



**CONSENSUS STATEMENT ON THE MANAGEMENT AND EVALUATION OF
MENORRHAGIA (INCLUDING MANAGEMENT OF FIBROIDS)**

Introduction

Menorrhagia is defined as excessive heavy menstrual bleeding occurring on a regular or irregular basis. It affects about 1 in 10 to 1 in 20 of Singapore women. The exact incidence will not be known because of different cultural perception of menstruation and awareness of the condition. Affected females often have to change their pads or tampons every one to two hours on their heavy days.

Medical Definition

The 90th centile for menstrual blood loss (MBL) from population studies is 80mls/cycle (Hallberg 1966). The method for measuring MBL is the alkaline haematin test. However this is only available as a research tool and not used in clinical practice. Another method that can be used in clinical practice is the pictorial blood loss assessment chart (PBAC) (Higham 1990).

Menstrual loss of 80ml is associated with iron deficiency anaemia.

Clinical Definition

Menorrhagia is cyclical menstrual loss that affects the quality of life by limiting daily activities, interfering with social and working life, accompanied by lack of energy, pain and emotional stress.

A woman with menstrual flow lasting longer than seven (7) days, or has heavy bleeding that saturates a pad or tampon in one to two hours or uses more than 6 to 10 pads/tampons in one day is most likely to suffer from menorrhagia.

In a local study covering 133 women with menorrhagia, 50% were found to be anaemic with a haemoglobin level of below 10gm % (Lee 2002).

Menorrhagia

20% of reproductive age women worldwide

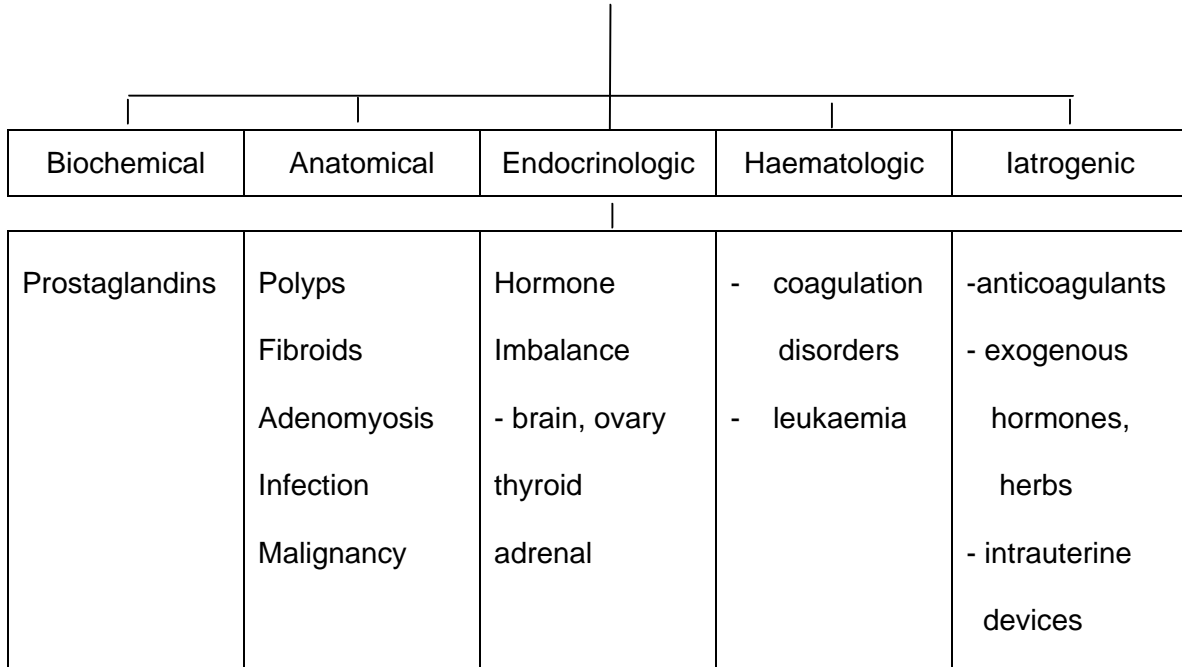


Diagram 1: Menorrhagia - Etiology

Management

A history of heavy cyclical menstrual loss over several consecutive cycles should be obtained. It should be established that there is no intermenstrual bleeding or post coital bleeding, otherwise this should be further evaluated. Specific questions should be asked about drugs, Chinese herbs, beauty products and contraceptive practice, as well as questions to exclude endocrine causes.

An abdominal and pelvic examination should be performed. A full blood count and pelvic ultrasound scan should be considered. Endocrine function tests do not need to be routinely performed unless the woman has symptoms or signs that suggest endocrine dysfunction.

If indicated, efforts should be made to keep the woman amenorrhagic or to decrease menstrual loss while rebuilding her haemoglobin level with haematinics.

Medical Therapy

Iron rich vitamins are important to rebuild low haemoglobin level and treat anaemia. Although there are several drug therapies that are effective treatments for reducing MBL, it is arguable that medical therapy should be the first line of treatment, since certain conditions preclude effective treatment eg submucous fibroid.

