Brit. J. Psychiat. (1978), **132**, 205–209

Correspondence

Letters for publication in the Correspondence columns should not ordinarily be more than 500 words and should be addressed to:
The Editor, British Journal of Psychiatry, 17 Belgrave Square, London SW1X 8PG

PRENATAL HORMONES AND IQ: NEED FOR SIBLING CONTROLS

DEAR SIR,

In her article on 'Prenatal Progesterone and Educational Attainment' (*Journal*, November 1976, **129**, pp 438–42), Dr Dalton concluded that progesterone administered to pregnant women to reduce toxaemic symptoms '. . . not only prevents the development of toxaemia, and eliminates the diminished intelligence in the child [associated with toxaemic pregnancies] but actually enhances the intelligence . . .'. In her comparison of progesterone, normal control and toxaemic control groups of children, Dalton found significant differences among the groups (as young adults) in the number of 'O' level passes ($P < 0{\cdot}02$) and 'A' level passes ($P < 0{\cdot}05$) received. In the light of Barker and Edwards' (1967) finding that children from toxaemic pregnancies may have impaired intellectual abilities, significant differences among the three groups are hardly surprising. Any claim that prenatal exposure to progesterone actually 'enhances' intelligence must therefore be based on a comparison between the progesterone and normal control groups. Barker and Edwards concluded that '. . . data relating small differences in performance to obstetric events can be interpreted only against a control population matched for similar hereditary, prenatal and postnatal determinants. Therefore, unless the differences are large, sibs provide the only possible controls.' Even kwashiorkor as a *cause* of lowered IQ required sib controls (Birch *et al*, 1971).

Money and Lewis (1966), Baker and Ehrhardt (1974) and McGuire and Omenn (1975) have used sibling controls (10, 27 and 22 respectively) in their examinations of the effects of foetal androgens on intellectual development of patients with the adrenogenital syndrome. These investigations have demonstrated that although foetally androgenized patients had IQ scores significantly elevated above the expected population mean, their scores were not significantly different from those of their unaffected siblings.

In addition, Reinisch (1976) has compared the IQ scores of subjects prenatally exposed to various proportions of synthetic progestins and/or oestrogen with those of their untreated siblings. Although the mean IQ scores of the subjects were again significantly higher than the expected population mean, IQ appeared to be independent of dosage and treatment for the three specific hormone treatments. Reinisch concluded '. . . that the best predictor for the later intelligence of treated subjects was the intelligence of the subjects' untreated siblings'.

The studies cited demonstrate the importance of sibling control groups in order to control for genetic contributors to intellectual abilities. Although they suggest that prenatal exposure to androgens is not directly related to intellectual development, Reinisch has pointed out the possibility that hormones may affect achievement indirectly through effects on personality. Given Dalton's omission of sibling controls, any conclusion that prenatal exposure to progesterone actually enhances educational attainment is somewhat premature, and may even be dangerous. At least one hormone administered prenatally to prevent threatened abortion, DES (diethylstilbestrol), has been associated with vaginal cancer in female offspring many years later (Herbst *et al*, 1971).

SUSAN RESNICK

IRVING I. GOTTESMAN

Department of Psychology,
University of Minnesota,
Elliott Hall,
75 East River Road,
Minneapolis, Minnesota 55455

References

BAKER, S. W. & EHRHARDT, A. A. (1974) Prenatal androgen, intelligence and cognitive sex differences. In *Sex Differences in Behavior* (eds R. C. Friedman, R. N. Richart and R. L. Van de Wiele), pp 53–84. New York: Wiley.

BARKER, D. J. P. & EDWARDS, J. H. (1967) Obstetric complications and school performances. *British Medical Journal, ii*, 695–9.

BIRCH, H. G., PIÑEIRO, C., ALCALDE, E., TOCA, T. & CRAVIOTO, J. (1971) Relation of kwashiorkor in early childhood and intelligence at school age. *Pediatric Research*, 5, 579–85.

DALTON, K. (1976) Prenatal progesterone and educational attainment. *British Journal of Psychiatry*, **129**, 438–42.

HERBST, A. L., ULFELDER, H. & POSKANZER, D. C. (1971) Adenocarcinoma of the vagina: association of maternal stilbestrol therapy with tumor appearance in young women. *New England Journal of Medicine*, **284**, 878–81.

