ORIGINAL ARTICLE

A Comparative Study of Hysterectomy and Conservative Treatment of Menorrhagia due to Dysfunctional Uterine Bleeding in Women of Low Socioeconomic Group

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ABSTRACT

Objectives: This study was conducted to select a better option out of available medical and surgical interventions for treatment of menorrhagia due to dysfunctional uterine bleeding specially in women belonging to low socio-economic group.

Design & settings: This interventional type of study was conducted in the Department of Obstetrics and Gynaecology, Bahawal Victoria Hospital Bahawalpur, The duration of study was one year starting from 07-07-2004 to 06-07-2005.

Methodology: Total 100 cases of menorrhagia due to dysfunctional uterine bleeding were selected on the basis of history, clinical examination and investigations. These patients were divided into two groups of 50 patients each. In-group A surgical intervention hysterectomy was performed and in-group B medical treatment was given for menorrhagia.

Results: Results were compared on the basis of expenses of treatment, duration of hospital stay, number of follow up visits and complications of treatment. The average duration of hospital stay in (Group A) was 6 times longer than Group B. The expenses of surgical treatment were more than medical treatment. As compared to surgical group, the conservative group required more regular and long-term follow up which showed poor compliance due to financial reasons mainly. More complications were observed in conservative group than surgical group.

Conclusion: This study concluded that Hysterectomy offered better, definitive and permanent cure for menorrhagia due to dysfunctional uterine bleeding as compared to medical treatment, among women (aged 40-45 years) belonging to low socio-economic group due to financial reasons mainly.

Key words: Menorrhagia, Dysfunctional uterine bleeding (DUB), Low socio-economic group

INTRODUCTION

Menorrhagia is menstruation at regular cycle intervals but with excessive flow and duration. It is defined clinically as total blood loss exceeding 80 ml per cycle or menses lasting longer than 7 days. A normal menstrual cycle is 21-35 days in duration, bleeding lasting for seven days and flow between 25 and 80ml[1].

Menorrhagia is one of the commonest complaints seen in practice and accounts 12% of all referrals to a general gynaecologic clinic. Among women aged 16-45 years it has an incidence of around 30% and remains the commonest indication for hysterectomy[2]. According to a study menorrhagia was the most frequent presenting symptom and indication for hysterectomy in 56% cases[3].

Among the causes of menorrhagia are dysfunctional uterine bleeding (most common), others are pelvic pathology, coagulation disorders and medical disorders. DUB accounts for about 80% cases of menorrhagia. While majority of patients with DUB has anovulatory cycles, 25% of them have irregular ovulation[4].

The volume of blood lost, at menstruation is controlled by local uterine vascular tone, haemostasis, and regeneration of endometrium. Studies of patients with menorrhagia have shown a greater endometrial concentration of the vasodilator prostaglandin E (PGE)[5,6], and a relationship between total prostaglandin (PGE, PGI 2, and PGF2 alfa) concentration and average blood loss. Increased endometrial fibrinolysis may be of importance[7], as suggested by reduction in mean menstrual blood loss in women taking antifibrinolytic drugs (e.g. tranexamic acid)[8].

Women seeking treatment for menorrhagia often do not have greater blood losses than average. In a population study, 26% of women with normal menstrual loss (<60ml) considered their period heavy, while 40% of those with heavy losses (>80ml) considered their periods to be moderate or light [9].

Medical treatment of menorrhagia consists of antifibrinolytics (Tranexamic acid), non-steroidal anti-

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inflammatory drugs, the combined contraceptive pills, progestogens, danazol, or analogues of gonadotrophin releasing hormone[10].

Surgical treatment includes hysteroscopic endomentrial ablation by physical agents, laser electrodiathermy and "Roller ball" or surgical resection. Hysterectomy is the treatment of last resort[11]. Hysterectomy provides definite cure of menorrhagia[12].

The problem has been selected for study as most of the women in this area presenting with menorrhagia belong to very low socio economic status and non-compliant to coping with menstruation difficult. Menorrhagia is also a major cause of Iron deficiency anemia.

MATERIAL AND METHODS

It was an interventional study. The study was conducted in the Gyne unit-I of Department of Obstetrics and Gynecology Bahawal Victoria Hospital Bahawalpur. Bahawal Victoria Hospital is the teaching hospital, affiliated with Quaid-e- Azam Medical College Bahawalpur, and it is located in the southern Punjab. It is the tertiary care center and provides health care facilities not only to the people of southern Punjab (Bahawalpur and its peripheral areas) but also drains a large area of upper Sindh. Mennorhagia was defined for the purpose of study as ladies with history of passage of clots or the number of sanitary pads soaked per day more than their normal routine, or prolong cycle more than seven days. Low socioeconomic group was categorized by two criteria:

1. By personal judgment
2. The patient who had total family income of rupees 3000 or less per month. Dysfunctional uterine bleeding is defined as heavy and/ irregular menses in the absence of recognizable pelvic pathology, pregnancy or general bleeding disorders.