The following lists the medical therapies that has been proven to be effective (Level I evidence)

1. Tranexamic acid and mefenamic acid are effective for reducing heavy MBL
2. Antifibrinolytic drugs and non-steroidal anti-inflammatory drugs are both effective in reducing MBL in women with intrauterine contraceptive devices.
3. Combined oral contraceptives can be used to reduce menstrual blood loss
4. A progestogen-releasing intrauterine device such as the Mirena is an effective treatment for menorrhagia

Dilatation and Uterine Curettage (D&C)

It is primarily a diagnostic procedure to obtain tissue for examination and to exclude cancer. It is **not** a **curative** therapy for menorrhagia.

Hysteroscopy

This allows visualization of the uterine cavity and is often done together with a D&C. Submucous fibroids, endometrial polyps and other growths are diagnosed with the hysteroscope.

Current Treatment Chain for Menorrhagia

This paper will confine to the common surgeries designed to reduce menorrhagia due to benign causes. Hence it will exclude discussions on myomectomy, wedge resection of adenomyosis and ovarian cystectomy, whether done by laparotomy or laparoscopy.

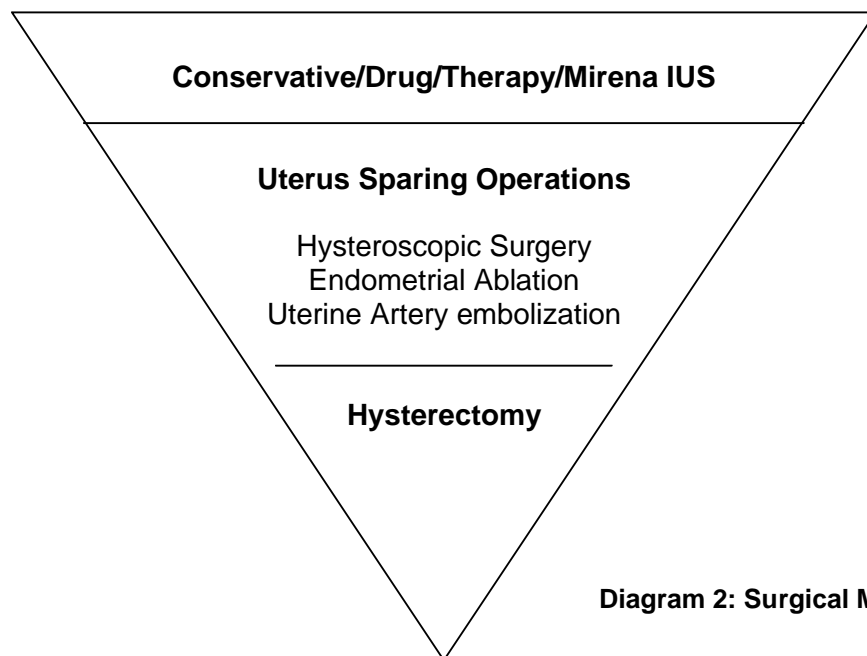


Diagram 2: Surgical Management

Concept of Uterus Sparing Operations

The source of bleeding in menorrhagia is largely from the endometrium whether it is due to polyps, submucous fibroids or overactive blood vessels (very much akin to varices). Hence by destroying the endometrial lining and allowing scar tissue to replace it, it will reduce all or most of the bleeding surface. The mode of destruction can be by electrocautery, laser, heat, cryosurgery, radiofrequency and micro-wave (Lethaby et al 2002).

Common Methods Used in Singapore Today

Transvaginal Resection of the Endometrium (TCRE)

Although TCRE is generally regarded as the **gold standard**, it is associated with an inherent risk of fluid overload. This procedure requires an experienced team to monitor the fluid input and output of the uterine cavity and to detect early signs of fluid overload. When fluid overload occurs, it can result in brain damage and death. The gynaecologist must also be careful not to perforate the uterus. While TCRE is an effective treatment for menorrhagia, it is a procedure which requires a great deal of skill and discipline.

Uterine Balloon Therapy

This procedure was introduced into Singapore in 1998. It requires light general anaesthesia or local anaesthesia. In some cases, simple neuroleptic analgesia and analgesics will suffice.

This procedure has the advantage of outpatient treatment and the machine is portable. It is however not suitable for patients with submucous fibroids and patients with large and irregular uterine cavities. Overall success rate in reducing menstrual flow is around 80%

Microwave Endometrial Ablation (MEA)

The procedure requires short general anaesthesia or paracervical block and is also a day surgery procedure.

A probe is inserted into the uterine cavity and microwave energy of 9.2 GHz is emitted from the tip. Sweeping movements are made to ablate the uterine cavity

Postoperatively, the patient may experience some cramps which is easily treated with analgesics. She will experience a blood-stained discharge over 2 to 3 weeks. Overall success rate in achieving amenorrhoea is about 40%.

Uterine Artery Embolization (UAE)

Uterine Artery Embolization is a procedure whereby the uterine arteries are cannulated and blocked by particles under radiological guidance. This is carried out by the interventional radiologist.

