



COMPARISON OF TRANEXAMIC ACID WITH A COMBINATION OF TRANEXAMIC ACID AND MEFANEMIC ACID IN TREATING MENORRHAGIA

Gynecology

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ABSTRACT

An observational study was performed in 30 patients with duration of menorrhagia of 6 months. Patients in the age group 30-45 yrs with normal TVS (transvaginal sonography) and no other organic disease were included in the study. The patients were grouped into 2, each group had 15 patients. Both group received treatment from D1-D5 of menstrual cycle. Group A received tranexamic acid 500mg, 2 tablets stat followed by 1 tab 8 hrly and group B received tranexamic acid 500mg and mefenamic acid 250 mg, 2 tab stat followed by 1 tab 8hrly. The efficacy of the treatment was evaluated by clinical estimation of reduction in blood loss (patient history and decrease in number of sanitary napkins used) and rise in haemoglobin concentration post treatment at 3 months follow up. Bleeding lasted for 4-5 days in grp A but lasted for 3-4 days in grp B. Number of sanitary napkins used were reduced by 40-45% in grp A and by 55-60% in grp B. Hb levels rose by 1-1.5 gm% in grp A and by 1.5-2gm% in grp B. The result concluded that the combination therapy of tranexamic acid and mefenamic acid is superior to tranexamic acid alone in treating menorrhagia.

KEYWORDS

Dysfunctional uterine bleeding (DUB), menorrhagia, tranexamic acid, mefenamic acid, haemoglobin concentration, menstrual blood loss (MBL).

Introduction:

Dysfunctional uterine bleeding is abnormal uterine bleeding without an organic disease. (1) There are two types of DUB, Ovulatory DUB (20%) that is seen in reproductive age and Anovulatory DUB (80%) which is seen at menarche and during perimenopause. (2) The most common menstrual disorder that troubles women from menarche to menopause is DUB. (2), it commonly manifests as menorrhagia. Nearly one-third of all women have suffered from menorrhagia and incidence of new cases aged 30-49 years is 5%. (1) Menorrhagia, or heavy regular menstrual bleeding when quantified as menstrual blood loss (MBL) of 80 mL or more per cycle (3). Clinically, diagnosis is subjective based on patient history suggestive of bleeding >7 days, soaking of one or more napkins hourly, use of more than one pad, bleeding with clots and need to change sanitary napkins during the night. (5)

Menorrhagia affects the life of women physically, socially, emotionally and economically to an extent that they seek medical or surgical help for this problem. (6) Medical management should usually be opted first specially in premenopausal women and for preserving fertility in reproductive age. Medical management reduces the need of hysterectomy and associated morbidity. Many drugs are available for managing DUB but hemostatic agents (tranexamic acid and NSAIDs (Mefenamic acid) are among the most effective first line drugs for treating menorrhagia. (1)

Haemostatic agents: The antifibrinolytic tranexamic acid (a synthetic derivative of amino acid lysine) reduces menstrual blood loss by 45-60%. It inhibits plasminogen activators in the endometrium, these enzymes convert plasminogen to plasmin, and are raised in menorrhagia. Plasmin dissolves fibrin clots which add to menstrual flow so tranexamic acid reduces menstrual blood loss by reducing plasmin production.

NSAIDs: Women with menorrhagia have increased prostaglandin E2 synthesis and prostaglandin E binding sites. Cyclo-oxygenases that help in prostaglandin production are inhibited by NSAIDs. NSAIDs reduce blood loss by 20-50 per cent. Mefenamic acid (anthranilic acid derivative) is the only licensed drug for treating menorrhagia and remains the most effective. It also relieves co-existent dysmenorrhea (2,5).

The study aims at comparing the efficacy of tranexamic acid (an antifibrinolytic) with a combination of tranexamic acid with mefenamic acid (NSAID) in reducing menstrual blood loss in the age group 30-45 years.

Patients and methods-

1. Patients aged 30-45 years, complaining of heavy menstrual bleeding.
2. Organic causes excluded by TVS, Paps smear.
3. Patients who have no history of renal or hepatic impairment, coagulation or fibrinolytic disorder, previous thromboembolism, peptic ulceration, inflammatory bowel disease were included.
4. Patients with Hemoglobin level >7 gm% were included.
5. 30 patients having a menstrual blood loss >80 ml over 3 consecutive menstrual periods were included.

Treatment was given for 5 days from day 1 of MBL during three consecutive periods. 15 patients grouped as Gp A were given 1 gram stat dose followed by 500 mg 8 hrly. The other 15 patients in Gp B were given a combination of tranexamic acid 500 mg and mefenamic acid 250 mg, 2 tab stat dose followed by 1 tab 8 hrly.

The efficacy of the treatment was evaluated by clinical estimation of reduction in blood loss: patient history and decrease in use of number of sanitary napkins (of the same brand) and rise in Hb conc. post treatment during follow up at 3 months.

Results:

The average MBL was reduced in both the groups.

In group A: Bleeding lasted for 3-4 days (scanty in the last two days).

Number of sanitary napkins reduced by 40-45%.

Hemoglobin value rose by 1-1.5 gm%.

In group B: Bleeding lasted for 2-3 days (scanty in the last two days).

Number of sanitary napkins reduced by 55-60%.

Hemoglobin value rose by 1.5-2 gm%.

Conclusion-

The combination of tranexamic acid and mefenamic acid is definitely more superior to tranexamic acid alone in reducing MBL, and in the dosage used is quite acceptable to the patient. The combination therapy has an added advantage of relieving dysmenorrhea. This study recommends use of combination therapy as first line for treatment of menorrhagia.

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