

The willingness to be followed up was unaffected by passage of time, the failure to receive treatment, or the degree of recovery.

This survey was done at the suggestion of Dr. Max Hamilton, of the Department of Psychiatry, University of Leeds. We thank him for guidance and encouragement throughout the inquiry. We warmly appreciate the interest in the study shown by the late Professor D. R. MacCalman and Professor G. R. Hargreaves. Our thanks are also due to Miss Mary Stewart and Mrs. M. Johnson for much secretarial assistance.

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MENSTRUATION AND ACUTE PSYCHIATRIC ILLNESSES

BY

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This investigation was undertaken to determine whether acute psychiatric admissions to hospital were in any way influenced by the premenstruum or by menstruation. For many years it has been believed that psychiatric illness was apt to exacerbate at the time of the menstrual period, and in this paper an attempt is made to determine if such a relationship exists. It has been prompted by the recognition of the premenstrual syndrome and its successful treatment (Greene and Dalton, 1953).

As there are many ways in which the acutely ill can be admitted to hospital it was decided to examine admission records of two large mental hospitals (2,470 and 2,290 beds) and the mental observation ward of a London teaching hospital, and to confine the investigation to those patients whose illness was so acute that immediate admission was sought. This meant that patients who were admitted when a bed vacancy occurred were excluded, as were those admitted through

an out-patient clinic. By this means the investigation was restricted to those whose admission was obtained because of the acuteness of their illness at the time of admission.

The sister in charge of admissions recorded the date of the patient's last menstrual period at the time of her admission. The data were obtained from statements of patients suffering from a variety of psychiatric illnesses and excluding those too ill to give reliable information. All patients with amenorrhoea exceeding 28 days were excluded.

Results

For the interpretation of results the 28 days of the menstrual cycle were divided into seven four-day periods, in which days 1-4 corresponded to menstruation, days 13-16 covered ovulation, and days 25-28 the premenstruum. It was recognized that menstruation may exceed four days, but the full menstrual flow with relief of water retention usually occurs during the first four days. The relative incidence rate represents the number of actual admissions during a four-day period compared with the expected number of admissions during a four-day period (or one-seventh of total admissions).

Fig. 1 gives the time in the menstrual cycle of psychiatric admissions for 276 patients and shows that the expected rate of admissions is doubled during menstruation. Fig. 2 gives the time of admissions of 36 attempted suicides and shows a relative incidence rate during menstruation of 2.75 or 39%. This figure of 39% of attempted suicides during menstruation compares with the figure of 36% reported by Heller in 1900, 22% by Ollerdorf in 1905, and 33% by Slavik in 1910 (quoted by Gregory, 1957), and supports the findings of MacKinnon and MacKinnon (1956) that successful suicides seem commoner during the luteal phase. Figs. 3 and 4 show that admissions during menstruation are greatly increased both for 185 patients with depression and for 114 patients with schizophrenia.

The influence of menstruation on psychiatric admissions was evenly distributed among single, married, and widowed; among nulliparous and multiparous; and among those admitted for first and for recurrent attacks. There was, however, a marked difference in age, as shown in Fig. 5. The disturbing influence of menstruation was greatest among those under 25 years of age (37%), and compares with 20% for women over 45 years. The depressive and suicidal patients were

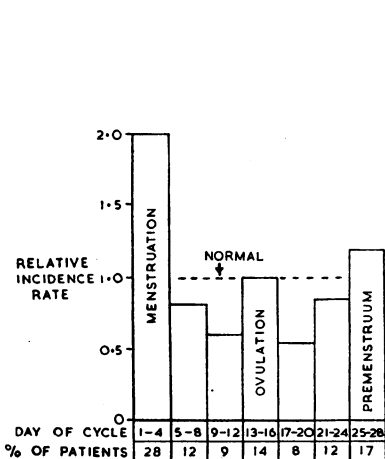


FIG. 1.—Time of acute psychiatric admission in 276 patients.

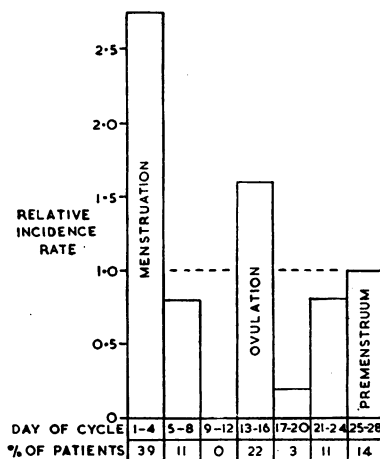


FIG. 2.—Time in menstrual cycle of 36 attempted suicides.

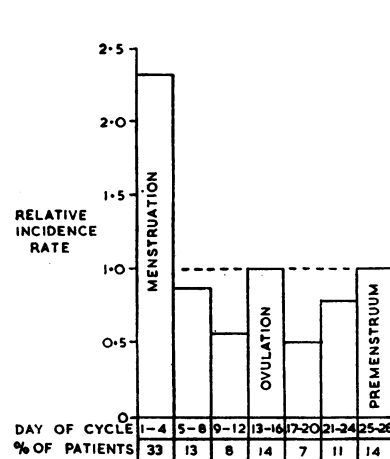


FIG. 3.—Time of admission of 185 patients with depression.

evenly distributed among all ages, while the schizophrenics were commonest among the younger age groups. The remaining patients were suffering from a wide variety of psychiatric illnesses—for example, psychoses, alcoholism, psychopathic disorders, neurosyphilis, and organic diseases. Their admissions were

evenly distributed throughout the menstrual cycle, and they tended to belong to the older age groups. It seems, therefore, that the disturbing influence of menstruation in the younger age groups is due to the predominance of schizophrenics among the younger patients.

