

tions in England and Wales are done before 5 years.<sup>6</sup> Nevertheless the circumcision rate of about 6% of all males is probably about the correct proportion in a Western country today.

- <sup>1</sup> Gee, W F, and Ansell, J S, *Pediatrics*, 1976, **58**, 824.
- <sup>2</sup> Apt, A, *Acta Medica Scandinavica*, 1965, **178**, 493.
- <sup>3</sup> Carne, S, *British Medical Journal*, 1956, **2**, 19.
- <sup>4</sup> Gairdner, D, *British Medical Journal*, 1949, **2**, 1433.
- <sup>5</sup> Kalcev, B, *Medical Officer*, 1964, **112**, 171.
- <sup>6</sup> DHSS, *Hospital In-Patient Enquiry*, 1975, Series MB4 No 5. London, HMSO, 1978.
- <sup>7</sup> Øster, J, *Archives of Disease in Childhood*, 1968, **43**, 200.
- <sup>8</sup> Aitken-Swan, J, and Baird, D, *British Journal of Cancer*, 1965, **19**, 217.
- <sup>9</sup> Terris, M, Wilson, F, and Nelson, J H, *American Journal of Obstetrics and Gynecology*, 1973, **117**, 1056.
- <sup>10</sup> Leiter, E, and Lefkowitz, A M, *New York State Journal of Medicine*, 1975, **75**, 1520.
- <sup>11</sup> Office of Population Censuses and Surveys, *Mortality Statistics: Cause*, 1975, Series DH 2 no 2. London, HMSO, 1977.
- <sup>12</sup> Leitch, I O W, *Australian Paediatric Journal*, 1970, **6**, 59.
- <sup>13</sup> Annunziato, D, and Goldblum, L M, *American Journal of Diseases of Children*, 1978, **132**, 1187.
- <sup>14</sup> Sussmann, S J, Schiller, R P, and Shashikumar, V L, *American Journal of Diseases of Children*, 1978, **132**, 1189.
- <sup>15</sup> Dagher, R, Selzer, M L, and Lapides, J, *Journal of Urology*, 1973, **110**, 79.
- <sup>16</sup> Gellis, S S, *American Journal of Diseases of Children*, 1978, **132**, 1168.

## Marriage matters

While marital dysfunction and breakdown are enormous problems, they are difficult to express in figures. About 250 000 people are divorced each year in Britain and upwards of 100 000 approach the marital agencies for help.<sup>1</sup> Add to this the large but unspecified numbers who present their marital distress in more covert ways and the problem becomes one which few in the helping professions can afford to ignore.

*Marriage Matters* is the ambiguous title of a recent Government document on marital disorder, which should be essential reading for every doctor.<sup>1</sup> It was prepared by a working party on marriage guidance set up at the suggestion of three major, independent, grant-aided organisations: the National Marriage Guidance Council, the Catholic Marriage Advisory Council, and the Institute of Marital Studies. The booklet lists the range of facilities available, tries to assess their adequacy, and suggests how they might be improved.

Several important questions are posed for doctors. Firstly, how far are medical practitioners, either specialists or family doctors, equipped to recognise marital problems, often covertly presented? Secondly, have they the understanding and skill to respond adequately? Thirdly, do they make sufficient use of local, perhaps non-medical resources when referral is necessary, and are they able to handle such referrals sensitively?

Underlying such questions is the fundamental one of the adequacy of doctors' training in fostering the right skills for dealing with human as opposed to medical problems. All might agree in principle that such training is desirable, but how is it best provided, when, and by whom? Today most medical students might recognise functional or psychogenic causes of illness but the recognition of emotional factors is a far cry from adequately responding to such patients. Those concerned in training for such work—be they psychoanalysts, social workers, or counsellors—are convinced that the necessary skills can be acquired only in the field through supervised work. This is true whether the problem is a general difficulty in relationships or a more specifically marital one.

Traditional medical education is poorly suited to meet this

need. Teaching medical students through participation in psychotherapy, as at University College Hospital in London, is the exception. Innovative curricula, such as that at Southampton, bring the student into contact with family medicine from the start, but these promising attempts at providing appropriate opportunities for learning are far too rare.

