



A Comparative Study of the Efficacy of Tranexamic Acid and Mefenamic Acid with and Without Ethamsylate in the Management of Dysfunctional Uterine Bleeding

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ABSTRACT

Introduction: Dysfunctional uterine bleeding (DUB) is responsible for more than 1/3rd of all admissions in the gynecological outpatient clinics. Menorrhagia is defined as a complaint of heavy menstrual bleeding over several consecutive cycles and affects upto 11% of women in their reproductive age group.

Aims&Objectives: To study the efficacy of Antifibrinolytic drugs and Antiprostaglandin drugs when combined with Ethamsylate in the management of DUB.

Materials & Methods: This study is randomized prospective study which was done in the Department of Obstetrics and Gynecology, Government Maternity Hospital, Hanmakonda / Kakatiya Medical College, Warangal after due approval of the ethical committee of medical college. A total of 50 patients were studied in each group with age between 15-50 years and they were divided into groups each of (A&B) 25 patients.

Results: There is subjective reduction in bleeding (Menorrhagia, Polymenorrhagia). In group A (75%) subjective symptoms of reduced bleeding by the patients gave better results when compared to Group B(60%). There is no change in 25% of patients in Group A and 40% in Group B. There is reduction of pallor within 8 weeks in Group A (more pronounced), when compared to Group B (9 Weeks). In Group A average Hb% before treatment is 8.7gm%, After treatment for 3 cycles it is 13.5gm% and in Group B it is 8.9gm% before treatment and 12.8gm% after treatment. p value is <0.001 in both groups which is highly significant.

Conclusion: The management of DUB has undergone a drastic change after the evidence based medicine studies done by Cochrane. As it is now recognized as a clinical entity Combination of Tranexamic acid with mefenamic acid and ethamsylate for the management of DUB

KEYWORDS :

Introduction:

Dysfunctional uterine bleeding (DUB) is responsible for more than 1/3rd of all admissions in the gynecological outpatient clinics. Menorrhagia is defined as a complaint of heavy menstrual bleeding over several consecutive cycles and affects upto 11% of women in their reproductive age group. It is mainly due to a disturbance in the Hypothalamo-pituitary-ovarian axis and on gynecological examination the uterus and adnexa are normal. Anovulatory bleeding which is usually seen in young adolescent age group, perimenopausal age group and in reproductive age group and responds well to Antifibrinolytic drugs like Tranexamic acid, Ethamsylate. They are very effective because they address the basic cause for the bleeding i.e., the local pathological mechanisms in the endometrium like increased activity of PGI₂ and PGE₂ and increased capillary permeability also counteracts the changes in the coagulation mechanism which occurs in the endometrium at the cellular level by inhibiting the excess fibrinolytic activity and promoting the haemostasis.

Aims&Objectives:

To study the efficacy of Antifibrinolytic drugs and Antiprostaglandin drugs when combined with Ethamsylate in the management of DUB.

Materials & Methods:

This study is randomized prospective study which was done in the Department of Obstetrics and Gynecology, Government Maternity Hospital, Hanmakonda / Kakatiya Medical College, Warangal after due approval of the ethical committee of medical college.

Inclusion Criteria:

All patients of menorrhagia, polymenorrhea, polumenorrhagia and continous bleeding in the age group of 15-45 years.

Exclusion Criteria:

The exclusion criteria were patients not in this age group and having any organic causes like Endocrine disorders, Tuberculosis, Carcinoma of cervix, carcinoma of body of uterus, blood dyscrasis and pregnancy related causes were excluded.

The patients were selected from Gynecology department clinic and a detailed history, general examination and Gynecological examination was performed. After the examination the patients were subjected to simple investigations in the outpatient clinic followed by a Transvaginal Ultrasound to rule our pathology.

A total of 50 patients were studied in each group with age between 15-50 years and they were divided into following groups each of 25 patients.