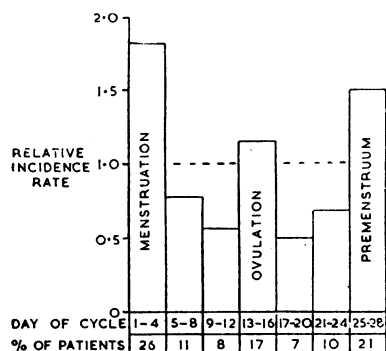


FIG. 4.—Time of admission of 114 patients with schizophrenia.

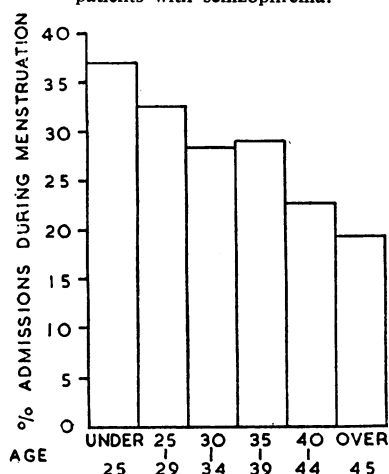


FIG. 5.—Age distribution of 78 patients admitted during menstruation.

Conclusion

This investigation into the time of admission of 276 psychiatric patients emphasizes the importance of menstruation and the premenstruum in relation to the onset of acute psychiatric episodes by revealing that 46% of all admissions occurred during this time. Indeed, 53% of attempted suicides, 47% of patients with

depression, and 47% of schizophrenic patients were admitted during menstruation or the premenstruum.

The significance of these figures lies in the immediate prognostic value; for patients who first seek psychiatric help in the premenstruum may be expected to become worse up to the third or fourth day of the menstrual cycle. Nor should it be forgotten that premenstrual tension can be successfully treated, and this applies whether premenstrual tension occurs alone or in combination with other psychiatric illnesses and regardless of whether the hormonal changes of menstruation are causative or merely acting as a trigger in the onset of an acute psychiatric episode. Hormone therapy is not contraindicated by other psychiatric treatment.

My thanks are due to Dr. E. W. Dunkley for his guidance and kind criticism, to Dr. D. D. Reid for statistical assistance, to Drs. E. W. Dunkley, F. Steel, and J. S. Harris for permission to undertake this investigation in the patients under their care, and to the sisters of the admission wards who made the investigation possible.

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ATONY OF THE FEMALE BLADDER

REPORT OF FOUR CASES

BY

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Most cases of bladder distension fall into one or other of the three standard classifications—that is, of mechanical, congenital, or neurogenic origin.

A certain number of cases of insidious distension of the bladder in the female are seen, however, in which atony of the bladder itself seems to be the primary factor, and in these cases no obvious mechanical obstruction, congenital malformation, or neurological disorder is to be found. It is because of the obscure cause of this atony, and because so little literature is to be found on the subject, that the following four cases, all occurring in females, are recorded and the sparse literature is reviewed.

Case 1

A married woman aged 57 first presented at hospital in 1952 with an attack of pyelocystitis. She had never at any time experienced any difficulty with micturition and thought she had always passed a normal quantity of urine.

On examination there was a large mass in the abdomen, reaching to the xiphisternum, which was cystic with a well-marked fluid thrill. The blood urea was 28 mg. per 100 ml., and urine examination showed pus cells and scanty *Escherichia coli*. Her blood pressure was 140/80.

A provisional diagnosis of large ovarian cyst was made, and the patient prepared for laparotomy. In view of the vague urinary symptoms, the possibility of the mass being distended bladder was considered, and a preliminary catheterization was performed in the theatre. This failed to empty the swelling, owing, as it was afterwards proved, to distortion of the urethra and bladder neck from pressure.

On opening the abdomen a huge bladder was found. This was incised and a large quantity of urine evacuated, together with several vesical calculi. The bladder was closed in two layers, and two weeks later the wound was soundly healed. At this stage an intravenous pyelogram showed perfectly normal kidneys and ureters, with no evidence of hydronephrosis.

Full cystometric examination of the bladder revealed: (1) that the bladder initially contained 88 oz. (2,500 ml.) of urine; (2) that the bladder had to be filled to the extent of 100 oz. (2,840 ml.) before the patient got any sensation of fullness, and with this amount in the bladder a pressure of only 26 cm. of water was recorded on the manometer; and (3) that this pressure could be increased to 100 cm. of water by voluntary contraction of the abdominal muscles.

Operation.—This was performed in August, 1953, by Mr. J. S. Ramage. A diathermy excision of the bladder neck (which was macroscopically and microscopically normal) was carried out, and about two-thirds of the redundant bladder wall was resected. The bladder was closed without drainage, and a rapid recovery with primary healing of the bladder occurred.

Several estimations of the residual urine have been made since operation, and it has varied between 7 and 10 oz. (200 and 280 ml.). It appears to be static in amount, and is not infected.

Histology of Resected Bladder.—Chronic inflammation was evident below the epithelial lining and in the deeper layers, and oedema and increased fibrous tissue were present around the smooth muscle bundles. No nerve ganglion cells were seen, but the nerve fibres were normal in number (Figs. 1 and 2). This apparently is the typical histological picture of the resected bladder in cases of primary atony.