Non compliance means the patients who either did not start the conservative treatment, or if started did not continue as advised, or those who quit conservative treatment due to any reason before the completion of treatment. Women of 40-45 years of age who had completed their family and presented with menorrhagia due to dysfunctional uterine bleeding and belonged to low socioeconomic group were included in the study.

Total 100 cases of menorrhagia due to dysfunctional uterine bleeding and belonging to low socio-economic group were selected after diagnosis on the basis of detailed history, clinical examination and investigations specially, hemoglobin estimation, ultrasonography (to determine endometrial thickness and to rule out any organic lesion like fibroid uterus) and diagnostic dilatation and curettage to exclude any other endometrial pathology. First 100 cases of women were selected using purposive sampling technique i-e fulfilling inclusion criteria from out-patient department of Gynaecology & Obstetric of Bahawal Victoria Hospital for study. These 100 cases were divided in to two groups**:**

Group A (study group - undergoing hysterectomy)
Group B (comparison group - given medical treatment) First line: Antifibrinolytic agents Non-Steroidal anti-inflammatory drugs 2nd line: Progesterone. Norethisterone, Dyhydrogesterone Combined oral contraceptive pills.

First line was given to all the 50 patients of group B.Trenexamic acid in combination with Mefenemic acid for first 5 days (during menstruation) for 6 cycles to control menorrhagia. Oral iron therapy in the form of Ferrous Sulfate was given for 6 months, according to the requirement (depending on degree of anemia), as most of the patients were anemic.

Thirty five patients (out of 50) responded to first line treatment and required no further treatment. Only 3 patients (out of 50) with severe menorrhagia were admitted and required injectable medication.

2nd line was given to those 15 patients who did not respond to first line treatment. . All those patients were advised regular follow. Data was collected on specially designed proformae after explaining the purpose of study to each of the patients and taking their verbal consent. Information regarding socio-demographic variables i-e age, address, educational status and income was collected from all the patients before undergoing intervention. After intervention patients of both groups were followed up for complete six months. In group A (patients who underwent hysterectomy), and group B (patients who received medical treatment),the information was collected regarding duration of hospital stay, expenses of treatment, total follow up visits and complications developed. Collected data analyzed on SPSS version 10. This difference noted was subjected to statistical tests i.e., Chi square.

RESULTS

This study was conduced on 100 patients, 50 underwent hysterectomy and 50 got conservative treatment. The comparison of both groups was based on six months follow up duration. It was observed after data analysis, that average duration of stay in hospital of group B patients, (who received medical treatment) was 1 day while in group A (surgically treated) was 6 days, which was 6 times longer than those, who were given conservative, or medical

treatment as shown in table 1. This difference was statistically significant. It was also observed that average cost of medical treatment was Rs.1600/ 6 months while in case of surgical treatment was Rs. 6000/ case, which was more expensive than the average cost of conservative or medical treatment as indicated by table 2 and difference of cost was statistically significant.

Data obtained from both groups A and B also showed, that patients of groups A, required less follow up visits (average 2) than those of groups B (average 3), as indicated in Table 3.This difference was found to be statistically significant.

Regarding complications of both groups it was observed that patients of group B had more but less serious complications than those of group A as shown in table 4.This difference was found to be statistically significant.

Table 1: Comparison of duration of hospital stay

Treatment option	**=n**	**Average duration of hospital stay (Mean ± S.D)**
Group A Surgical treatment	50	6 days (6 ± 1.58 S.D)
Group B conservative treatment	50	1 days (1 ± 1.18 S.D)

Standard error (S.E) of difference between two means is 0.278. The actual difference is 5(6 -1) which is more than twice (0.557) the standard error (S.E) of difference between two means and therefore‘’ significant‘‘, (P<0.05) meaning by hospital stay in Group B is definitely lesser as compared to Group A.

Table 2: Expenses of treatment

Treatment option	**=n**	**Range of Expenses**	**Average expenses (mean ±S.D)**
Surgical treatment	50	Rs(5000-7000)	Rs.6000 (6000±732 S.D)
Medical treatment	50	Rs(1000-2200)	Rs.1600 (1600± 350 S.D)

Table 3: Follow up visits

Treatment option	**=n**	**Average number of follow up visits (mean ± S.D)**
Hysterectomy	50	2 in 6 months (2 ±1.0198 S.D)
Conservative treatment	50	3 in 6 months (3 ±1.0392 S.D)

Standard error of difference between the two means is 114.7.The actual difference 4400(6000 – 1600) which is more than twice (229.4) the standard error of difference between the two means and therefore ” significant ” ,(P< 0.05) meaning by the expenses of treatment in “Group A” are definitely greater as compared to “ Group B “.

