PREMENSTRUAL SYNDROME

BACKGROUND

- Premenstrual syndrome (PMS) is part of a complex group of conditions known as the premenstrual disorders (PMDs).
- Most women experience some premenstrual symptoms before menstruation which is considered physiological when these symptoms are noticeable, but not severe enough to have an impact on quality of life.
- PMDs include a variety of physical and psychological symptoms and **it is the timing**, **rather than the types of symptoms**, and the degree of impact on daily activity that supports a diagnosis of PMS.
- To differentiate physiological menstrual symptoms from PMS, symptoms must cause significant impairment during the luteal phase of the menstrual cycle.
- 40% of women suffer from PMS and 4-8% suffer from a severe form

AETIOLOGY

The aetiology is unclear but it is likely due to fluctuations in the ovarian hormone cycle (this theory is strengthened by the absence of PMS prior to puberty, during pregnancy and after the menopause). Currently two main theories exist:

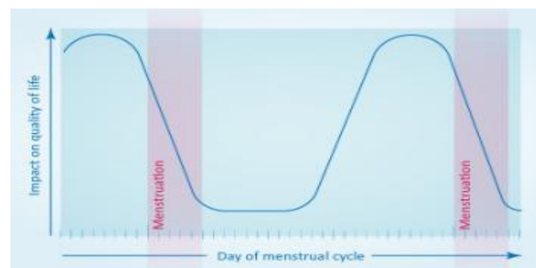
1. **Progesterone theory** - Some women are 'sensitive' to progesterone and progestogens
2. **Neurotransmitters theory** – caused by the neurotransmitters serotonin and c-aminobutyric acid (GABA). Serotonin receptors are responsive to oestrogen and progesterone, and selective serotonin reuptake inhibitors (SSRIs) are proven to reduce PMS symptoms. GABA levels are modulated by the metabolite of progesterone, allopregnanolone, and in women with PMS the allopregnanolone levels appear to be reduced.

CLASSIFICATION OF PMD – CORE PMD

PMD's can be classified into **core and variant** PMD's with core PMD being the most common

CORE PREMENSTRUAL DISORDER:

- Symptoms recur in a cyclical pattern (in the luteal phase) with precipitation by ovulation
- Symptoms resolve during or after menstruation to leave >1 symptom free week between menstruation and ovulation
- There are typical symptoms, but any number of symptoms can be present including physical and psychological
- The symptoms are not an exacerbation of an underlying psychological or physical disorder
- The symptoms cause significant impairment of daily activities (work, social life etc)



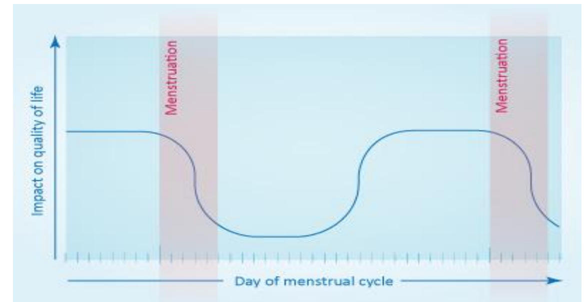
Core PMD's are further subdivided into:

a) predominantly physical symptoms
b) predominantly psychological symptoms and
c) mixed - both psychological and physical

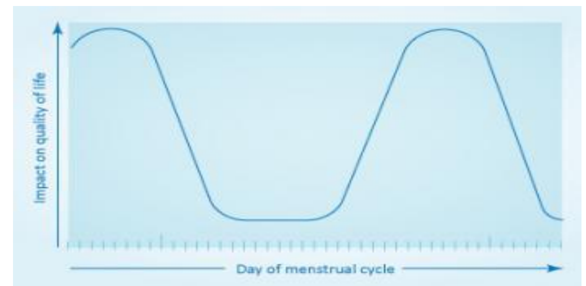
Treatment: See page 3

VARIANT PREMENSTRUAL DISORDERS

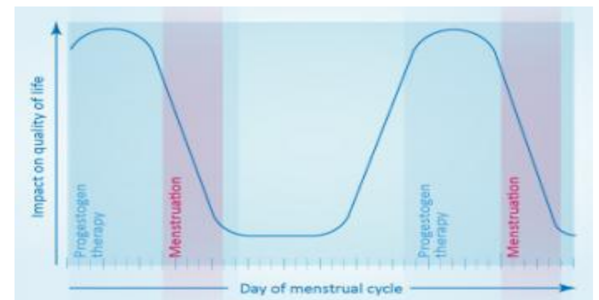
Symptoms do not meet criteria for core PMD and have more complex features. This is further sub divided into the following four categories:



1. **Premenstrual exacerbation (PME)**
   Worsening of an underlying medical or psychological condition (e.g. depression, diabetes, migraine, epilepsy) during the premenstrual phase, causing substantial impairment. Symptoms are experienced throughout the cycle but worsen before and improve after menstruation.
   TREATMENT: treat underlying disorder and as per core PMS



2. **Premenstrual disorder with absent menstruation**
   Same as core premenstrual disorder but without menstruation as a reference point to ensure resolution of symptoms following menstruation. Found in women with iatrogenic amenorrhoea caused by hysterectomy, endometrial ablation or LNG-IUS.
   TREATMENT: as per core PMS



3. **Progestogen-induced premenstrual disorder**
   Symptoms are cyclical and result directly from treatment with exogenous progestogens, e.g. HRT, COCP
   TREATMENT: change type of progestogen

4. **Premenstrual disorder due to non-ovulatory ovarian activity (rare)**
   The symptoms result from ovarian activity other than those of ovulation. The cause of symptoms is poorly understood.

