Abnormal Uterine Bleeding- Managing iron deficiency anaemia

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Heavy menstrual bleeding is the most commonly observed complaint among women of reproductive age (15–49 years) presenting to gynaecologic outpatient departments. Although treating the specific pathology for heavy bleeding is essential, many patients with AUB have iron deficiency anemia due to acute or chronic blood loss. India has one of the highest prevalence of anemia in the world across all age groups.

Heavy menstrual bleeding causes iron deficiency anemia and limits normal activity in two thirds of women who are losing >80ml per menstrual cycle. Women with increased menstrual bleeding experience decreased capacity to do routine work and are more likely to consult health care, resulting in a measurable economic burden to the society. These women suffer from significant depletion of iron stores due to continuous loss of iron every cycle (1). Although main aim of treatment in patients presenting with heavy menstrual bleeding is to treat underlying pathology leading to excessive blood loss. But treatment of iron deficiency anaemia should be done along with to improve overall performance status and to replete iron stores.

While investigating for the cause of bleeding, haematological investigations i.e. Hb, total leukocyte count, platelet count, serum ferritin, serum iron, transferring saturation, Total iron binding capacity, HPLC, RBC indices, baseline liver and kidney function tests should be advised.

Management of iron deficiency anaemia will depend upon Hb level, serum ferritin and other investigations indicating iron stores.
In patients with mild to moderate iron deficiency anaemia, oral iron therapy is the first line treatment option. But gastrointestinal adverse effects, poor patient compliance, and the prolonged time taken to increase hemoglobin levels limit its clinical utility. Additionally, in patients requiring rapid correction of anemia owing to surgery, oral iron therapy has limited utility.

Intravenous iron preparations have revolutionized the treatment of anemia. Due to high incidence of anaphylactic reactions, iron dextran is no longer used.

Over the past 20–30 years, intravenous iron sucrose (ISC) has become the preferred iron preparation for parenteral use. The only significant disadvantage of ISC is that it necessitates multiple infusions and prolonged infusion times. Repeated visits to a clinic are required because patients cannot receive more than 600 mg in 1 week.

With the challenge of optimizing iron delivery, new intravenous iron–carbohydrate complexes have been developed in the last few years. Most popular among the newer preparations is ferric carboxymaltose (FCM) which has been approved by FDA for the treatment of iron deficiency anemia in adult patients who are intolerant to oral iron or present an unsatisfactory response to oral iron, and in adult patients with non-dialysis-dependent chronic kidney disease (NDD-CKD). FCM is a robust and stable complex similar to ferritin, which minimizes the release of labile iron during administration, allowing larger doses (1000mg) to be administered in a single sitting thus making it more cost effective and patient friendly. As FCM is dextran free so does not cause anaphylactic reactions like iron dextran(2).

A prospective randomised trial was conducted to compare iron sucrose (ISC) and FCM for treatment of anaemia due to heavy menstrual bleeding. Thirty patients were assigned to each group. Increases in mean hemoglobin levels from baseline were significantly higher in the FCM group at 6 weeks (P = 0.005). At 12 weeks, there was no significant difference in haemoglobin (Hb) increase from baseline between the two groups (P = 0.11). Adverse events were similar between both treatment groups. The study concluded that FCM results in a rapid increase in Hb levels in patients with anemia due to HMB, with similar increases in Hb over a 12-week period (3).
Injectable iron therapy provides a better option in patients who are medically unfit or are waiting for surgery. This ensures the confirmatory improvement in Hb and iron stores.

To conclude, injectable iron therapy has revolutionised treatment of moderate to severe anaemia in women suffering from heavy menstrual bleeding. The need of blood transfusion is decreased significantly both pre-operatively and post-operatively. The threshold for injectable iron should be low while treating patients with heavy menstrual bleeding and moderate to severe anaemia or patient is not able to take regular oral iron due to compliance or intolerance.

Bibliography