books or attending courses. Because violent parents have themselves experienced parental violence and hostility (5) they lack the basic requirements for good parenthood; namely a stable and mature personality, reasonable ability to control their impulses and above all a good parenthood model to follow. These requirements are non-teachable, and I do not know of any course, however intensive it may be, or any book, however well-written, which can teach these qualities.

It seems that there is very little that can be achieved by 'education for parenthood.' It may help the basically good parents to be better parents, but it may make severely disturbed parents feel more inadequate, and more guilty, and so they may become more violent towards their children.

I wonder whether the £1 million available would be better spent on the education of the professional people working in this field rather than on the too ambitious and unrealistic task of trying to educate severely disturbed and violent parents into becoming loving, caring and kind parents.

WAGUIH R. GUIRGUIS
The Institute of Family Psychiatry,
23 Henley Road,
Ipswich, Suffolk

References

(1) D.H.S.S. (1978) *Violence to Children: A Response to the First Report from the Select Committee on Violence in the Family* (Session 1976–77). London: Her Majesty's Stationary Office.
(2) PAULSON, M. J. & BLAKE, P. R. (1969) The physically abused child: a focus on prevention. *Child Welfare*, **48**, 86–95.
(3) STEELE, B. E. & POLLOCK, C. B. (1968) A psychiatric study of parents who abuse infants and small children. In *The Battered Child* (eds. R. E. Helfer and C. H. Kempe), pp 103–47. Chicago: University Press.
(4) KEMPE, C. H. (1969) The battered child and the hospital. *Hospital Practice*, **4**, 44–57.
(5) SCOTT, P. D. (1973) Fatal battered baby cases. *Medicine, Science and the Law*, **13**, 3, 197–206.

CONTINUOUS APOMORPHINE INFUSION IN ACUTE DYSTONIC REACTIONS TO NEUROLEPTICS

DEAR SIR,

Acute dystonic ('neurodysleptic') reactions (ADR) are a not infrequent side-effect of neuroleptic drugs. In hypersensitive subjects they may occur even after a single dose. Anticholinergic drugs (e.g. orphenadrine, procyclidine, diphenhydramine, diazepam, barbiturates and thiocolchicoside) are commonly used to correct these adverse reactions. The beneficial effect of apomorphine given intramuscularly is also known (1). However, administered in this way, apomorphine has a brief duration of activity (less than one hour): therefore, repeated injections are frequently necessary, and an adequate control of the efficacious dose without side-effects (mainly vomiting) is difficult.

Our previous experience indicates the advantages of intravenous administration of apomorphine: in this way the control of the emetic effects of this drug is far more easy even in individuals not protected by neuroleptics (2).

We administered apomorphine HCl in saline by continuous intravenous infusion in 8 subjects (6 females, 2 males, 13 to 35 years old) affected by ADR. ADR were due to metoclopramide (3) in 3 cases, chloropromazine plus trifluperidol in 2 cases, trifluperidol, haloperidol and fluphenazine each in 1 case. Efficacious doses in controlling ADR ranged from a minimum of 18 μg/min (0.4 μg/kg/min) for 3 hours (total: 3.2 mg) in a female patient who developed ADR after 20 mg metoclopramide *per os*, till a maximum mean dose of 70 μg/min (1.7 μg/kg/min) for 12 hours (total 50 mg) in a female who developed ADR after treatment with trifluperidol 2 mg/day plus orphenadrine 80 mg/day parenterally for 3 days (in this case up to 250 μg/min of apomorphine were administered initially for 30 consecutive minutes, without side-effects). The mean dose in the 8 patients was 35 μg/min for 260 minutes (mean total: 8 4 mg).

This way of treatment promptly and fully controlled ADR in all cases. No significant changes in blood pressure and heart rate were noted even during 250 μg/min of apomorphine in the above said patient, nor nausea or vomiting occurred, the only side-effect being a slight degree of sleepiness.

We think this may represent a new simple and safe way to treat acute dystonic reactions to neuroleptics.

CARLO CIANCHETTI
CARMELO MASALA
ALFONSO MANGONI
Istituto di Clinica Neurologica,
Università di Cagliari,
Cagliari, Sardegna, Italy

References

(1) GESSA, R., TAGLIAMONTE, A. & GESSA, G. L. (1972) *Lancet*, *ii*, 981.
(2) CIANCHETTI, C., MASALA, C., CORSINI, G. U., MANGONI, A. & GESSA, G. L. (1978) *Life Sciences*, in press.
(3) Concerning metoclopramide as a neuroleptic, see MANGONI, A., CORSINI, G. U., PICCARDI, M. P. & GESSA, G. L. (1975) *Neuropharmacology*, **14**, 333–5.