

with a number of potentially lethal complications of liver failure. The best known and most feared is bleeding, the causes of which are complex but include decreased synthesis of clotting factors, thrombocytopenia and probably abnormal platelet function, intravascular coagulation (perhaps less important than originally suspected), and fragility of blood vessels. The frequency of haemorrhagic oesophagitis and gastritis in fatal cases has led J. Caroli and his colleagues to advocate the routine use of alkalis in treatment. Other threats to life include sepsis, especially pulmonary infections, endotoxaemia, hypoglycaemia, renal failure, and cerebral oedema. In fact, surprisingly few patients seem to die from liver cell necrosis alone—17 of 105 deaths analysed by I. M. Murray-Lyon—and for them at present no treatment is likely to help, though transplantation might be feasible in the future. At the other end of the spectrum are patients who will recover from coma without active intervention, though they will still need skilled and intensive care. In between are the group who will require some form of artificial support until natural regeneration restores liver function. The problem is how to define these groups, and various means are being explored for assessing the liver's regenerative capacity. For example, the presence of α -fetoprotein may indicate recovery of liver cells,³ while early liver biopsy (apparently quite safe in spite of the bleeding tendency) will allow calculation of the "liver cell mass," a value of 40% being regarded as critical.⁴

Haemodialysis was early found to be ineffective in the treatment of liver failure, and this led to attempts to develop other methods of haemoperfusion which would remove not only water-soluble substances but compounds of larger molecular size which might be responsible for the encephalopathy. Uncharged exchange resins such as Amberlite XAD 2 are capable of removing protein-bound compounds such as drugs, as well as bile acids and other lipid-soluble substances. In contact with blood, however, they cause considerable platelet loss, and this is clearly unacceptable in patients with liver failure. Activated charcoal coated with a biocompatible polymer appears to overcome this problem, as well as preventing charcoal emboli, which was a problem with the early columns, but there is still a small drop in platelet count during haemoperfusion. B. G. Gazzard reported that 17 of 37 patients in the most severe (grade IV)⁵ coma treated with the charcoal column recovered, though there was no improvement in the conscious state until at least 18 hours after haemoperfusion. The column effectively removed bile acids, short-chained free fatty acids and aminoacids but not ammonia or conjugated bilirubin. Recovery was complicated by severe cholestasis, and further development of coated resins or the use of affinity chromatography,⁶ in which an agarose-albumin gel has been devised for the treatment of severe neonatal jaundice, may prove of greater value in removing higher molecular weight substances.

There is now an urgent need to evaluate the place of haemoperfusion in liver failure. While a priori any improvement in mortality would appear to justify a particular form of treatment, interpretation of results in the past has been bedevilled by spontaneous variations in the severity of the illness in different centres, differences in aetiology (failure due to hepatitis has a somewhat better outlook than that associated with halothane), and the lack of prognostic indices suitable for case selection. As J. W. Mosley pointed out, even publicity associated with a new treatment may affect the results, while parallel developments such as intensive care and monitoring ought to be taken into account. In Britain the number of patients with liver failure treated by any one clinician is likely to be small, so that evaluation might best be confined to a few

centres with an agreed protocol or, if thought desirable, on the basis of a randomized controlled trial.

¹ Gazzard, B. G., *et al.*, *Lancet*, 1974, 1, 1301.

² *Artificial Support Systems for Acute Hepatic Failure*. To be published by Pitman Medical.

³ Kew, M. C., Purves, L. R., and Bersohn, I., *Gut*, 1973, 14, 939.

⁴ Scotto, J., *et al.*, *Gut*, 1973, 14, 927.

⁵ Trey, C., Burns, D. G., and Saunders, S. J., *New England Journal of Medicine*, 1966, 274, 473.

⁶ Plotz, P. H., *et al.*, *Journal of Clinical Investigation*, 1974, 53, 786.

Experts and Child Abuse

In the last few months before Maria Colwell was beaten to death by her stepfather her pitiful appearance became a talking point among neighbours. They reported incidents to the N.S.P.C.C., several times; they contacted the social services department, and the police were called in; and Maria's schoolteachers also asked for help from the education welfare department. Yet the social worker responsible for the child, the inspector from the N.S.P.C.C., and her general practitioner all examined her and found no undue cause for alarm. None of them, it seems, knew all the facts, and the parents managed to conceal the worst of the child's sufferings from the authorities.

The committee of inquiry¹ repeated the familiar charge that society as a whole must bear the ultimate blame—but surely in this case society, in the shape of neighbours and the school, did its best; it was the professionals who failed. Maria Colwell's death was not unique—other children have died in similar circumstances: so what are the lessons to be learned?

One change that has already occurred is that the courts and social services no longer give as much emphasis to the importance of the blood-tie. Maria was returned to her parents without any serious opposition from the social services because they believed—probably correctly at the time—that a request to a court by a mother for the return of her child from foster-parents was unlikely to be refused unless she was demonstrably an "unfit person." Since then legal attitudes have changed, and judges are now paying more attention to the interests of the child and less to the "rights" of a parent. The Secretary of State for Social Services has said that the Government will introduce a Children's Bill in the autumn concerning adoption, guardianship, and fostering, and one of the proposals is that children at the centre of disputes about custody and control should have separate legal representation. This is a necessary reform: with so many cases coming before the courts the child's interests are often overlooked simply because no-one has drawn attention to them.

In the current political situation, however, promises of future legislation carry little certainty, and furthermore many cases of battering occur in families which have had no legal disputes about custody. The solution offered by the committee of inquiry and endorsed by Mrs. Castle is improvement of communications within and among the agencies and departments which encounter children at risk. Certainly the inquiry showed that information about Maria was not passed on from one department to another, and this led to decisions being taken on inadequate data. Possibly communications will be improved by the area review committees now being set up throughout the country, which will have the task of coordinat-

ing the agencies responsible for these children. The problem cannot, however, be solved by administrative changes alone.