MCGUIRE, L. S. & OMENN, G. S. (1975) Congenital adrenal hyperplasia. I. Family studies of IQ. *Behavior Genetics*, **5**, 165–73.

MONEY, J. & LEWIS, V. (1966) IQ, genetics and accelerated growth: adrenogenital syndrome. *Bulletin of Johns Hopkins Hospital*, **118**, 365–73.

REINISCH, J. M. (1976) Effects of prenatal hormone exposure on physical and psychological development in humans and animals: with a note on the state of the field. In *Hormones, Behavior, and Psychopathology* (ed. E. J. Sachar), pp 69–94. New York: Raven Press.

TRIAL OF 'PIRACETAM' IN CHRONIC SCHIZOPHRENIA

DEAR SIR,

A double-blind cross-over trial of Piracetam (2 = pyrrolidone acetamide) *v* placebo has recently been completed on sixteen male and eleven female chronic schizophrenic in-patients aged 20 to 65 years, most of whom were severely disabled despite medication and sustained efforts at rehabilitation. The trial was stimulated by work suggesting that Piracetam improves interhemispheric transfer of visual information across the corpus callosum (Buresova and Bures, 1976) and reports of impairment of transfer of information across the corpus callosum in chronic schizophrenia (Rosenthal and Bigelow, 1972; Beaumont and Dimond, 1973). The drug has been used in a variety of psychiatric conditions on the continent, especially in chronic organic states where memory is impaired (Abuzzahab *et al*, 1973; Dencker and Lindberg, 1977). The dosage was 1,600 mg of Piracetam three times a day for four weeks, in addition to the long-term psychotropic medication the patients were already receiving. Assessment of response was by Wing's Symptom and Behaviour Rating Scales.

The drug failed to produce any significant change in either symptoms or behaviour in this group of patients. There was no apparent effect on blood chemistry, nor were any side-effects detected. A detailed report is available on request.

I. G. PRYCE
CHARLES GRAY

Whitchurch Hospital,
Whitchurch, Cardiff CF4 7XB

References

ABUZZAHAB, F. S., MERWIN, G. E. & SHERMAN, M. C. (1973) A controlled investigation of Piracetam versus placebo on the memory of geriatric patients (abstract). *The Pharmacologist*, **15**, 456 (abstract).

BEAUMONT, J. G. & DIMOND, S. J. (1973) Brain disconnection and schizophrenia. *British Journal of Psychiatry*, **123**, 661–2.

BURESOVA, O. & BURES, J. (1976) Piracetam-induced facilitation of interhemispheric transfer of visual information in rat. *Psychopharmacologia (Berl.)*, **46**, 93–102.

DENCKER, S. J. & LINDBERG, D. (1977) A controlled double-blind study of Piracetam in the treatment of senile dementia. *Nordisk Psykiatrisk Tidsskrift*, **31**, 48–52.

ROSENTHAL, R. & BIGELOW, L. B. (1972) Quantitative brain measurements in chronic schizophrenia. *British Journal of Psychiatry*, **121**, 259–64.

SPECIALIST NURSES

DEAR SIR,

It was with dismay and concern that I read Professor Goldberg's frivolous review of *Nursing in Behavioural Psychotherapy: An Advanced Clinical Role for Nurses* (*Journal*, September 1977 **131**, p 320). It is unfortunate that so eminent a professor should treat an important development as a joke. Not only is it reactionary and prejudiced but it does not attempt to make a constructive critical appraisal of well researched work in which nurses and patients are so closely involved. The attitude adopted by Professor Goldberg takes no cognisance of a successful attempt to help sick people more quickly than might otherwise be the case. This extension of the nurse's role is but one of a series of advances being made by nurses in the clinical field and should be treated with the courtesy it deserves.

EILEEN SKELLERN

Chief Nursing Officer,
The Bethlem Royal Hospital,
and The Maudsley Hospital,
Denmark Hill,
London SE5 8AZ

DEAR SIR,

It is a pity that Professor Goldberg should utilize his obviously fertile imagination to do gross injustice to what is an important development for nurses, as well as a potentially important therapeutic advance for psychiatric treatment in this country.

Psychiatric nurse therapists do not wish to 'fly the aeroplane' but merely to ease the burden of the pilot by providing specialist intervention for patients who might, through lack of time or other resources, go