

# The outcome of menorrhagia: a retrospective case control study

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**SUMMARY.** One hundred and three women who were known to have complained of menorrhagia at some time in their lives were compared with a control group drawn from the practice's age-sex index.

The results indicated that the women in the menorrhagia group were more likely to have had antidepressant medication prescribed for them at some time in their lives than the women in the control group. Furthermore, their case folders were thicker than those of the controls. The age at which menorrhagia was first reported was the only factor studied which was associated with increased likelihood of hysterectomy.

## Introduction

**M**ENSTRUAL complaints are not uncommon in the general practitioner's surgery. Around 40 women per 1,000 consult their doctor each year because of menstrual disturbances, and around 10 per cent of these women are referred to a specialist.<sup>1</sup> In the author's practice between 1979 and 1981, seven women per 1,000 presented each year with a new complaint of menorrhagia.

The complaint of menorrhagia is largely subjective. It is known that total loss at menstruation is unrelated to either the number of days of bleeding or the number of sanitary towels used.<sup>2</sup> An associated iron deficiency anaemia is probably the best indicator of heavy loss. This finding is more likely in women who lose more than 60 ml blood per menses and becomes common when the loss is greater than 80 ml.<sup>3</sup> A low level of serum ferritin may be a more sensitive indicator of iron deficiency, but this test is seldom routinely performed.<sup>4</sup>

The psychological component of menstrual complaints has been extensively studied, particularly in cases which progress to hysterectomy. Ballinger<sup>5</sup> showed that women aged 40-55 years attending a gynaecological outpatient clinic with menorrhagia were more likely to have a history of psychiatric disturbance than controls attending other clinics. This finding was especially likely in those women selected for hysterectomy. A major prospective study revealed that the prevalence of

emotional disorders was higher among women with menorrhagia of benign origin who were subsequently selected for hysterectomy than in the general population, and that there was emotional improvement after hysterectomy.<sup>6,7</sup> This confirmed an earlier report.<sup>8</sup>

In contrast to these recent studies, Richards<sup>9</sup> found that 55 per cent of women under 40 years of age had postoperative depression after hysterectomy; half of the women with a previous psychiatric history were re-referred and this was twice as common if no pathology was found.<sup>10</sup>

Little is known of the natural history of menorrhagia. In adolescents, spontaneous remission is common.<sup>11</sup> In older women the onset of the climacteric brings relief. However, for women aged 25-40 years with no obvious pathology the clinical outcome is uncertain.

These reports suggest that there is an association between emotional disorders and gynaecological complaints (particularly menorrhagia) and that hysterectomy modifies or changes the expression of this emotional component. However, there is a lack of information about the initial presentation of women with menorrhagia. Is the observed association between menorrhagia and emotional problems restricted to women in gynaecological clinics, or is it also present in women who are not referred and whose problems are treated adequately by their general practitioners?

## Aims

The specific aims of the study reported here were to:

1. determine whether women with a recorded history of menorrhagia would also have a history of affective mood disturbance at a higher rate than might be expected in a control group;
2. determine whether there was a difference in consultation behaviour between the two groups (as measured by the size of their NHS medical records);
3. determine whether outcome was associated with any obvious predisposing factors.

## Method

During the period 1978-81 all the NHS records of the 3,200 patients in the author's practice were scrutinized and coded for significant events in their past history. A Weaver index<sup>12,13</sup>

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1. Name	
2. Parity	
3. Menorrhagia?	Yes/No
4. Date at which menorrhagia first reported	
5. Age at which menorrhagia first reported	
6. Outcome of menorrhagia	
a) Hysterectomy	
b) D and C	
c) Drug therapy	
d) Spontaneous remission	
7. Associated iron deficiency anaemia	Yes/No
8. History of use of tranquillizers (more than once)	Yes/No
9. History of use of antidepressants	Yes/No
10. History of psychiatric referral	Yes/No
11. Known history of marital disharmony	Yes/No
12. Years covered by medical record	
13. Thickness of medical record (mm)	
14. Associated significant morbidity.	

**Figure 1.** Details collated by microcomputer analysis.

was constructed into which each significant diagnosis was entered. For this study, the names of all patients known from their medical records to have had menorrhagia at any time were taken from the index.