If he has not had relevant training, what can a doctor do when he recognises signs of marital discord? He may use his intuitive sense of human relationships—though this may have been blunted by years of clinical work. He may give common-sense advice, but this is seldom enough when marriage or individuals have run into serious difficulties. More often, sensing that a problem is beyond his capacity to cope, he will, like the patient, simply deny it. How many relatively useless prescriptions are the price paid for such collusive avoidance of the real emotional issue?

Nowhere are these problems more pressing than for the general practitioner, who in the end has the patient "for better or for worse." Possibly future general practitioners will be better trained for work in marital troubles, but in the meantime those wishing to improve their skills have limited possibilities. The now well-established Balint groups, with their psychotherapist leaders and informal case discussions, help doctors to recognise the emotional and interpersonal processes affecting their consultations. Brook<sup>2</sup> has reported a different approach, in which the psychotherapist is taken into the surgery to provide help on the spot to the doctor through discussion of difficult cases and, at times, consultation with the patient directly. Such resources, however, are available only to a few doctors. An alternative suggested by the working party is co-operation between general practitioners and marriage guidance counsellors. Marriage guidance resources are little used by general practitioners, though a few practices have tried an attachment of a counsellor. One important cause of the underuse of voluntary marriage guidance workers may be their unprofessional image—which often does poor justice to their present-day training and skills. Both wider recognition of their status and further improvement in training resources might be fostered by a larger Government investment in the marital agencies. If the doctor can overcome his suspicion of the counsellor he might find an unexpected source of professional support. This, however, puts a big responsibility on the marriage guidance councils to ensure that the doctor is not let down.

<sup>1</sup> Home Office, *Marriage Matters. A Consultative Document by the Working Party on Marriage Guidance*. London, HMSO, 1979.

<sup>2</sup> Brook, A, *Health Trends*, 1978, **10**, 37.

## Influenza: naught for our comfort

Few viruses have been studied so intensively as influenza, and its structure and replication are fast being explained in terms of their detailed chemistry. Yet paradoxically we have no satisfactory vaccine, no effective chemotherapy, and apparently little in the way of preventive hygiene to stop an epidemic in its tracks. Furthermore, the disease caused by smallpox virus, of which our knowledge is much less extensive, has been eradicated, and this with the aid of a discovery made nearly 200 years ago.

The explanation lies in the nature of the influenza virus.

One-third of the recent *British Medical Bulletin* on influenza<sup>1</sup> is on this aspect of the virus, including two complete articles on the chemistry of one surface component alone. Admittedly, this is the haemagglutinin, a glycoprotein which largely determines the pathogenicity of the virus. Nevertheless, it is now a far cry from the days when a distinguished virologist could write that "... what viruses do and how they do it is very much more important than what they are." Not surprisingly, what viruses are goes a long way to explaining what they do, and influenza virus is no exception. Its behaviour has for long puzzled virologists. The more or less sudden appearance of major new variants every few years seemed to have no reasonable genetic or biological explanation, even though it was accompanied by a more intelligible and less abrupt antigenic change of surface characters. The phenomenon of genetic recombination in influenza had certainly been observed in the laboratory in cells infected simultaneously with two strains of the virus.<sup>2</sup> The puzzle was that the recombination rate was embarrassingly high compared with that of other viruses, and the ease with which a reassortment of genetic factors could occur seemed almost too good to be true.

Two decades of intensive work have done much to explain these features. Genetically, the influenza virus is best considered as a set of eight little RNA viruses—that is to say, eight pieces of RNA each coding for a peptide. These RNA moieties have some independence of expression within the cell—as has been known for years from the work, for example, of Scholtissek and Rott<sup>3</sup> on avian influenza<sup>4</sup> virus. Nevertheless, the RNA moieties are not independently viable, and they must work as a team, requiring each one of the eight members. This behaviour contrasts with, for example, mumps or measles or even a plant virus such as tobacco mosaic virus. All of these are, like influenza, RNA viruses, but the RNA behaves essentially as one large genetic and biochemical unit. The relative independence of action enjoyed by the eight little viruses which make up influenza means that, in a cell infected with two different strains of influenza (with two "teams" of eight in the same cell at one time), a reassortment of the players can occur. This process can be followed by observing and identifying, in particular, the haemagglutinin (H) and also the neuraminidase (N), both of them surface proteins. When recombination occurs, strains of influenza with differing H and N components "swap" with each other—or, to continue the terminology of the football field, transfer one or more players.