SYMPTOMS

There are > 200 reported premenstrual symptoms. To diagnose PMD the timing of the symptoms is more important than their character. There are, however, some symptoms that typify premenstrual disorders.

PHYSICAL

- breast tenderness/pain
- abdominal swelling/bloating
- headaches
- skin disorders
- weight gain
- swelling of extremities (hands/ feet/both)

PSYCHOLGICAL

- mood swings, irritability
- anger, aggression
- anxiety, depression
- lack of interest in usual activities
- loneliness/ hopelessness
- suicidal ideation

BEHAVIOURAL/COGNITIVE

- sleep disturbances
- changes in appetite, overeating or food cravings
- restlessness
- poor concentration
- confusion
- social withdrawal

DIAGNOSIS

1. **History** - full gynae history and establish **TIMING** of symptoms
2. **Symptom diary** - Daily symptom rating over two consecutive menstrual cycles. Use the daily record of severity of problems (DRSP) (RCOG recommended) or NAPS chart (see appendices)

- When the diagnosis is unclear from 2 months' prospective DRSP charting, GnRH analogues can be used to establish and/or support a diagnosis of PMS.
- Diagnostic Apps e.g. PreMentricS may be useful but need validation

TREATMENT

FIRST LINE

- Encourage healthier lifestyle, diet, regular exercise, yoga etc
- Cognitive behavioural therapy
- Complementary therapies e.g. Agnus Castus, Vitamin B6, Calcium/vit D, evening primrose oil (see appendices for list of evidence-based therapies)

Ovulation suppression:

- Combined new generation COCP (e.g. Yasmin/Eloine) (advise to take continuously rather than cyclically)

Psychological:

- Continuous or luteal phase (day 15–28) low dose SSRIs, e.g. citalopram/escitalopram 10 mg

SSRI's counselling

- Must be discontinued gradually to avoid withdrawal symptoms (if taken continuously)
- Possible side effects: nausea, insomnia, somnolence, fatigue and reduction in libido
- **Preconception counselling** - PMS symptoms will abate during pregnancy so SSRI's should be stopped prior to and during pregnancy + folic acid etc
- If conception occurs whilst taking an SSRI there is a potential, but unproven, association with congenital malformations but it is likely to be extremely small when compared to the general population.

SECOND LINE

Ovulation Suppression:

Estradiol patches (100 mcgs) + endometrial protection (micronised progesterone (100-200mg) day 17–28, PO/PV or LNG-IUS 52 mg)

Psychological:

Higher dose SSRIs continuously or luteal phase, e.g. citalopram/escitalopram 20–40 mg

REFER TO HOSPITAL GYNAECOLOGY FOR THIRD AND FOURTH LINE TREATMENT

Resistant PMS or persistent progestogenic side-effects

Third line:

GnRH analogues + add-back HRT ((continuous combined estrogen + progesterone) or Tibolone 2.5 mg)

Fourth Line:

Surgical treatment (hysterectomy + BSO) + HRT

Patient support resources:
National Association for Premenstrual Syndrome [http://www.pms.org.uk/]
Managing PMS RCOG leaflet [https://www.rcog.org.uk/en/patients/patient-leaflets/managing-premenstrual-syndrome-pms/]

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APPENDICES

APPENDIX 1 - DRSP

DAILY RECORD OF SEVERITY OF PROBLEMS

Please print and use as many sheets as you need for at least two FULL months of ratings.