Test Group A: The patients were treated with Tranexamic acid, Mefenamic acid and Ethamsylate.

Test Group B: The patients were treated with Tranexamic acid and Ethamsylate.

- Doses: 1. Oral Tranexamic acid 500 mg /TID
2. Oral Mefenamic acid 250 mg/TID
3. Oral Ethamsylate 250 mg/TID.

The duration of the treatment was 5 days for 3 consecutive cycles. The patients were followed up for every 15 days of treatment and the results were recorded after the completion of treatment i.e., after 3 months and the results were subjected for statistical analysis.

Results:

We observed that the maximum prevalence of DUB is between the age group of 31-40 years i.e., 44% followed by 32% in the age group of 41-45 years. (Table 1). The commonest bleeding pattern is observed in our cases were Continuous type in 60% followed by menorrhagia in 30%, polymenorrhea 7%, and polymenorrhagia 3%.

Table 1: Age distribution of patients and percentage of DUB

Sl.No	Age group	Percentage
1	16-20y	4%
2	21-25y	4%
3	26-30y	8%
4	31-35y	20%
5	36-40y	24%
6	41-45y	32%
7	45-50y	8%

There is subjective reduction in bleeding (Menorrhagia, Polymenorrhagia). In group A (75%) subjective symptoms of reduced bleeding by the patients gave better results when compared to Group B(60%). There is no change in 25% of patients in Group A and 40% in Group B (Table 2).

Table 2: Subjective Reduction in Bleeding

Group A:	75% gave history of reduced bleeding 25%, there was no change observed
Group B:	60% observed reduction in bleeding 40% there was no change.

Table 3: Subjective Reduction in spasmodic Dysmenorrhea and Abdominal Pain

Group A	55% showed reduction in Spasmodic Dysmenorrhea 45% No change
Group B	55% showed reduction in Spasmodic Dysmenorrhea 45% No change

There is reduction of pallor within 8 weeks in Group A(more pronounced), when compared to Group B (9 Weeks).In Group A average Hb% before Treatment is 8.7gm%, After treatment for 3 cycles it is 13.5gm% and in Group B it is 8.9gm% before treatment and 12.8gm% after treatment. p value is <0.001 in both groups which is highly significant.(Table 4)

Table 4: Hb% levels in both Groups

Sl.No	Group	Hb% before Treatment	Hb% After Treatment	P value
1.	Group A	8.7±2.1	13.5±1.7	< 0.001
2.	Group B	8.9±3.9	12.8±1.97	< 0.001

Discussion:

DUB accounts for 1/3rd of all Gynecological admission and it is broadly divided into Ovulatory and Anovulatory types. The main pathology is coagulation mechanism in the endometrium. When the normal fibrinolytic mechanism of endometrium is disturbed bleeding occurs. Drugs like Tranexamic acid inhibit conversion of plasminogen to plasmin and encourage haemostasis and it also helps in clot stabilization and preserves the fibrin matrix.

Mefenamic acid because of anti prostaglandin activity is very useful. It selectively reduces PGI₂ and PGE₂ which are vasodilators and reduce bleeding. It also inhibits PGF_{2α} and decreases pain.

Evidence based medicine in DUB when graded into A,B and C assume that NSAIDS when combined with Tranexamic acid reduce menstrual blood loss and also dysmenorrheal.

In our study also there is significant reduction in the menstrual blood loss as evidenced by reduction in menorrhagia and increase in Hb% which compares favourably with evidence based studies. Our study showed the superiority of combing Tranexamic acid with ethamsylate and mefenamic acid in the management of DUB. The Cochrane review conclusion 2002 also proves the efficacy of antifibrinolytic drugs in menorrhagia which is again in conformity with our study.

Conclusion:

The management of DUB has undergone a drastic change after the evidence based medicine studies done by Cochrane. As it is now recognized as a clinical entity Combination of Tranexamic acid with mefenamic acid and ethamsylate for the management of DUB.

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