elsewhere on the pinna or in front of it, and there may be more than one pit on each ear. The pit is circular or elliptical, and "barely wide enough to admit the tip of a sharpened lead pencil" (Edmonds and Keeler, 1940). Its size is, in fact, quite variable. Occasionally the skin in front of the tragus is poorly developed so that it looks like a scar, but the pit itself is by no means an obvious lesion, and a medical colleague in whom we noticed one did not know he had it (Fig. 1). The pit may, however, suppurate and infect the pre-auricular gland (Bailey, 1949). Occasionally a person with ear-pits also has branchial fistulae or some other less obvious sign of a faulty development of one of the branchial clefts, such as a depression in the skin

FIG. 1.—An ear-pit on the margin of the helix.