A PROGNOSTIC STUDY OF NEUROTIC PREGNANT PATIENTS—PRELIMINARY COMMUNICATION

By

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THE Anglo-American literature relevant to psychiatry and obstetrics reveals studies of the puerperal psychoses (Tetlow, 1955); papers describing the psychological reactions experienced during pregnancy and labour (Tobin, 1957; Kartchner, 1950) and retrospective studies of patients presenting with obstetric abnormalities of pregnancy and labour (Coppen, 1958; Caldwell, 1958; Cramond, 1954). The present paper describes the psychiatric and obstetric follow-up of a group of neurotic pregnant women, a study of similar material not being previously recorded in the literature.

AIMS OF INVESTIGATION

A number of questions of psychiatric and obstetric interest were formulated and an answer sought in the available data. To achieve clarity, the psychiatric and obstetric aspects of the group have been separated, though it is appreciated that this is an artificial distinction when considering the total reaction of the individual patient. Answers were sought to the following questions: (1) do pregnant women with overt neurosis exhibit any greater incidence of obstetric abnormality and if so what are the abnormalities; (2) can the obstetrician be advised as to the expected behaviour in labour of his patient; (3) what may be the expected psychiatric reaction of a neurotic patient in whom pregnancy supervenes; (4) are there any psychiatric differences between the patients who are neurotically ill before becoming pregnant and those in whom the pregnancy immediately ante-dates their illness; (5) are there any psychiatric differences between patients whose pregnancy is "illicit", compared with those in whom it is legitimate; (6) what is the psychiatric prognosis of such patients.

METHOD

All patients of the Bethlem Royal and Maudsley Hospitals who were diagnostically classified as suffering with a neurotic illness and pregnancy were followed up by letter, to their hospital maternity unit or medical practitioner, seeking information on abnormalities of pregnancy and labour. Adequate data were obtained in 22 patients. The age range was 18 years to 38 years. One patient was under 20 years, 12 were between 20 years and 30 years and 9 were over 30 years. The patient under 20 years of age, 6 of the "20–30 years group" and 4 of the "over 30 years group" were primiparae, giving a percentage of 50. Of the multiparae, 4 were multipara 1, 1 was multipara 2 and 4 were multipara 3 or more. Of the 22 patients, 13 had legitimate and 9 had illicit conceptions. Illicit includes both illegitimacy and conceptions in married women resulting from intercourse with men other than their husbands. Of the illicit group, 5 were married and multiparous, 4 were unmarried and primiparous. Of the 13 legitimate pregnancies, 7 were primiparous, 6 were multiparous.

The Dulwich hospital maternity unit provided control data of greater specificity there than obtained from the Aberdeen maternity unit or King's College Hospital (Table I). From Dulwich Hospital a random selection was

TABLE I

Percentage Comparison of Obstetric Abnormalities in Total Neurotics with Control Groups

	Neurotic Group	Aberdeen	K.C.H. 1954	K.C.H. 1956	Dulwich Hospital
Total Nos.	22	5,702	784	858	92
Pregnancy:					
Essential hypertension ..	18·2	4·7	1·5	2·9	1·5
Pre-eclamptic toxaemia ..	4·5	3·8→19·3	10·0	9·3	11·3
Prolongation	9·1	10·0	—	—	3·2
Labour:					
Caesarean section	4·5	1·5	8·5	9·9	1·6
Use of forceps } primiparae ..	9·1	5·9	9·2	9·2	6·6
} multiparae ..	4·5	2·2	6·5	5·4	0·0
Prolongation	4·5	13·5	1·5	1·4	12·9
Disturbed behaviour ..	13·6	—	—	—	2·2

made of white patients including legitimate primiparae (30 patients), legitimate multiparae (32 patients) and illegitimate primiparae (30 patients) of the same age as the studied group. No control data was available for married women with illicit pregnancies who numbered 5 in the present study. Of the 13 patients in the legitimate group, diagnoses were depressive reaction in 5 patients, anxiety reactions in 6 patients and obsessional neurosis in 2 patients. In the illicit group, diagnoses were borderline defect in 1 patient, depressive reaction in 5 patients, anxiety reaction in 2 patients and psychopath in 1 patient. Of the total group 81·8 per cent. were diagnosed as either anxiety or depressive reactions.