Patients who opt for this procedure are usually those who have menorrhagia and are associated with multiple fibroids but refused hysterectomy or are not suitable for major surgery. Experience with UAE locally is still limited due to slow demand and cases are dependent on referral by the gynaecologist.

The patient is normally hospitalized for 1 or 2 days post procedure for postoperative pain management. Otherwise, the patient is ambulant.

Hysterectomy

When medical therapy or conservative surgery fails, hysterectomy is the final option. It is curative and gives a high satisfaction rate (Marjoribanks et al 2003). Hysterectomy can be performed either by abdominal, vaginal or laparoscopic route. The likely outcomes and possible complications should be discussed with the patient as well as quality of life issues before the surgery.

Management of Fibroids

Introduction

Fibroids or myomas are common benign smooth muscle tumour arising from the uterus. They can be found in 10% to 20% of normal women and are classified according to the layer of the uterus. The 3 types are subserous on the peritonea surface of the uterus, intramural – within the myometrium and submucous – under the endometrial lining of the uterine cavity. Depending on the types of myoma and their locations, symptoms and signs vary.

Management

Conservative

Most uterine fibroids discovered on routine medical examination can be observed with regular annual examination if they are asymptomatic and small (usually taken as less than 3cm)

Operative

Surgery to remove fibroids (myomectomy or hysterectomy) will depend on the age, parity and patient's desire to conserve her uterus.

The following indications are generally accepted for surgical intervention.

1. Menorrhagia or having menstrual bleeding per vaginum.

2. Symptomatic commonly pain, dysmenorrhoea or symptoms due to pressure on surrounding organs eg urinary and bowel symptoms, bloatedness, dyspepsia.
3. Fibroid or fibroids are noted to be rapidly increasing in size especially in the perimenopausal age groups. Sarcomatous change may occur although the risk is low (less than 0.5%).
4. Infertility:
When it is clinically ascertained that the fibroid interferes with conception or causes miscarriage by interfering with the implantation

Type And Route Of Surgery

Surgery for fibroids may be myomectomy or hysterectomy with or without oophorectomy. A small subgroup of patients may need or desire a subtotal hysterectomy. The approach can be laparotomy or endoscopic

The laparotomy approach is the conventional abdominal basic technique. Endoscopic approach whether by laparoscopy or hysteroscopy is another acquired skill and hence more skill dependent.

Laparoscopic myomectomy demands skillful suturing and repair of the myometrium and hence it is recommended for gynaecologists who are good at laparoscopic suturing. The size of the myoma selected for laparoscopic approach should not be greater than 10cm in diameter (ISGE 2004, consensus agreement).

Hysteroscopic resection of submucous myomas are recommended to be limited to Type 0 and Type I submucous myomas (European Society of Hysteroscopy Classification of Submucous Fibroids, Wamsteker et al 1993), size of myoma under 4 cm in diameter and with adequate preparation of the endometrium (Lee 2002).

Summary of Management of Menorrhagia

	Classification		
	Dysfunctional Uterine Bleeding	Adenomyosis	Fibroids
Oral medical therapy	Useful	Useful	Unlikely to work
Progestogen IUD	Useful	Useful (less predictable for larger uterine size)	Less likely to work
Endometrial ablation	Useful	Less useful	Useful for submucous fibroids
Myomectomy	NA	Not recommended	Useful
Hysterectomy	Useful	Useful	Useful

Conclusion

The best outcome is one in which the patient is fully aware of all the pros and cons and selects an option mutually agreeable to both the patient and doctor after a thorough discussion.

Hysterectomy remains a good treatment for menorrhagia but at a cost. Alternative methods of treatment offer good results with less morbidity. Patients should be properly counselled and educated about the options.

This consensus statement is produced on behalf of the College of Obstetricians and Gynaecologists, Singapore by:

Dr Fong Yoke Fai
Dr Lee Keen Whye

Valid until 2008
unless otherwise indicated

REFERENCES

1. Hallberg L, Hogdahl AM, Nilsson L, Rybo G. Menstrual blood loss--a population study. Variation at different ages and attempts to define normality. *Acta Obstet Gynecol Scand.* 1966; 45(3):320-51.
2. Higham JM, O'Brien PM, Shaw RW. Assessment of menstrual blood loss using a pictorial chart. *Br J Obstet Gynaecol.* 1990; 97(8):734-9.
3. Lee KW. Benjamin Henry Sheares Memorial Lecture. " Enhancing Optimum Practice and Safety of Hyateroscopy in Modern Gynaecology"
Singapore Journal of Obstet Gynaecol, 2002; 33(2): 1-16.
4. Lethaby A, Hickey M. Endometrial destruction techniques for heavy menstrual bleeding. *Cochrane Database Syst Rev.* 2002; (2):CD001501.
5. Marjoribanks J, Lethaby A, Farquhar C. Surgery versus medical therapy for heavy menstrual bleeding. *Cochrane Database Syst Rev.* 2003; (2):CD003855.
6. Wamsteker K, De Blok S, Gallinat A and Lueken RP (1993) Fibroids. In Lewis BV and Magos AL (eds) *Endometrial Ablation.* Churchill Livingstone, Edinburgh, pp. 161–181.