

to interest ourselves in statistical algebra or to grapple with the analysis of variance. The Registrar-General does not expect that. He expects his reader to take some interest in the causes of mortality and in the factors, whether age, sex, geographical situation, economic status, or domestic housing, which increase or diminish rates of mortality. He might reasonably expect that many readers interested in such things would be found in the ranks of our profession. Let us hope that the second century of civil registration in England and Wales will be inaugurated by a large addition to the number of regular medical readers of the Annual Reports which were begun by William Farr.

PREVENTIVE SURGERY

"Surgery to prevent surgery" is one of Lord Moynihan's vivid phrases that have caught fire, and we can say to-day with some confidence that not only is the preventive side of clinical medicine coming into its own, but that concurrently with it may be observed a steady evolution of surgical procedures whose aim is to prevent more extensive or formidable operations at a later date. "A stitch in time" is as applicable to modern surgical practice as to many other things in life: it may not only be desirable in order to avert the need for many stitches later, but it is of course often necessary as an immediate life-saving measure. Perfect practice then becomes a twofold matter: instant recognition of the need for the stitch, and its timely and skilful application. Both are necessary, because "no amount of excellence in tactics will repair a fault in strategy," and the physician and surgeon clearly fall outside the ambit of Goethe's assertion that it is man's errors that make him truly lovable.

In his lecture on "Avoidable Disasters," delivered recently to the Ayrshire Division of the British Medical Association, and published this week at page 349, Mr. G. R. Girdlestone of Oxford draws attention to some common errors in diagnosis and to the disasters to which such mistakes lead. Mr. Girdlestone, as might be expected, considers his subject chiefly from the point of view of the orthopaedist, his examples including failure to recognize fractures or the onset of ischaemic contracture, or to administer anti-tetanus or anti-gas-gangrene serum early in wound treatment, or the well-known mistake of regarding acute osteomyelitis in its initial phases as acute rheumatism. The subject, however, is a wide one, extending far beyond the realms of orthopaedic surgery, and examples of avoidable disasters in all branches of practice will readily occur to the reader. There is good reason to believe that disasters are becoming fewer, and if for instance we consider those attributable to the mismanagement of fractures, we may not unreasonably look forward to a time when, with the spread of the knowledge of modern fracture treatment, there will be such a uniformly high level of practice throughout the country that a badly treated fracture will be almost a thing of the past. Mr. Girdlestone lays stress upon the very important fact that fractures when under treatment should be painless.

Very often the patient expects his broken bone to be painful, and is prepared for, and accepts, discomfort which, were it reported, would draw attention to the need for interference with the treatment. His practitioner likewise is tempted to administer analgesia rather than inspect the local condition, but pain should be regarded as a warning signal just as important in a fractured bone under treatment as in a patient suffering from cardiac disorder. In either case, if the pain is masked in any way and the warning overlooked disaster may result.

In recent times probably the greatest advances in medicine, so far as these concern the bulk of patients, have been along lines of improved efficiency in the recognition of the earliest manifestations of ill-health and in more effective attempts to ward off or cut short disease. Much more remains to be accomplished in both directions; but we may hope that the many hours of patient labour which the Curriculum Committee of the General Medical Council, the conference of representatives of universities and licensing bodies, and the Committee on Medical Education appointed by the British Medical Association have applied to reforming the student's curriculum will ultimately bring about an all-round improvement in early diagnosis and in preventive clinical practice—medical, surgical, and obstetrical. Then avoidable disasters will become fewer and fewer, and there will be less occasion to remember the words of King Edward VII, when speaking of a particular disease: "If preventable, why not prevented?"

MODERN METHODS IN BOTTLE-FEEDING

While it is true that the first consideration for a baby fed unnaturally is the individual study of his needs, there are certain principles which must be observed in the preparation of a milk mixture. In theory, cow's milk can be modified by such additions of water, carbohydrate, and fat as will make the percentage composition resemble that of human milk, and this method of infant feeding is the basis of the well-known Truby King dietary, which in this country is promulgated by the Mothercraft Training Society. Percentage feeding, however, overlooks the variation in the type of protein in human and in cow's milk: it is true that the latter has a total protein content two to three times as large as that of human milk, but the nature of the protein is quite different, and certain amino-acids are relatively deficient in cow's milk when compared with the human product. No one has ever produced scientific evidence that a moderate excess of protein in the diet does any harm, but protein deficiency will undoubtedly lead in the long run to slower growth, to a decreased resistance to infection, and possibly to other disorders less easily recognized. Dilute milk-and-water mixtures—that is, equal parts of each—present a risk of protein deficiency, and stronger mixtures are advocated by the majority of children's physicians in this country. These remarks are prompted by a recent paper by Dr. E. Fitzgerald¹ which was read before a conference in Dunedin, and

¹ *New Zealand Med. Journ.*, December, 1935, xxxiv, 388.