One hundred and three women were recorded as having had menorrhagia. The index also revealed that a further 33 women had undergone hysterectomy for reasons other than menorrhagia or for reasons which were not clear; these women were excluded from the study.

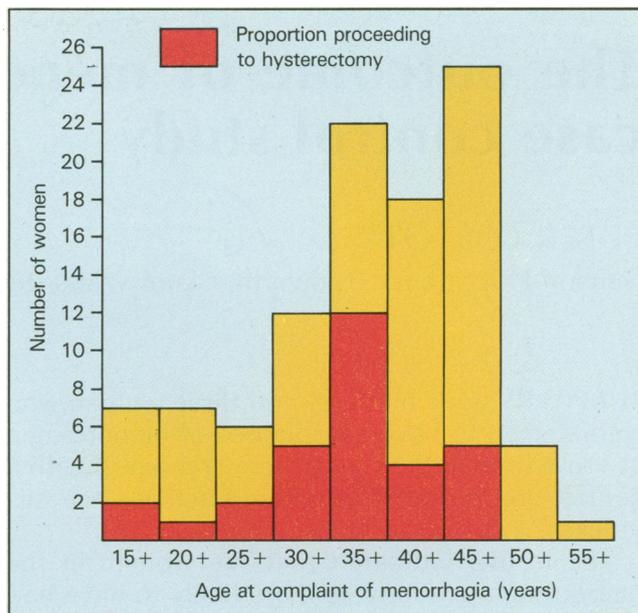
For each 'menorrhagia index case' a control was selected from the age-sex index. Where available, the next alphabetically consecutive woman with the same year of birth was chosen, and when this was impossible the first woman in the year of birth before that of the menorrhagia index case was chosen. No woman was used as a control twice, nor if she was already included in the menorrhagia group.

Incidence figures for menorrhagia over the last three years were available from the practice's morbidity record. Details for analysis were abstracted from the patients' NHS records, continuation cards and hospital letters (Figure 1). The data were analysed using a microcomputer. The thickness of each folder of case notes was measured to the nearest millimetre using BS engineer's calipers closed to hand pressure at the mid-point of each envelope and then removed.

## Results

**Length of time covered by records.** The length of time which each NHS medical record covered was calculated from date entries. The average for the menorrhagia group was 26 years and for the control group 24 years—not statistically different ( $P > 0.05$ ).

**Parity.** There was no significant difference between the menorrhagia group and control group in terms of the size of their families: means/modes 1.8/2 and 1.6/2 children respectively (standard deviations 1.1/1.2 children; standard error in distribution of differences between means 0.16 ( $P > 0.05$ )).



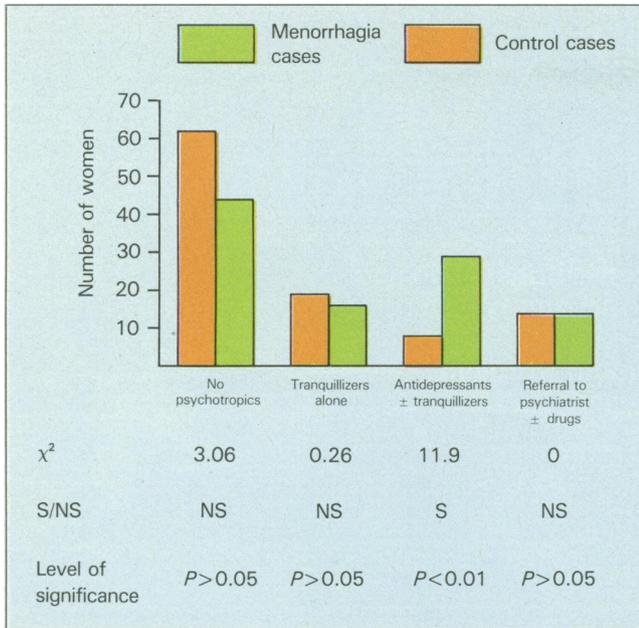
**Figure 2.** Age at complaint of menorrhagia (n=103).