The criterion for diagnosis of essential hypertension was a persistently raised blood pressure reading over 140/90 mm. mercury during several visits to the clinic in the absence of demonstrable pathology to account otherwise for the hypertension. Pre-eclamptic toxaemia was diagnosed in the presence of any two of the following: (*a*) minimal blood pressure reading 140/90 mm. mercury, (*b*) albuminuria, (*c*) oedema in the upper part of the body. Prolongation of pregnancy was accepted if continued for at least 43 weeks; prolongation of labour implies a minimum of 24 hours, whilst the categories of Caesarean section and forceps delivery are self-explanatory, with the proviso that mechanical causes had been excluded. A final category of "difficult behaviour" during labour was included though based on a crude subjective assessment by the attending staff.

Essential hypertension, which shows such a high proportion in the total neurotic group, was found to be equally so throughout the subgroups compared with the subgroups in the Dulwich Hospital controls. Disturbed behaviour is seen to predominate in the group studied, though this datum is difficult to evaluate, as it may reflect biased assessment on the part of the attendants as much as the behaviour of the neurotic patients.

The clinical picture that emerges from the two groups tabulated below, is that the illicit group is characterized by a relative absence of previous mental illness associated with a minimal family history of psychiatric disorder; the pregnancy is unwanted and a temporal relationship exists between the

TABLE II

Clinical Pattern of Psychiatric Illness
(Percentage figures)

	Illicit Conceptions	Legitimate Conceptions
Total Nos.	9	13
Family history of psychiatric disorder	11·1	46·2
Family history of personality disorder	22·2	23·1
Previous mental ill-health	22·2	69·3
Pregnancy ante-dating neurosis	77·7	46·2
Rejection of foetus	88·8	53·8

pregnancy and the affective disorder. In effect the psychiatric illness is predominantly reactive. The pattern in the legitimate group is comparable with that seen in non-pregnant neurotic patients.

A symptomatic assessment of the psychiatric state was made, the term improvement implying marked resolution. Insufficient data was available on 4 patients. Irrespective of the division into illicit or legitimate primiparae or multiparae, improvement was noticed in 72·2 per cent. of 18 patients, though the illicit group only took 2 months to reach this stage compared with 4·5 months in the remainder. However, of the 22 patients, 3 made suicidal attempts and 2 had suicidal thoughts, divided equally between the illicit and legitimate groups.

DISCUSSION

It seems possible now to answer some of the questions initially formulated. Psychiatrically, a pregnancy supervening in a neurotic patient may cause a temporary exacerbation of symptoms, but as with patients who present a reactive illness to an illicit conception, the prognosis during the months of pregnancy and labour is good. Treatment in the illicit group is essentially supportive and social, acceptance of the patient's pregnant state without a display of moral judgment, sharing responsibility with the patient regarding arrangements for antenatal care and obtaining hostel accommodation if required. The suicidal risk is present initially and might necessitate in-patient admission but there seems little reason to advocate therapeutic abortion on these grounds alone, as psychiatric improvement may be anticipated during the coming months. It must be emphasized that only short-term prognosis has been assessed and this may bear no relationship to puerperal reactions or mother–infant interaction with the possible sequelae of psychological disorder in the child.

The obstetric prognosis for the neurotic patients in the group studied, is characterized by a high proportion of patients with essential hypertension, disturbed behaviour during labour and an absence of abnormalities of labour. The latter findings are supported by other studies. Klein, Potter and Dyke (1953) studied 27 primiparae patients and sub-divided them on the basis of clinical assessment of personality into "stable" and "unstable". They further classified their patient's labour into "psychologically poor or good" and "physiologically poor or good" and were then able to form four categories of patients. They demonstrated that no accurate prediction of behaviour in labour could be made and concluded from their findings that "emotional factors have no palpable effect on the actual mechanics of labour" and that "behaviour in pregnancy was not necessarily duplicated in labour". A better methodological

