Does psychological status predict the presentation in primary care of women with a menstrual disturbance?

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SUMMARY

Thirty per cent of women aged 35 years and over suffer from heavy menstruation, but only 7% have consulted a doctor in the previous six months, suggesting that a significant number of these women do not consult a general practitioner. There is evidence that women who report heavy menstruation are more likely to have symptoms of psychological disturbance. This study sets out to determine whether the presence of symptoms of anxiety and depression might be linked to subsequent consultation for increased vaginal bleeding in primary care.

Keywords: psychological status; menstruation disorders; primary care.

Introduction

THE point prevalence of self-reported 'very or fairly heavy periods' in the community is 30% in women aged 35 years and over.[1] Although 22% of women in this age group report that such periods interfere with their life, only 7% have consulted their doctor about them in the previous six months. The consultation rate in primary care for 'disorders of menstruation and other abnormal bleeding from the female genital tract' is 5.8% of women per year in the age range 25 to 64 years.[2] This suggests that a significant number of women with 'heavy periods' do not consult a general practitioner (GP).

One potential predictor of consultation is psychological status.[3] There is some evidence from hospital-based studies that women attending specialist gynaecological clinics have higher rates of psychiatric morbidity than the general population.[4] Such women are a selected group of those that consult in primary care, but one small case-control study of 26 women presenting with dysfunctional uterine bleeding in general practice suggested a link with recent life changes and associated stress.[5]

There is consistent evidence that women who report heavy menstruation in community surveys are more likely to have symptoms of a psychological disturbance.[1,6] We therefore wished to investigate whether the presence of symptoms of anxiety and depression might be linked to subsequent consultation for increased vaginal bleeding in primary care.

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Method

The study took place in a four-partner urban practice with a total population of 10 000 patients. The practice records all consultations on a computerised database (ViSion) and submits data to the Royal College of General Practitioners Weekly Returns Service. All data entries have an associated Read code.

Between 1 August 1996 and 30 September 1996, 2008 randomly selected women in the age group 18 to 75 years (approximately 50% of the practice-registered women in the age range) were sent a health survey questionnaire that included a Hospital Anxiety and Depression Scale (HAD). The HAD is a reliable, valid, and practical tool for identifying and quantifying the two most common forms of psychological disturbances in medical patients. It is well documented to predict mood over intervals of one year and longer.[7]

Data were collected from ViSion and coded into Microsoft Access to obtain cases and sample controls from women who had responded to the survey with a completed questionnaire. Cases were defined as women who presented to a doctor or practice nurse with an episode of increased vaginal bleeding in the two years following the completion of the HAD (1 October 1996 to 30 September 1998) but had not consulted with increased vaginal bleeding in the year prior to completing the HAD (1 October 1995 to 30 September 1996). Fourteen Read codes (and their daughter codes) were used and these did not include codes related to pregnancy or post-menopausal bleeding. Women who were aged over 54 years, or pregnant at diagnosis, or had a hysterectomy prior to the Read code, were excluded. In addition, women who had had a gynaecological operation or had been pregnant within the three months prior to the Read code were also excluded.

Each case was matched by age within five years to controls who were defined as women registered with the practice from 1 October 1995 to 30 September 1998 and had not presented with increased vaginal bleeding during the same time interval.

A secondary analysis focusing on a subgroup of women who presented with a Read code for 'excessive or frequent menstruation' or a daughter code was performed in order to test the hypothesis that the large number of Read codes used might dilute any effects within a subgroup with a more specific label.

Mantel–Haenszel odds ratios[8] were used to estimate the relative risk of menstrual disturbance associated with differing levels of psychological status (anxiety and/or depression) and confidence intervals estimated by the exact method. Statistical analysis was carried out using McNemar's test, and interpretation of the *P*-values relate to a two-tailed significance level of $\alpha = 0.05$. Data analysis was carried out using SPSS version 9.0.

Results

There were 1402 completed questionnaires returned in the baseline survey, a 70% response rate. Of these, 905 were returned by women aged 18 to 54 years. A total of 85 cases were identified (a prevalence of 9.4% [95% confidence interval (CI) = 7.6% to 11.5%]), of whom a subgroup of 45 (5.0% [95% CI = 3.6% to 6.6%]) presented with a Read code for 'excessive or frequent menstruation' or a daughter code.

Table 1. Relationship between psychological status and consultation for (a) increased vaginal bleeding and (b) excessive and frequent menstruation, in women presenting to general practice.