**Thickness of folders.** Significance testing revealed that the notes of the menorrhagia and control patients belonged to two distinct populations: means 8.1 mm, 4.8 mm; standard deviations 3.5 mm, 3.0 mm respectively; standard error in distribution of differences between means 0.5 mm. Thus the notes for the menorrhagia group were significantly fatter than the notes for the control ( $P < 0.01$ ).

**Marital disharmony.** A chi-square test revealed no significant difference between the menorrhagia group and the control group in terms of the numbers of patients who were known to have had significant marital disharmony: 24 in menorrhagia group, 14 in control group ( $\chi^2 = 2.63$ ;  $P$  (both groups) =  $> 0.05$ ).

**Age at menorrhagia, and outcome.** The outcome for the 103 women with menorrhagia was: 30 per cent of the cases had resulted in hysterectomy, 29 per cent resolved after curettage, 24 per cent resolved with treatment and 17 per cent resolved spontaneously. Figure 2 shows their ages when they experienced menorrhagia. Most (63) were aged 35–49 years. The likelihood of hysterectomy was related to age at menorrhagia. Women aged 25 to 39 years were twice as likely as the remainder to have undergone hysterectomy: 19 hysterectomies in 40 women aged 25–39 years compared with 12 in 63 of the rest ( $\chi^2 = 6.66$ ,  $P < 0.05$ ).

**Association with affective problems.** Figure 3 illustrates the proportions in both groups who were recorded as having had tranquillizers (more than once but without antidepressants or referral to a psychiatrist), antidepressants (with or without tranquillizers but without referral to a psychiatrist) or who had ever seen a psychiatrist (plus or minus psychotropics).



**Figure 3.** Recorded history of 'emotional problems' for 103 menorrhagia cases and 103 control cases (NS = not significant, S = significant).

No difference was noted between the two groups for tranquillizers alone or for referral to a psychiatrist. However, those in the menorrhagia group were significantly more likely to have had antidepressants (without the involvement of a psychiatrist). Twenty-eight of the 29 women in this last-named category had also received tranquillizers at some time, and 12 had undergone hysterectomy (not significantly different from the norm). The mean thickness of the folders for the medical records of these 12 women was 10 mm, indicating that theirs were among the larger folders in the menorrhagia group. Of the 29 women who had had antidepressants, 14 had had them coincident with the complaint of menorrhagia; however, 10 of these 14 women had also had antidepressants at other times in their lives. In general, the length of time for which the drugs had been taken was short (mean/mode = 3/2 months; range 1–18 months).

**Association with other significant medical conditions.** Nineteen (18 per cent) women in the menorrhagia group were noted to have had an associated iron deficiency anaemia (there were no cases in the control group). Eighteen menorrhagia patients had received treatment for varicose veins or haemorrhoids compared with six in the control group. In the menorrhagia group, 28 women had seen gynaecologists for reasons other than menorrhagia compared with 39 in the control group. With the exception of iron deficiency anaemia and cardiovascular problems (varicose veins and haemorrhoids), there were no other significant differences in the overall observed morbidity between the two groups. There were two cases of thyroid disease in the menorrhagia group and three cases in the control group.

**Associations with specific outcomes.** No other significant associations with outcome were observed. In particular, the likelihood of hysterectomy was not associated with parity, iron deficiency anaemia or the three categories of emotional problems described.

**Incidence data.** In the three years (1979–81) for which reliable data on morbidity is available from the practice, the incidence of menorrhagia was seven per 1,000 women per year.

## Discussion

Retrospective surveys of this type, which rely on good record-keeping, are notoriously inadequate because of the loss of information from the system. Comparison with controls makes a survey more reliable, since the exercise then becomes one of looking for differences between the two groups. Checks can be built into the project in order to validate the details. In this respect it is interesting to note the number of parameters which are not significantly different in the menorrhagia cases and controls: for instance, length of history covered by the records, parity, overall associated morbidity, and known experience of marital problems.