approach using the Maudsley personality inventory, rating scales and intelligence testing on 200 patients was carried out by Stewart and Scott (1953) and Scott and Thompson (1956). These conclusions were that there appeared little relationship between "behaviour in labour and psychological assessments made in pregnancy" and that patients with a high neurotic score on the Maudsley medical questionnaire failed to show a high incidence of difficult labour. That the group experiences and hierarchical structure of the staff in the labour ward prior to delivery may be of greater aetiological importance in labour abnormality is suggested by Tylden (1952). That personality rather than neurotic symptomatology might be more pertinent to abnormality of labour, receives support from Cramond (1954) who using a control group matched for age, height, marital status, parity, intelligence and social class, studied 50 patients with severe uterine dysfunction. Although finding no significant difference between the two groups comparing "rejection of the feminine role, psychosexual adjustment and anxiety of pregnancy" he described a "dysfunction temperament" characterized by "suppression of feelings of tension, reserve, suspicion, difficulty in talking and more conventional than normal".

The finding of essential hypertension in a high proportion (18·2 per cent.) compared with the controls (1·5 per cent.) is of obstetric importance, for McClure Brown (1958) found that in 216 cases of mild hypertension prior to 15 weeks pregnancy, 39 per cent. developed toxaemia and this is now the most common cause of maternal mortality. Professor Pickering (1955) refers to pre-eclamptic toxaemia as "specific hypertensive disease of pregnancy" and argues that it is illogical to distinguish between the two conditions of essential hypertension and pre-eclamptic toxaemia on the basis of finding albuminuria or oedema in the latter. Pickering, although pointing out the many methodological difficulties involved in psychiatric research, considers that environmental factors, including psychological ones, may play a major contributory part in the production of raised blood pressure. Coppen (1958) who psychiatrically studied 50 toxaemic patients with controls found a significant relationship between psychiatric symptoms during pregnancy and the later development of pre-eclamptic toxaemia. Further evidence for this possible relationship is quoted by Dieckman (1952) and Page (1953) who described the dramatic supervention of a blood pressure of 210/140 mm. with albuminuria and fits within twenty-four hours of the patient being arrested for alleged felony, her antenatal examination immediately prior to this being normal. The present author abstracted from the case reports in their monograph by Klein, Potter and Dyke, the patients described as "unstable-neurotic" and found 40 per cent. recorded as hypertensive compared with 11·8 per cent. in the "stable" group. Caldwell (1958) reviewed retrospectively 300 obstetric patients and found 12·2 per cent. of his "neurotic" patients diagnosed as pre-eclamptic toxaemia compared with 4·7 per cent. in the "well-adjusted" group, though his study unfortunately lacks definition of the terms used. There is much literature concerning the studies of hypertension, neurotic mechanisms and personality in non-pregnant patients; Hambling (1951), Binger *et al.* (1945), Wolf *et al.* (1943), Saslow *et al.* (1950) and Reiser *et al.* (1950). It is of interest to note that Saslow *et al.* concluded that "there was a significant association between 'obsessive-compulsive behaviour', 'sub-normal assertiveness' and hypertension", but neither of the 2 patients with obsessional neurosis in the present series developed hypertension during their pregnancy.

The possible neural effect in producing hypertension receives some support from the occasional case reports of lowered blood pressure in hypertensive

patients who underwent leucotomy operations for associated severe psychiatric illness (Partridge, 1950; Tibbetts, 1949). Hofbauer (1956) writing on the neuro-endocrine pattern of toxaemia distinguished two elements. Firstly, the dominant influence of the "hypothalamic-pituitary-adrenal system" and secondly the "functional sensitivity of the arterioles affecting their pattern of response to hormonic stimuli". Walsher (1948) points out that, in addition to neural and hormonal effects producing hypertension, a further indirect mechanism might be the over-eating of the nervous insecure patient. The present author wonders what possible relationship might exist between the "food fads" of pregnant women, toxaemia and hypertension. With increasing awareness of neural and humoral aspects of hypertension one can theoretically conceive of psychological experiences having their physical counterpart at the cortical level and their passing through a physiological pathway via the hypothalamus, post-pituitary and adrenal glands, as well as the more direct neural pathway via the autonomic nervous system.