Name or Initials ______________________

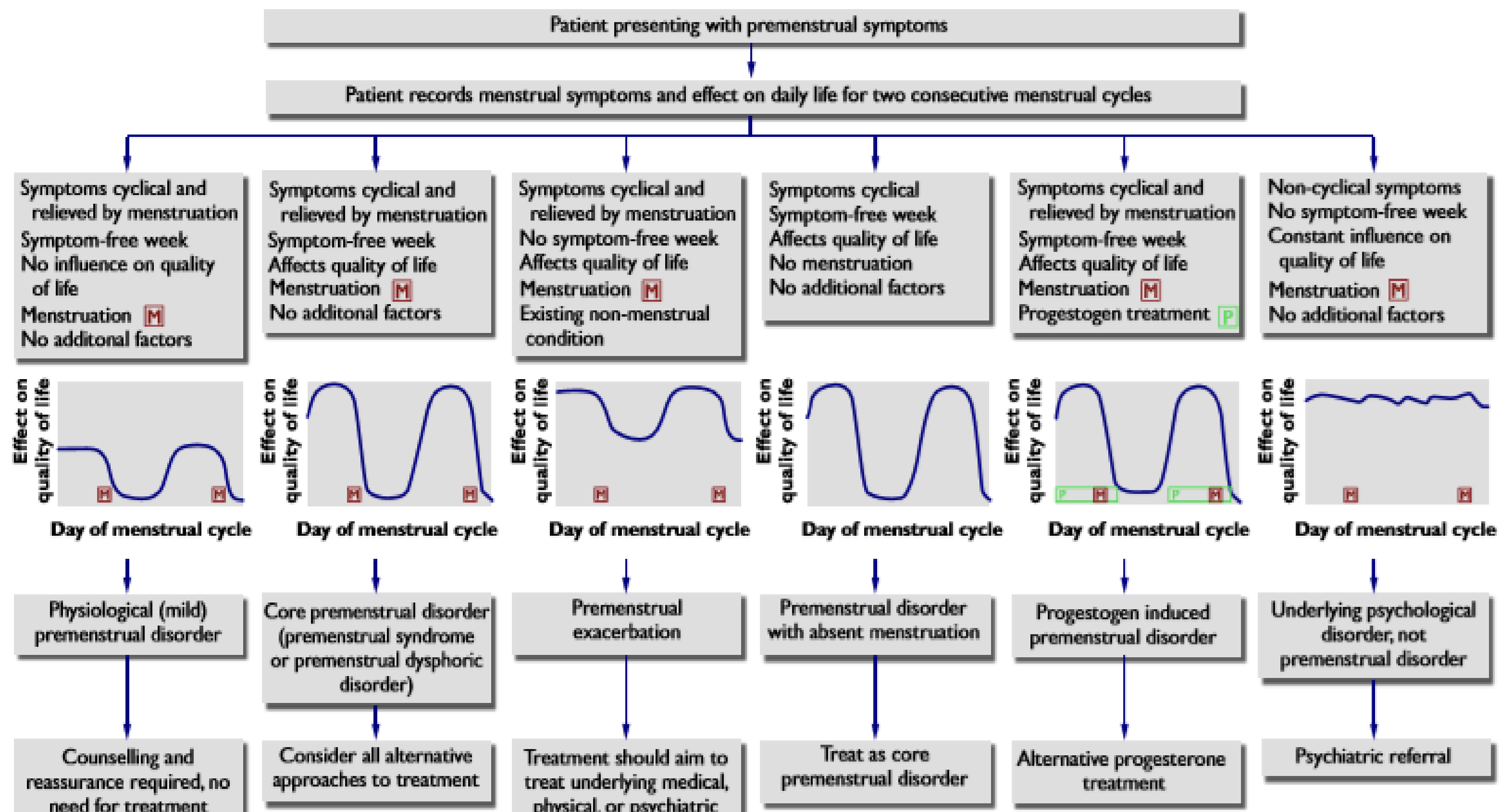
Month/Year ______________________

Each evening note the degree to which you experienced each of the problems listed below. Put an "x" in the box which corresponds to the severity: 1 - not at all, 2 - minimal, 3 - mild, 4 - moderate, 5 - severe, 6 - extreme.

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Enter day (Monday-"M", Thursday-"R", etc) >																																
Note spotting by entering "S" >																																
Note menses by entering "M" >																																
Begin rating on correct calendar day >		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1 Felt depressed, sad, "down" or "blue", or felt hopeless; or felt worthless or guilty	6 5 4 3 2 1																															
2 Felt anxious, tense, "keyed up" or "on edge"	6 5 4 3 2 1																															
3 Had mood swings (i.e. suddenly feeling sad or tearful) or was sensitive to rejection or feelings were easily hurt	6 5 4 3 2 1																															
4 Felt angry or irritable	6 5 4 3 2 1																															
5 Had less interest in usual activities (work, school, friends, hobbies)	6 5 4 3 2 1																															
6 Had difficulty concentrating	6 5 4 3 2 1																															
7 Felt lethargic, tired or fatigued; or had lack of energy	6 5 4 3 2 1																															
8 Had increased appetite or overate; or had cravings for specific foods	6 5 4 3 2 1																															
9 Slept more, took naps, found it hard to get up when intended; or had trouble getting to sleep or staying asleep	6 5 4 3 2 1																															
10 Felt overwhelmed or unable to cope; or felt out of control	6 5 4 3 2 1																															
11 Had breast tenderness, breast swelling, bloated sensation, weight gain, headache, joint or muscle pain, or other physical symptoms	6 5 4 3 2 1																															
At work, school, home or in daily routine, at least one of the problems noted above caused reduction of productivity or inefficiency	6 5 4 3 2 1																															
At least one of the problems noted above caused avoidance of or less participation in hobbies or social activities	6 5 4 3 2 1																															
At least one of the problems noted above interfered with relationships with others	6 5 4 3 2 1																															

Appendix 2: Complementary therapies (RCOG guideline)

Appendix II: Classification of PMS[1]



APPENDIX 3 – RCOG classification of PMS flowchart