An overview of development of diagnostic plan for Premenstrual syndrome

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ABSTRACT

Premenstrual syndrome is a psychoneuroendocrine disorder of unknown etiology. It is characterized by a large number of symptom constellations with various characteristic pattern of appearance & disappearance. The Luteal phase symptom pattern of sufficient severity is the mainstay for diagnosing this condition & needs to be confirmed by prospective charting. Variety of tools with different rating scales & criteria are available for this purpose. The article reviews these tools & criteria to reach a consensus statement for diagnosis of Premenstrual syndrome.

Keywords: Premenstrual syndrome, luteal phase pattern, criteria, tools

Introduction

The Premenstrual Syndrome (PMS) is a cyclic recurrence of symptoms which subside with onset of menstruation. Frank first of all coined the term 'Premenstrual Tension' in 1931 for symptoms like seizures, bronchial asthma and cyclic edema occurring few days before menstruation. [1] Since then the list of symptoms has grown to include nearly 150 symptoms from different medical specialties. [2,3,4] Symptoms can be affective, behavioural, cognitive, central, neurovegetative, autonomic, pain related, fluid retention related and dermatological. [5] A lot of research is going on to explore the etiopathogenesis of PMS but nothing conclusive has come out. Till date no biochemical marker is known to confirm the diagnosis of PMS. Attempts have been made over the years to standardize the diagnostic criteria for PMS. But variability of presenting features lack of etiological basis and biochemical markers have made the diagnosis of PMS an uphill task. Numerous tools like questionnaires, calendars, daily diaries, Visual analogue scale (VAS) etc. have been developed from time to time by different authors to diagnose PMS. Some tools emphasize more on physical symptoms while others on behavioral or affective symptoms. This article aims to review few existing tools, their utility in diagnosing PMS & the development of Diagnostic Plan/ criteria for PMS.

Material/ Methods:

Computer & manual search of the literature, drug trials in PMS was done. The questionnaires & scales cited in different trials were retrieved & compared to study their strengths & limitations. The

shifting of emphasis from type of symptoms to changes in severity in relation to menstrual cycle phases was observed. Numerous tools available for prospective rating and charting of symptoms were analyzed to study their role in diagnosing PMS.

Tools & Diagnostic criteria

I) For PMS: Moos pioneered in devising a retrospective 47 symptoms 'Menstrual Distress Questionnaire' with eight symptom groups viz pain, water retention, autonomic reaction, behavioural, concentration, control, negative effect and arousal. He used six point scale ranging from no symptom to acute disturbing symptoms. This questionnaire aimed at assessing symptoms prevalence, severity and its correlates. Moos questionnaire was extensively used by investigators & remained the only available standard tool for diagnosing PMS for more than a decade. [5] But later on many drawbacks were reported. It focussed more on somatic symptoms than psychological, emotional & behavioural symptoms. Out of eight symptom group, only two (negative effect and arousal) emphasized on affective symptoms thereby increasing the chances of exclusion of patients with predominant affective symptoms. Moreover the recall of symptoms with 6 point grading by the patients may not be very reliable. Moos normative sample was also defective as inclusion & exclusion criteria were not well defined. Half of subjects were on oral contraceptive pills but influence of sex hormone levels on premenstrual symptoms was not recorded. [6]

'Research Diagnostic Criteria' (RDC) framed for psychiatric syndromes by Spitzer contributed towards drafting of 'Diagnostic & Statistical Manual III (DSM III) criteria by American Psychiatric Association. [7] But neither of these recognized premenstrual tension syndrome as a distinct entity.

Following Spitzer format of RDC, Steiner developed '36 item self rating scale', '10 item observer rating scale' and 'Research Diagnostic Criteria' for PMS. Strict inclusion and exclusion criteria were followed i.e female patients of 18-45 years age with both physical & psychological symptoms in premenstrual phase for atleast six cycles, relieved at onset of menses were included. Patients with pregnancy, coexisting psychiatric disease & on hormonal contraceptive or any other drug in preceding 4 weeks were excluded. Moos 47 item questionnaire was reduced to a '27 rank order list' consisting of 23 psychological & 4 physical symptoms. Since majority of subjects manifested only behavioural & emotional symptoms, the physical symptoms were excluded from 'RDC'. [8] Steiner's rating scales were established to be quite specific for diagnosing PMS but probably ignored patients with predominant physical symptoms so chances of false negative results were quite high even with these criteria. [9]

Later a '19 item symptom questionnaire' having 4 symptom group's i.e anxiety/ irritability, depression with cognitive impairment, appetite/ food craving and water retention was devised. But lack of standard psychometric procedures compromised the sensitivity & specificity of this tool and physical symptoms still awaited due consideration. [10]