	Number (%) of concordant pairs		Number (%) of discordant pairs			
Psychological disorder	Case/control[a] positive[b]	Case/control negative[b]	Case positive/ control negative	Case negative/ control positive	OR[c] (95% CI)	P-value[d]
(a) Increased vaginal bleeding (n = 85 pairs)						
Anxiety						
Borderline or definite	11 (12.9)	28 (32.9)	19 (22.4)	27 (31.8)	0.70 (0.37–1.31)	0.302
Definite	4 (4.7)	57 (67.1)	10 (11.8)	14 (16.5)	0.71 (0.28–1.73)	0.541
Depression						
Borderline or definite	2 (2.4)	57 (67.1)	13 (15.3)	13 (15.3)	1.00 (0.43–2.34)	1.000
Definite	0 (0.0)	78 (91.8)	5 (5.9)	2 (2.4)	2.50 (0.41–26.3)	0.453
Neurosis[e]						
Borderline or definite	12 (14.1)	23 (27.1)	20 (23.5)	30 (35.3)	0.67 (0.36–1.21)	0.203
Definite	4 (4.7)	57 (67.1)	10 (11.8)	14 (16.5)	0.71 (0.28–1.73)	0.541
(b) Excessive and frequent menstruation (n = 45 pairs)						
Anxiety						
Borderline or definite	7 (15.6)	14 (31.1)	10 (22.2)	14 (31.1)	0.71 (0.28–1.73)	0.541
Definite	2 (4.4)	31 (68.9)	4 (8.9)	8 (17.8)	0.50 (0.11–1.87)	0.388
Depression						
Borderline or definite	0 (0.0)	33 (73.3)	6 (13.3)	6 (13.3)	1.00 (0.27–3.74)	1.000
Definite	0 (0.0)	42 (93.3)	3 (6.7)	0 (0.0)	–	–
Neurosis						
Borderline or definite	11 (24.4)	7 (15.6)	11 (24.4)	16 (35.6)	0.69 (0.29–1.58)	0.442
Definite	31 (68.9)	2 (4.4)	4 (8.9)	8 (17.8)	0.50 (0.11–1.87)	0.388

[a]Cases (controls) are defined according to the presence (absence) of Read code diagnoses for menstrual disturbance; [b]positive (negative) indicates that the patient was (was not) suffering from the specified psychological disorder, the presence or absence of the disorder being defined according to threshold scores of the HAD; [c]Mantel–Haenszel estimate of the relative risk of menstrual disturbance associated with psychological status; [d]McNemar's test using the binomial distribution for small samples; [e]neurosis is a disorder of anxiety or depression.

Relative risk estimates of menstrual disturbance associated with different levels of psychological distress are presented in Table 1. All *P*-values were non-significant ($P>0.05$) and most odds ratios were quite close to unity, indicating no association between psychological status and menstrual disturbance. The results for the subgroup were similar to those for the study population as a whole.

The characteristics of the 905 survey responders that differed to those of the 477 non-responders aged between 18 and 54 years were: consultation rate was 9.4% for responders and 5.9% for non-responders ($P = 0.032$); median age = 38 years for responders and 34 years for non-responders ($P<0.001$).

Discussion

Anxiety and depression, as measured by the HAD in this case-control study, was not a predictor for consultation in primary care with an episode of increased vaginal bleeding.

It is likely that our observed consultation rate has tended to an over-estimate, as non-responder rates are different. However, this will not have biased the findings concerning anxiety and depression and consultation.

Psychological status as measured by the General Health Questionnaire is a predictor of consultation with a GP,[3] and it is possible that a mental disorder, such as anxiety or depression, may be associated with an increased likelihood of consultation among women with similar degrees of menstrual disturbance.

Studies suggest that women who attend specialist gynaecological clinics are more likely to have an associated psychiatric disorder.[4] In the community, women with excessive uterine bleeding are more likely to have associated psychiatric morbidity.[1] The psychiatric disorder may be primary, or it may be secondary to distress and fear caused by excessive menstruation.[4] However, our study provides preliminary evidence that, overall, women initially consulting with increased vaginal bleeding in general practice have no higher likelihood of anxiety or depression compared with a random sample of all women of the same age who have not consulted for the symptom, in the same registered general practice population.

We suggest that GPs consider the impact of psychological status on the presenting symptom of increased vaginal bleeding when considering referral to a specialist.

References

1. Gath D, Osborn M, Bungay G, *et al*. Psychiatric disorder and gynaecological symptoms in middle aged women in a community study. *BMJ* 1987; **294:** 213-218.
2. Office of Population Census and Surveys. *Morbidity Statistics from General Practice. Fourth National Morbidity Study 1991-1992.* London: HMSO, 1995.
3. Verhaak PFM. Determinants of help-seeking process: Goldberg and Huxley's first level and first filter. *Psychol Med* 1995; **25(1):** 95-104.
4. Iles S, Gath D. Psychological problems and uterine bleeding. *Baillière's Clinical Obstetrics & Gynaecology* 1989; **3(2):** 375-389.
5. Tudiver F. Dysfunctional uterine bleeding and prior life stress. *J Fam Pract* 1983; **17:** 999-1003.
6. Ballinger B. Psychiatric morbidity and the menopause: screening of general population sample. *BMJ* 1975; **iii:** 344-346.
7. Herrmann C. International experiences with the hospital anxiety and depression scale - a review of validation data and clinical results. *J Psychosom Res* 1997; **42:** 17-41.
8. Breslow NE, Day NE. *Statistical methods in cancer research. Vol 1. The analysis of case control studies.* Lyons: International Agency for Research on Cancer, 1980.

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