It is not the author's intention to discuss here in detail possible pathogenic mechanisms relating psychological stimuli, psychiatric symptoms and raised blood pressure. The author considers that for the purposes of clinical research two points require further exploration. Firstly, confirmation of findings by obtaining a larger series of patients. Secondly, to assess whether patients with neurotic symptoms not amounting to a neurosis or requiring psychiatric intervention have an associated abnormally raised blood pressure during pregnancy. With the latter point particularly in mind, the present writer plans to engage upon a statistical and controlled anterospective study; testable hypotheses relating to pre-eclamptic toxaemia and essential hypertension can now be formulated.

Summary

A psychiatric and obstetric study of 22 neurotic pregnant patients reveals a high proportion of patients with hypertension (18·2 per cent.) compared with the controls (1·5 per cent.). No higher percentage of labour abnormalities was noted other than difficult behaviour (13·6 per cent. compared with 2·2 per cent. in the controls), but in the absence of data regarding the interpersonal staff relationships this cannot be adequately evaluated. Affective disorder was the commonest reaction (81·8 per cent.) and a favourable short-term psychiatric prognosis was found in 72·2 per cent. of patients, despite suicidal attempts or thoughts being present in 23 per cent. of the group. Differences in the clinical pattern of the psychiatric illnesses between illicit and legitimate conceptions is presented.

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References

BINGER, C. A. L., ACKERMANN, N. W., COHEN, A. E., SCHROEDER, M. A., and STEELE, J. M. *Psychosom. Med. Mgr.*, 1945. Suppl. No. 8.
BROWN, J. C., and MCCLURE, —., *Practitioner*, 1958, **18,** 651.
CALDWELL, J., *Sth. Med. J.*, 1958, **51,** 1026.
COPPEN, A. S., *J. Psychosom. Res.*, 1958, **2,** 241.
CRAMOND, W. A., *Lancet*, 1954, *ii*, 1241.
DIECKMANN, W. J., *The Toxaemias of Pregnancy*, 1952. London: Kimpton.
HAMBLING, J., *Brit. J. Med. Psych.*, 1951, **24,** 242.
HOFBAUER, J., *Amer. J. Obst. Gynaec.*, 1956, **71,** 255.
KARTCHNER, F. D., *ibid.*, 1950, **60,** 19.

KING'S COLLEGE HOSPITAL MATERNITY REPORT, 1954. Shrewsbury: Wilding, Sons, Ltd.
Ibid., 1956. Shrewsbury: Wilding, Sons, Ltd.
KLEIN, H., POTTER, H. W., and DYK, R. B., *Anxiety in Pregnancy and Childbirth*, 1950. New York: Hoeber.
PAGE, E. W., *Hypertensive Disorders of Pregnancy*, 1953. Springfield, Illinois: Thomas.
PARTRIDGE, M., *Prefrontal Leucotomy*, 1950. Oxford: Blackwell.
PICKERING, G. W., *High Blood Pressure*, 1955. London: J. & A. Churchill Ltd.
REISER, M. F., BRUST, A. A., SHAPIRO, A. P., BAKER, H. M., RANSHOFF, W., and FERRIS, E. B., *Res. Publ. Ass. Nerv. Ment. Dis.*, 1950, **29**, 870.
SASLOW, G., GRESSEL, G. C., and SHOBE, F. O., *Psychosom. Med.*, 1950, **12**, 292.
SCOTT, E. M., and THOMPSON, A. M., *J. Obstet. Gynaec. Brit. Emp.*, 1956, **63**, 503.
STEWART, D. B., and SCOTT, E. M., *Trans. Edin. Obstet. Soc.*, 1952–53, **49**.
TETLOW, C., *J. Ment. Sci.*, 1955, **101**, 629.
TIBBETTS, R. W., *Brit. Med. J.*, 1949, *ii*, 1452.
TOBIN, S. M., *Obstet. Gynaec.*, 1957, **10**, 677.
TYLDEN, E., *Lancet*, 1952, *i*, 231.
WALSHER, H., *Amer. J. Obstet. Gynec.*, 1948, **55**, 799.
WOLF, S., PFEIFFER, J. B., RIPLEY, H. S., WINTER, O. S., and WOLFF, H. G., *Ann. Int. Med.*, 1948, **29**, 1056.

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