The World Health Organisation has proposed a nomenclature for the subtypes of H and N proteins, and there are now sixteen H and ten N subtypes known, making possible 160 combinations. Of these subtypes, five H and two N have been found in strains isolated from man, two of each from pigs, and two of each from horses. Interestingly, the largest variety is found in birds, especially domestic poultry and wild ducks. Several subtypes of influenza A may be circulating in the avian fauna of a single piece of water, and there may be two or even more subtypes infecting one duck at the same time.<sup>5, 6</sup>

The sudden emergence of an influenza virus with a new H or N protein subtype (or both) on its surface demands an explanation, and the answer seems likely to be recombination of an existing strain in a duck, perhaps in a pig, or even in a horse. Direct transfer from an animal reservoir to man is another possibility, and the persistence of "old" strains in a reservoir of ducks or pigs could explain otherwise puzzling observations such as the reappearance of swine influenza (Hswl) in man and the recent emergence from retirement of

an old combination such as H1N1 after 30 years. Though H1N1 has not been found contemporaneously in ducks, Shortridge<sup>7</sup> has recently reported the presence of H2N2 (absent from man for 10 years) in domestic ducks from southern China, and it would not be surprising if there were more influenzas, new and old, still to emerge from that country—where the ducks are said to outnumber the Chinese.

For years now the unpredictability of the major changes has combined with the steady drift of surface antigens within an H or N subtype to make influenza the despair of vaccine manufacturers. Their problems in trying to keep pace with new strains are all too familiar. Moreover, a recent publication of the results of a detailed study at a boys' boarding school<sup>8</sup> suggests that those who were vaccinated were little better off (perhaps worse) after their first postvaccination encounter with the strain concerned. Once a new major strain difference ("shift") occurred they needed a completely fresh vaccine anyway. Improvement may, however, be possible through better ways of inactivating the virus or better ways of using adjuvants; and live vaccines may one day come into their own. Nevertheless, the prevailing mood is clearly one of qualified pessimism. So far as specific chemotherapy is concerned, the various compounds tried in hope have not yielded results that stand comparison with their counterparts in bacteriology. The cyclic primary amines of the amantadine series have a significant inhibitory effect, but in practical terms their use is limited by the need to give them prophylactically and the possibility of development of drug-resistant strains.

All these aspects are discussed in the *British Medical Bulletin*<sup>1</sup> issue on influenza. On reflection, perhaps we have one ground for encouragement: we can at least rest assured that, if the stalemate over influenza continues, it will not be because of untried moves.

<sup>1</sup> *British Medical Bulletin*, 1979, **35**, 1. (Published by the Medical Department, The British Council, 65, Davies Street, London W1Y 2AA.)

<sup>2</sup> Burnet, F M, and Lind, P E, *Australian Journal of Experimental Biology and Medicine*, 1952, **30**, 469.

<sup>3</sup> Scholtissek, C, and Rott, R, *Virology*, 1964, **22**, 169.

<sup>4</sup> Schäfer, W, *Zeitschrift für Naturforschung*, 1955, **10b**, 81.

<sup>5</sup> Laver, W G, and Webster, R G, *British Medical Bulletin*, 1979, **35**, 29.

<sup>6</sup> Easterday, B C, in *The Influenza Viruses and Influenza*, ed E D Kilbourne, p 449. New York and London, 1975.

<sup>7</sup> Shortridge, K F, *Lancet*, 1979, **1**, 439.

<sup>8</sup> Hoskins, T W, *et al*, *Lancet*, 1979, **1**, 33.

## Premature rupture of the membranes

Premature rupture of the membranes is an inappropriate and ill-defined term. The phrase is commonly applied to any rupture of the membranes at any time before the onset of labour, regardless of the length of gestation. By this definition it occurs in 6% to 12% of pregnancies, but most of the babies are neither "premature" in terms of gestational age nor of low birth weight. For practical purposes a useful distinction may be drawn between rupture of the membranes occurring "prelabour" and "preterm".

Labour rapidly succeeds rupture of the membranes in most instances, but the latent period tends to be longer in patients further from term. In a prospective study<sup>1</sup> of 1896 women with prelabour rupture of the membranes, labour ensued within 24 hours in 68% when the infant was mature (> 2500 g) and in 42% when the infant was premature (1000-2500 g). By