



FIG. 1.—Shows the patient's mood schematically, his urine cyclic AMP, and antidiuretic hormone excretion and urine volume.

seen on days 1, 2 and 3, becoming more erratic on day 4. This patient is already known to show similar changes in water balance and electrolytes as well as in many other parameters (Jenner, Gjessing, Cox, Davis-Jones, Hullin and Hanna (1967)). The changes in water balance seem to be due at least in part to changes in vasopressin output by the pituitary. Fig. 1 also shows the patient's 48 hour cycle of urine volume changes and vasopressin excretion (by method of Bisset, 1962) consistent with this view. It is believed that the action of vasopressin on toad bladder permeability *in vitro* is mediated by cyclic AMP; certainly the mammalian kidney contains a vasopressin-responsive adenylyl cyclase (see Robison, Butcher, and Sutherland (1971) for a summary of the evidence on these points). It seems likely, therefore, that the changes in cyclic AMP which we find are secondary to hormone changes, possibly resulting from a pituitary or hypothalamic defect which may be the primary origin of the syndrome and of the other cyclical changes which have been found in the

patient. If this is so, it is entirely conceivable that other defects may be possible which could result in mood changes without affecting cyclic AMP excretion, and hence that cyclic AMP variation is not a necessary or even a frequent accompaniment of manic-depressive illness.

It is nevertheless also of some interest that in this patient lithium is very effective (Hanna, Jenner, Pearson, Sampson and Thompson, 1972), and also that we have shown that lithium inhibits the action of vasopressin on the kidney as well as the effect of vasopressin and of cyclic AMP on the toad bladder's transport of water (Harris and Jenner, 1972).

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BEHAVIOR MODIFICATION IN MENTAL RETARDATION, BY W. I. GARDNER

DEAR SIR,

I would like to bring to the attention of your

readers that W. I. Gardner's important book *Behavior Modification in Mental Retardation*, reviewed by Dr. Wollen in the April *Journal* (vol. 120, p. 466), has now been published by London University Press. It costs £5.60.

It believe that Dr. Gardner's book is a most important contribution to the care of the mentally retarded, for the following reasons:

(i) It explains most lucidly and concisely the principles of behaviour analysis and modification by operant conditioning.

(ii) It describes briefly but clearly the essential components of this approach to the care of the retarded:

(a) The need to specify with great precision the behaviours that might usefully be reduced in frequency or intensity because they are disruptive or aversive to others, and the useful or appropriate behaviours which might at the same time be increased in frequency.

(b) The need to assess the effectiveness of any programme to modify behaviours by measuring very systematically whether or not the programme is followed by changes in frequency of the target behaviours—such changes may be missed in the absence of frequency counts.

(c) The need, when programmes prove ineffective, to re-examine and replan the programme. The approach is clearly inconsistent with the time-honoured practice of labelling patients, when programmes appear ineffective, as 'vegetative idiots', 'hyperactive imbeciles', 'gross homosexuals', or as persons 'who cannot benefit from training or education'.

(iii) It gives many clinical examples both of behaviour analysis and programmes of rehabilitation. These have been well chosen in that they occur commonly inside and outside of residential facilities for the retarded.

(iv) It includes information on all ranges of retardation including the most profoundly retarded and severely behaviour-disordered for whom so much exciting work waits to be undertaken.

(v) It can be used by parents, teachers, nurses, social workers, psychiatrists, as well as by psychologists.

(v) It is well annotated and the bibliography is a masterly collection of most of the best work done in this area up to the time of publication.

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A STUDY OF IMIPRAMINE IN THE TREATMENT OF PHOBIAS

DEAR SIR,

The recent correspondence from Freed and his co-workers (*Journal*, May 1972, p. 590-1) on the treatment of obsessional neurosis with tricyclic anti-depressant drugs prompts me to publish my own experience in the treatment of phobic neurosis (I.C.D. 300.2) by this means. Impressed by the results of Kelly and his co-workers (1), and yet confused by the practice they had adopted of using mixtures of drugs in the treatment of their patients, I wished to gain some information of the effect of one drug alone in this condition.

Accordingly most of the patients presenting at my clinics whom I diagnosed as suffering from phobic neuroses were treated with imipramine alone for a period of at least eight weeks. During this period the dose was increased to the limit of tolerance, and at the final assessment interview 17 of the 33 patients were taking 225 mg./day; the rest of course were receiving a somewhat lower dose.

Initial and final ratings were made using Marks and Gelder's phobic rating scale (2), and in addition ratings were made of the intensity of associated free-floating anxiety and of depression on two similarly constructed five-point scales. (Various self-rating scales were also used, but since they added nothing to the information gained from the clinical ratings they will not be analysed here).

Fourteen of the patients suffered from agoraphobia, eight from social phobias and eleven from other phobias. The results, expressed as percentage falls in the ratings between the initial and the final interview at eight weeks, are shown in the accompanying Table.

	Anxiety	Depression	Phobia
Agoraphobia ..	19.0	30.1	33.3
Social ..	33.2	20.0	25.1
Others ..	42.3	39.4	33.3

So far as the phobic symptom alone is concerned a fall of three or four points on the phobic scale may be called a good response, a fall of two points a moderate response, and a fall of one point or no fall at all a poor response. Of the total population the proportion in these categories was 18.2 per cent, 27.3 per cent and 54.5 per cent, respectively.

Rank correlations of the degree of the improvement in the phobia ratings and the initial ratings of all three measures were carried out. This proved significant for the (initial) depression rating ($r + .41$; $p < .02$)