Standard error of difference between the two means is 0.205.The actual difference is 1(3-2) which is more than twice (0.411) the Standard error of difference between two means and therefore “significant”, (P<0.05) meaning by number of follow up visits in Group”B” are definitely greater as compared to Group”A”.

Table 4: Complications of treatment

Complications	**Surgical**	**Conservative**	**Total**
Yes	12	32	44
No	38	18	56
Total	50	50	100

Chi-square value = 16.2 at (P< 0.05) significant.

DISCUSSION

Menorrhagia, i.e. excessive menstrual bleeding has been a physically incapacitating, financially draining and socially embarrassing condition. Socioeconomic strata hinders the prolonged and costly medical treatment and its long term follow up. The purpose of this study was to select the better option of treatment for menorrhagia out of available medical and surgical interventions, in-patients aged 40-45 years who had completed their family and belonged to low socio-economic group.

The results of our study are comparable to a good extent, regarding duration of hospital stay; of surgical intervention to a study conducted at Liaqat National Hospital Karachi, from 1992 to 1996[13], that showed that the hospital stay of hysterectomy ranged from 6-9 days (average 6 days).

Regarding conservative management of menorrhagia no specific data was found regarding hospital stay but in our study only 3 patients out of 50, having severe menorrhagia, were admitted in the hospital and were given Inj. Transamine, and Tab. Mefenamic acid in 24 hours of stay. Their improvement was assessed and then discharged on oral medication.

In our study group B patients were given two lines of conservative treatment. The first line treatment included Tab. Mefenamic acid and Caps. Tranaxemic acid. The second line of treatment included hormonal therapy. e.g., Progesterone , Combined oral contraceptive pills. In-group B 35 patients (70%) out of 50 responded to first line of treatment, where as rest of 15 patients (30%) were also supplemented with second line of treatment (hormonal therapy).

The results of conservative treatment of our study is somehow comparable to a study carried out at Abbasi Shaheed Hospital Karachi from 1st January;

1995 to 31st December 1995 in which Tranexamic acid and Mefenamic acid were shown good medical option as first line treatment of menorrhagia[14]. In that study the efficacy of Tranexamic acid was 50% and that of Mefenamic acid was 20-30%. In our study, the second line treatment (hormonal therapy) which was supplemented to those of first line therapy, failures was 30%(15 patients) that is to somehow comparable to a study conducted at Abbasi Shaheed Hospital Karachi from December 1999 to December 2000, in which the response of hormonal therapy in ovulatory DUB was 20%[15].

In our study the cost of surgical treatment was Rs.6000 per case, that was much cheaper than the cost of hysterectomy in United States in which the average cost of hysterectomy, is 6300$[16]. In our study group B patients (medical treatment) required more frequent follow up than that of group A (surgically treated). So the patients compliance of follow up in-group B is poor than that of group A. Medical treatment requires follow up of the patients, as atypical hyperplasia of endometrium, may develop and can lead to endometrial carcinoma[15].

In our study the complications of surgical option was very low as compared to medical treatment that is almost 3 times less than medical therapy. Regarding side effects of medical treatment gastrointestinal symptoms were most commonly noticed by patients who used Tab Mefenemic acid that is quite comparable to a study conducted at Abbasi Shaheed Hospital Karachi from December 1999 to December 2000. In this study 75% patients (who used Tab Mefenemic acid for treatment of dysfunctional uterine bleeding) reported gastrointestinal symptoms. Headache, nausea, vomiting, weight gain and mood changes were the side effects noticed by the patients who used combined pills of Ethinylestradiol and nor-ethisterone. Regarding complications of surgical option, there was no mortality associated with hysterectomy in this study. Febrile morbidity was most frequently noted problem despite antibiotic prophylaxis that is comparable to a good extend to a study conducted at Liaqat National Hospital, from 1992 to 1996[13]. So it appeared that hysterectomy is safe in our setup and caries a low morbidity without mortality. Results of two new studies show that despite aggressive medical management most women with menorrhagia unrelated to pregnancy or malignancy will eventually need surgery and will undergo additional offering by forestalling more definitive treatment[17].

CONCLUSION

This study concluded that hysterectomy was a better modality of treatment of menorrhagia due to dysfunctional uterine bleeding, in age group 40-45 years, as far as, cost of treatment, complications and short term good compliance follow up is concerned, as compared to medical treatment except for the hospital stay that was shorter in the group treated conservatively.

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