As Dr. Selwyn Smith and Miss Ruth Hanson emphasize in their article at p. 666 this week, day-to-day responsibility for children known to be at risk is nowadays generally in the hands of social workers—the medical profession seems largely to have abdicated its responsibility. Social work is a new and young profession, and many social workers are recent entrants, lacking both experience and confidence. Surely the outstanding lesson from Maria Colwell's death is that it is only too easy for an error in assessment to be made by an inexperienced observer, in whatever profession.

No-one expects infallible judgement; but one of the main criticisms made by the committee of inquiry was the reluctance shown by the social worker to ask for specialist help. "If there is reluctance to seek a second opinion," says the report, "then clients will suffer, as Maria did. For if ever there was a case of urgent necessity to diagnose correctly . . . this was it." While undoubtedly many social workers are overburdened with work, it is also true that many who are relatively inexperienced are given considerable freedom of judgement. Add to this the tendency until very recently for any sort of specialization to be discouraged and it is not surprising that mistakes have been made. Assessment of the situation when child-abuse is suspected is one of the most difficult problems for a doctor or a social worker. For this reason Dr. Selwyn Smith has suggested that specialist teams should be set up in every hospital region, to whom all suspected cases could be referred. These teams might include a psychiatrist (or two half-time psychiatrists), a senior social worker, and a paediatrician, and they could be called in whenever child-abuse was suspected. If such a system were combined with the advice in the Tunbridge Wells Memorandum²—that in every case of suspected child-abuse the child should be admitted at once to hospital for assessment—then there might be a real chance of reducing the deaths and disability caused by repeated assaults.

¹ *Report of the Committee of Inquiry into the care and supervision provided in relation to Maria Colwell.* London, H.M.S.O., 1974.

² *British Medical Journal*, 1973, 4, 96.

Choice of Contraceptives

Three or four years ago it seemed that the millennium in contraception was just around the corner. Some of the new approaches in immunization, in prevention of implantation, and in the control of the function of the corpus luteum indicated that harmless, efficient contraception would soon be available. That promise has not been fulfilled. Instead there has been a number of unspectacular but useful advances in the established techniques. W.H.O. has created a worldwide network of task forces working on contraception, and some progress will surely come from these and the other agencies; but their attention is being directed at means of controlling the population explosion—a somewhat different problem from that concerning a doctor advising his patients in Britain.

It is surprisingly difficult to get comprehensive data about contraceptive practice in Britain today. A large proportion of couples use contraception only sporadically or not at all, and others, almost as inaccessible to survey, use coitus interruptus or the rhythm method. Of course many family planning clinics publish the methods used by their clients.

Such publications might lead one to suppose that the use of oral contraceptives and intrauterine contraceptive devices far outweighs all other means.¹ But clinic populations reflect only the patterns imposed on them and, until 1970, 37% of the couples using contraceptives in Britain² used condoms, and rhythm or withdrawal accounted for a further 33%. These groups are now shifting to other methods and together with the increasing numbers of other couples starting to use contraceptives they need advice about the choice.

Though the use of spermicides and barrier methods such as diaphragms and condoms is declining there is still sufficient real need for these methods to have induced the Family Planning Association in 1972 to establish a sales organization which distributes its products mainly through paramedical channels but also uses commercial outlets such as pharmacies and vending machines. Few doctors advising their patients about contraception would today head the list with condoms, but there are special circumstances where a strong case can be made in their favour. The sheath is a method of contraception under male control, and there are situations where (in spite of present sensitivity about male chauvinism) this is an advantage. A case in point is that of the honeymoon and the first few months of married life.

Prostaglandins can be struck off the list of contraceptives. At one time it seemed likely that a tablet of prostaglandin E₂ or F_{2α} inserted into the vagina at the end of the menstrual cycle would precipitate menstruation by provoking involution of the corpus luteum.³ It is now evident that the luteolytic effect of prostaglandin is at best occasional and unreliable.⁴ There is no question that prostaglandins inserted into the uterus cause powerful uterine contractions and that they are a useful compound in the induction of abortion, but this hardly qualifies for contraception.

Intrauterine contraceptive devices had a period in the doldrums when their relative inefficiency and the high incidence of untoward effects such as menorrhagia and uterine perforation became apparent. Several new developments make them worthy of reconsideration. It is now clear that the efficacy of the device is dependent on the area of contact between it and the endometrium. New forms such as a shield-shaped device are designed to ensure a larger area of contact and appear to be more effective in preventing pregnancy. The notion of incorporating various medicaments such as long-acting progestational steroids in the composition of intrauterine devices is not likely to get beyond its present experimental stage for a long time, but another development is having considerable impact on contraceptive practice. This arises from the discovery that adding copper to an intrauterine device enhances its contraceptive effect.⁵ Clinical trials going on at present will help to determine the most suitable shape, the copper being added as a wire wound round the device. Regardless of shape, copper intrauterine devices are basically made of polyethylene plastic to which barium sulphate is added to make them radio-opaque. With a pregnancy rate of 2-3 per 100 women years the copper intrauterine device is not nearly as reliable as the best oral contraceptive pills, but it should be given a high priority for those women for whom such pills are contraindicated or for whom a very small risk of pregnancy is acceptable.

The oral contraceptive pill is probably the most suitable contraceptive to advise, particularly since after the recommendations of the Committee on Safety of Drugs in 1969 the oestrogen content of most of the preparations on the British market has been kept at 50 micrograms or less. One consequence of this has been virtually to remove the sequential