A 95 item 'Premenstrual Assessment Form' (PAF) with 6 point severity scale was developed stressing more on degree of change in symptom severity than on type of symptom. It encompassed broader variety of affective symptoms & a sensitive measure for indexing level of severity. Although it was used extensively by many investigators to

differentiate PMS from premenstrual exacerbations of mental disorders, still it faced criticism due to large number of symptoms and overlapping of symptom categories. [11, 12]

National Institute of Mental Health (NIMH) guidelines for diagnosis of PMS also required at least 30% increase in symptom severity from proliferative to luteal phase and documentation of this change in at least two successive menstrual cycles. [13]

In accordance with these guidelines a 22 item 'Daily Diary' [14] & 'Calendar of Premenstrual Experiences' (COPE) [15] were devised. These consisted of four subsets of symptoms assessed on a scale of 0 to 3 (0- no symptoms, 1- symptoms present without impairment, 2- symptoms interfering with functioning & 3- incapacitation due to symptoms). Out of 22 symptoms, 12 are behavioural & remaining 10 are physical. From the daily diary or calender, follicular and luteal phase scores are calculated on day 3-9 and in last 7 days of menstrual cycle respectively. A luteal phase score twice the follicular phase is mandatory to diagnose PMS. Minimal luteal phase score should be 42 & maximal follicular phase score should be 40. Another tool for charting symptoms is Prospective Record of Impact and Severity of Menstrual symptomatology calender (PRISM). It helps in quick assessment of pattern, severity & lifestyle impact of 12 physical & 11 psychological symptoms on a 4 point scale. [16] PRISM calender has shown to be highly correlated with Steiner's self rating scale. [17] Thus PAF, Daily Diary, COPE & PRISM etc. using scoring systems are valid and reliable prospective tools which can be used in ambulatory patients as well as in longitudinal research. [18, 19]

II) FOR PMDD: The severe form of PMS termed 'Premenstrual dysphoric disorder' (PMDD) requires more stringent

diagnostic criteria. Diagnostic and statistical Manual IV (DSM IV) [20] criteria for PMS established by American Psychiatric Association require presence of 5 symptoms out of total 11, 1 of which must be from the core symptom group (marked depression, anxiety/ tension, affective lability, persistent anger/ irritability). The symptom must have been experienced in last week of luteal phase and relieved with onset of menses in majority of cycles during previous year. Symptoms must be severe enough to interfere with daily functioning/ activity. Prospective charting of symptoms for at least 2 months is mandatory. To operationalize DSM IV criteria 'Daily Record of Severity of Problems' (DRSP) [21] is used. Patient records the symptoms in DRSP sheet daily for at least 2 months on a 6 point severity scale from no symptom to extremely severe symptoms.

The prevalent use of rating scales indicates that most of the workers agreed on recording change in symptom severity with menstrual cycle phases as an essential step in diagnosing PMS. In addition to instruments mentioned above numerous other scales & tools have been used from time to time to confirm the diagnosis of PMS. All of them are time consuming & too complicated to put into routine clinical practise. There is no concensus among workers regarding the first choice instrument for prospective charting & rating of symptoms.

Steiner developed a simple, fast, user friendly premenstrual symptom screening tool for clinicians (PSST). [22] It translates categorical DSM IV criteria into a rating scale & is helpful in identifying women suffering from severe PMS/PMDD who are likely to be benefited by treatment.

The standard diagnostic plan recommends that after ruling out anovulatory cycles and other psychiatric

or medical diseases, patient must maintain daily symptom chart for 2 or more menstrual cycles. If the symptom chart shows only luteal phase pattern & no symptoms in follicular phase, only then a diagnosis of Premenstrual syndrome is considered. If symptoms occur in follicular phase as well, it may be premenstrual syndrome accompanied by some other disorder or some cyclic disorder with premenstrual exacerbation. [23]

Despite differences in preference for diagnostic tools or rating scales, the clinical outcomes in PMS can be expected to improve. Perhaps this is because of development of some sort of consensus among workers recently on diagnostic criteria. The University of California at San Diego criteria require presence of one physical and one affective symptom for five days before menses in at least three preceeding cycles & obligatory absence of symptoms from day 4 to day 13 [25]

American College of Obstetricians & Gynaecologists (ACOG) has validated San Diego criteria & use of COPE & PRISM for prospective charting of symptoms. [24, 25]

Conclusion

It can be summarized that despite differences in tools or scales used for diagnosis of PMS, the underlying methodology remains the same which stresses on 3 key elements for diagnosis viz:

- Symptom group consistent with diagnosis
- Luteal phase pattern
- Severity enough to interfere with normal activity.

This must be confirmed by prospective charting for 2 cycles using any of the large number of tools available. Lack of any of above 3 key elements is considered sufficient to rule out PMS. Studies are awaited to prioritize the symptoms which occur with maximum frequency in majority patients so as to bring uniformity in prospective charting tools. Impact of socioeconomic status & education status of woman needs evaluation to diagnose PMS.

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