Three points stand out in comparison between the two groups:

1. The menorrhagia group have fatter medical records. Overall morbidity seems similar in the two groups, with the exception of iron deficiency anaemia, varicosities and menorrhagia itself. It seems unlikely that the difference in folder size is due solely to these factors. In the majority of cases the thickness of the folder was as much due to continuation cards as to hospital letters, and it would seem that frequent attendance at the surgery for recurrent minor problems was the reason for there being a large number of continuation cards.
2. Those in the menorrhagia group were more likely to have presented an emotional problem in a way which would have led the general practitioner to treat the patient with antidepressants but without specialist psychiatric help. Half of these women had received antidepressants coincident with the recorded complaint of heavy periods; however, even in this category most patients had also received antidepressants at other times in their lives. Thus almost all of those women who had received antidepressants had had them at a time other than coincident with the menorrhagia. It is only possible to speculate on the reasons for this finding, which may be as much related to factors within the doctor-patient relationship as to the woman's mental state.<sup>14</sup>
3. The complaint of menorrhagia from a woman aged 25 to 39 years was more likely to result in a hysterectomy than in other age groups. No other associations were noted. In particular, the likelihood of hysterectomy was unrelated to a history of iron deficiency anaemia or of affective illness, there being no differences in the proportions of the various 'affective'

categories in each outcome subgroup. This may imply that while there is in some cases an affective component to the complaint of menorrhagia it plays little part in affecting the ultimate outcome.

Few cases of menorrhagia were found which had presented before 1960, which was to be expected from the average length of time the notes covered (25 years). However, if the incidence of menorrhagia recorded for the three years is reliable one might have expected a sample size of around 250 cases, not 103. Some of these women may have died and their notes have been lost. Some episodes were not recorded. The third possibility is that the present therapeutic environment and public expectation leads more women to seek help from their doctor than previously. Nowadays, many women's idea of a normal period is that which they experience while using the oral contraceptive. Since these drugs reduce the degree of loss at menstruation, attitudes to what is acceptable as a 'normal' period may have changed in the last 10 years.

## Conclusions

This study supports the general observation of an association between some complaints of menorrhagia and a history of an emotional disorder of the sort traditionally treated by general practitioners with anti-depressant drugs without referral to psychiatrists. The menorrhagia patients' thicker folders are mainly due to their more frequent consultations for minor complaints.

The outcome of the menorrhagia was unrelated to any of the factors studied other than the age at which the woman first complained of the problem. Women aged 25-39 years were significantly more likely to progress to hysterectomy. The likelihood of undergoing hysterectomy was unrelated to the presence of an iron deficiency anaemia (an indication of the degree of menstrual loss) or a history of affective mood disturbance.

If studies of the complaint of menorrhagia are to become more objective, it would seem essential that a simple and reliable method of assessing the amount of menstrual loss be developed.

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## Acknowledgements

I would like to thank the South West Thames Regional Health Authority for supporting the microcomputer study of which this project is a part. I also thank Joyce Jacobs and Sally Wallington for typing the manuscript.

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## Deaths from accidents and violence

The number of accidental deaths decreased by 4.2 per cent from 3,630 in the December quarter of 1980 to 3,478 in the comparable period of 1982. There were decreases in both transport accident deaths (-4.9 per cent) and other accidental deaths (-3.5 per cent). The number of suicides registered in the December quarter 1982 (1,114) was marginally down on the figure for the corresponding quarter of 1980 (1,183) due to a reduction in the number of deaths of females. There was an increase in homicides (+22) but a reduction of deaths resulting in open verdicts (-21).

The total number of accidental and violent deaths for the year decreased from 20,296 in 1980 to 19,610 in 1982. There were decreases in all categories except open verdicts; transport accidents (-8.4 per cent), other accidents (-2.7 per cent), suicides (-1.0 per cent) and homicides (-13.8 per cent). The increase in open verdicts (+10.1 per cent) may be partly the result of handling accelerated registrations in 1982, which may be offsetting the apparent reduction in homicides.

All road accident deaths have to be referred to the coroner and therefore there is inevitably a time-lag between the death and registration. An assessment of this time-lag shows that at least 50 per cent of all deaths are registered within three months and over 90 per cent within six months.

Source: Office of Population Censuses & Surveys. *OPCS Monitor* 1983; DH4 83/2: 1.