the expression of dissatisfaction with the Truby King dietary having been made in New Zealand it can perhaps be echoed in this country without raising a cry of iconoclasm. Indeed, in an editorial comment on Dr. Fitzgerald's paper a strong plea is made that the Plunket Society (which does in New Zealand very much the work which the Mothercraft Training Society does here) should reconsider its standard teaching and be prepared to modify it in the light of recent investigation and experience. It is apparently felt by practitioners in New Zealand that if they use modern methods of infant feeding recommended by authorities of world-wide repute they meet with antagonism from the Plunket Society and open hostility from the Plunket nurses, who apparently forget that the first duty of a nurse is to carry out the instructions of the doctor. In this country, too, practitioners have occasionally met with some degree of hostility from nurses and "nannies" trained in the strict Truby King school with regard to the strength of milk mixtures. The plea made in New Zealand for a reconsideration of this one aspect of the Truby King programme will certainly be supported by most children's specialists in Great Britain. So much valuable work is done by the Mothercraft Training Society in every other respect that it would be a pity if this question of bottle-feeding acted as a source of friction.

NEW DIGITS FOR OLD

A new digit to replace an old or damaged one would seem all to be desired, especially if the replacing digit could be sacrificed without appreciable disadvantage while the new digit would be of definite functional value. Such a condition of affairs would exist if a comparatively useless toe could be made to replace successfully a damaged finger. From time to time attempts have been made to bring about this replacement, and recently a report comes from Russia of a successful case.¹ The surgeon, Professor M. I. Kuslik of Leningrad, is to be congratulated on a fine effort. His patient, a girl aged 17, as the result of an accident while tobogganing, had an unsightly stump in place of her left index finger. The greater part of her second left toe was successfully transplanted on to the freshened stump of the index finger, the extensor tendons being first joined, while a plantar flap provided nourishment at the site of junction. The finger and toe were maintained in apposition by a plaster jacket for some five weeks, after which the plantar attachment of the toe was severed and the flexor tendons were united. The procedure must have called for much patience and perseverance on the part of the patient as well as the surgeon, but the result seems to have justified such expenditure, because photographs show the reconstructed index finger in use, and it both looks well and appears to be very serviceable. Professor Kuslik comments also upon the fact that the mental state of the patient was greatly improved; she had previously been much depressed by the appearance of the stump of her forefinger. Thus the new lamp in place of the old apparently carried none of the disadvantages which followed the exchange in the fairy-tale. Professor Kuslik's case is not the first of its kind, but appears to have been one of the most successful. Since 1897,

when Nicoladoni first suggested the practicability of the transference, there have been numerous reported efforts, and up to 1930 Professor Kuslik had been able to trace seventeen, two of which had been those of colleagues of his in Russia. From his review of previous attempts and his own experience the reporter of this successful case concludes that the transference is practicable and desirable in certain cases. He believes that the best toe to use is the second; that the flap should be a plantar one; that osseous, tendinous, and cutaneous suturing should not be along coincident lines; that periosteal cuffs should be fashioned and sutured over the line of bony apposition; and that plaster fixation should be used, since it not only assists union by effective immobilization, but helps the patient to endure the ordeal which the rather cramped position demands.

STERILIZATION IN SWITZERLAND

The canton of Vaud was the first community in Europe to legalize the sterilization of persons suffering from mental disorder and defect. Moreover, this legislation did no more than regularize a practice which already existed throughout a large part of Switzerland. Practical experience from Vaud¹ therefore appears to have some value as evidence for or against compulsory sterilization. Dr. H. Steck, in a survey of results, states that only incurable persons may be sterilized, and only if their offspring is bound to be tainted. The majority of the persons sterilized between 1919 and the end of 1934 were mentally defective women, and the figures for the last five years show in addition seven cases of women sterilized for schizophrenia (five after termination of pregnancy), one for manic-depressive psychosis, one for epilepsy, and two for congenital mental instability. Of the three males, one was sterilized for mental deficiency, and two were mental defectives who were castrated after conviction for sexual delinquency. During the five years ending with 1934, eighty-eight applications were made and forty-six were granted. To ensure that the law shall not be abused, the health authority of the canton is charged with the strict supervision of every case. Each application is accompanied by a medical certificate; two experts—a psychiatrist and a gynaecologist—make an examination, and the authority acts on their report at its discretion. In any event it has no power to order, but only to authorize, the operation. It always requires the consent of a parent or guardian and the written consent of the patient. For psychiatric reasons it does not approve a compulsory operation on a mental patient, and, when liberty depends on giving the consent, this is not often withheld. In investigating cases the experts construct a family tree with the help of the family doctor and the local health authorities. So far, the law has been administered with great caution and only in cases in which the heredity seemed hopelessly tainted. Dr. François Naville,² reviewing the results of the castration of 100 sexual delinquents and abnormals, reports excellent results: delinquency of every form has disappeared in nearly all cases; the patients can nearly always be set free to rehabilitate themselves; physical health is not impaired, and the nervous and mental

¹ *Arch. of Surg.*, January, 1936, p. 123.

¹ *Rev. Méd. de la Suisse Romande*, 1935, lv, 874.
² *Journ. de Méd. de Lyon*, 1935, vi, 711.