manifested by orthostatic symptoms, irrespective of level of haemoglobin or hematocrit.

Alternative modalities available for managing subsequent cycles

These are extended OCP regime, long acting depo-medroxyprogesterone acetate (DMPA), Levonorgestral releasing IUD, non steroidal anti-inflammatory drugs, antifibrinolytic agents, danazol and GnRH analogues.

OCPs have been reported to reduce menstrual loss by 43%[13]. Over the last few years, use of extended regime is becoming more common. Numerous clinical trials on women with menorrhagia have shown that extended regimen without hormone free interval, is a safe and effective method to relieve these symptoms and ultimately induce amenorrhoea in 80% to 100% of women by 10 to 12 months use till such time their haemoglobin is restored to normal[14].

Intramuscular injection of a long acting progestational agent such as depo- medroxyprogesterone acetate (DMPA) has been used over the last decade to achieve therapeutic amenorrhea in the management of menorrhagia. However, some patients experience breakthrough and irregular bleeding. Such irregular bleeding pattern may further complicate the tendency for uncontrolled bleeding in patients with haematological abnormalities.

Non steroidal anti-inflammatory drugs like mefenamic acid (500mg 8 hourly) and antifibrinolytic drug like trenaxaemic acid (1gm 6-8 hourly) are indicated as an alternative to OCPs during menstruation in those patients who are hemodynamically stable and have moderate to heavy flow. NSAIDS and antifibrinolytic drugs reduce menstrual loss by an average of 30% and 50% respectively. [15.16]

Danazol[17] is an isoxazol derivative of 17 á ethinyl- testosterone and has a pure progestogenic action. It inhibit release of pituitary gonadotropin thereby suppresses the endometrium. However, its use is limited due to its cost and side effects like androgenic features, weight gain, muscle cramps, skin rashes etc.

GnRH agonists[18] causes pituitary down regulation and subsequent inhibition of cyclical ovarian activity. It is effective in reducing mean blood loss (MBL), however its use is limited to short term because of its cost and significant side effect like osteoporosis etc.

TREATMENT AND PREVENTION OF ANAEMIA

All adolescents with anaemia (haemoglobin less than 12 gm%) are treated with 180-200mg of elemental iron in divided doses whereas those with haemoglobin more than 12gm% should be prescribed prophylactic dose of 100 mg of elemental iron daily.

REASSURANCE

Reassurance is needed for all adolescents with menorrhagia to allay anxiety both related to disease and treatment. Parents and guardians are often reluctant for use of hormonal therapy in the form OCP etc. for their children. Proper counselling needs to be done.

PROGNOSIS AND FOLLOW UP [19, 20]

Adolescents with menorrhagia constitute a high risk group as there is an increased incidence of anaemia, need for transfusion, subsequent infertility, spontaneous abortion, and impaired reproductive potential. Chronic anovulation in PCOS also predisposes patients to endometrial hyperplasia and frank carcinoma in later life.

The importance of continued follow up in these girls is reinforced by the results of a 25 year prospective evaluation of adolescents' menstrual abnormalities. In 291 patients, 2 years after onset of the presenting episode, bleeding problem continued in 60% at 4 years, in 50% at 10 years and in 30 to 40% after more than 10 years. The worst prognosis was found in those with menorrhagia at the time of menarche.

The girls with underlying coagulation disorder remain a therapeutic challenge, best managed by the combined effort of both a haematologist and gynaecologist.

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