



Premenstrual Dysphoric Disorder

Media Conference: Mental Health and Hormonal Contraceptives

Facilitator's Guide

Contributors

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Overview

The ability to field patient questions arising from popular culture is an important professional skill for trainees. In particular, trainees should be able to explain and interpret data and statistics cited in the lay media in an accurate, reassuring, and clinically relevant manner.

This session consists of three parts: 1) reviewing and critiquing a piece on the menstrual cycle from the popular media (such as from newspaper articles or social media); 2) appraising a contrasting piece of medical literature; 3) role playing a psychiatrist/patient interaction about how to communicate this topic to a lay audience.

The aim of reviewing the medical literature is to compare peer-reviewed findings with the information portrayed in the media. For this exercise, the most relevant parts of medical literature are the abstract, the introduction, and the discussion.

The aim is to identify the gaps between the information presented by the media compared with medical literature.

Sessions last approximately 30 minutes, but can be modified depending on the number of media items and articles selected. The media conference is designed for PGY-1 psychiatry residents, but can be tailored to any resident trainee. A small group setting with time and space to work within break-out format is recommended.

Learning Objectives

By the end of this module, participants will:

- Demonstrate the ability to analyze issues related to mental health and hormonal contraceptives, as portrayed in the lay media
- Locate and analyze relevant scientific literature as it relates to mood changes associated with the menstrual cycle
- Communicate thoughtfully and accurately with a lay audience (e.g. a patient in a reproductive psychiatry consultation)

Structure of the Session

1. Review of media items (10 minutes): Faculty and residents together will review the media item(s)
2. Review of medical literature (10 minutes): Faculty and residents together will briefly assess the comparable medical literature using a structured format
3. Large group discussion (10 minutes)

Presentation of Media Items

Main Media Item

- 1) "Birth control is turning women into hormonal messes"
<https://nypost.com/2016/10/13/my-birth-control-made-me-suicidal/>
- 2) "The Pills Effects On Women Can Be Devastating. We Need Better Information, Now."
<https://www.theguardian.com/society/commentisfree/2023/jun/11/the-pills-effects-on-women-can-be-devastating-we-need-better-information-now>

Supplemental Reading:

- 1) "Is Birth Control Depressing the Hell Out of You?"
<https://www.manrepeller.com/2016/09/birth-control-depression.html>
- 2) "The Weird Ways Birth Control Can Impact Your Mood"
<https://www.self.com/story/birth-control-side-effects-mood-depression>
- 3) "Women Are Getting Off Birth Control Amid Misinformation Explosion" <https://www.washingtonpost.com/health/2024/03/21/stopping-birth-control-misinformation/>
- 4) Carlini SV, Lanza di Scalea T, McNally ST, Lester J, Deligiannidis KM. Management of Premenstrual Dysphoric Disorder: A Scoping Review. *Int J Womens Health*. 2022 Dec 21;14:1783-1801. doi: 10.2147/IJWH.S297062. PMID: 36575726; PMCID: PMC9790166.

Critique of Media Coverage

1. What is the central claim of these media pieces?

Facilitator elicits the following:

- Birth control can worsen your mental health, potentially causing mood swings and depression (Items 1 & 2)
- Antidepressant use is highly correlated with hormonal contraception especially in teenage girls. (Item 2)

2. How do these media pieces influence (and potentially bias) the lay reader?

Facilitator elicits the following:

- The introduction puts forward the belief that birth control pills can transform someone from a "bubbly, blushing bride" into someone "suddenly gripped by demons." *The article uses personal anecdotes to illustrate potential side effects of birth control instead of data.* (Item 1)
- The article introduces the notion that hormonal contraception can cause feelings of being unable to speak and sadness. While its discontinuation results in a difference similar to "sunshine and roses" and "going from black and white to color." (Item 2)
- The article conflates **causation** with **association** (as the study being cited was an observational study, causation cannot be ascertained. (Items 1 & 2)
- The article also seems to undermine the stance that randomized studies are better than observational studies by adding "only" this statement: "But enough large randomized controlled trials hadn't been done, and this was "only" an observational study, said most of the medical literature." (Item 2)
- The article does not discuss any of the potential benefits of birth control (Item 1)
- It does not discuss or take into account the other biological, psychological, and social factors that might have also contributed to mood changes in the women cited in the article (Item 1 & 2)
- These articles might make women less likely to use birth control or contraception pills (even in situations when it might be clinically indicated) -Items 1 & 2
- It might lead to the erroneous conclusion that birth control/ contraception pills should be avoided at all costs (Items 1 & 2)

3. What is the “face validity” of the articles?

Facilitator elicits the following:

- Some studies have identified an **association** of depression with hormonal birth control
- Some women may be sensitive to the hormones in oral contraceptives
 - For example, a single woman with PMDD may have different responses to different oral contraceptives (e.g. Yaz versus Ortho Tri-Cyclen).
- Most of the articles, as they evolve, become more balanced in their reporting. The second supplemental reading even includes the nuance that women with PMDD may have improvements with certain types of birth control
- The third supplemental reading highlights how media misinformation capitalizes on the mistrust BIPOC women have around birth control due to the history of forced sterilization.

Appraisal of Scientific Literature

Article 1: Yonkers, K. A., Brown, C., Pearlstein, T. B., Foegh, M., Sampson-Landers, C., & Rapkin, A. (2005). Efficacy of a new low-dose oral contraceptive with drospirenone in premenstrual dysphoric disorder. *Obstetrics and Gynecology (New York. 1953)*, 106(3), 492–501. <https://doi.org/10.1097/01.AOG.0000175834.77215.2e>

Article 2: Eisenlohr-Moul TA, Girdler SS, Johnson JL, Schmidt PJ, Rubinow DR. Treatment of premenstrual dysphoria with continuous versus intermittent dosing of oral contraceptives: Results of a three-arm randomized controlled trial. *Depress Anxiety*. 2017 Oct;34(10):908-917. doi: 10.1002/da.22673. Epub 2017 Jul 17. PMID: 28715852; PMCID: PMC5629109.

1. What is the study design?

Facilitator elicits the following:

- **Article 1**: Randomized placebo-controlled trial
- **Article 2**: Double blind randomized placebo-controlled trial

2. Who were the patients?

Facilitator elicits the following:

- **Article 1**: 18-40 year old females with a diagnosis of premenstrual dysphoric disorder according to DSM IV without a recent history of other mental health disorders
- **Article 2**: 18-40 year old females with prospectively-confirmed luteal-phase confinement of premenstrual dysphoria which correlated with DSM V PMDD if they had met at least one core emotional item *and* five items total from the operationalized PMD criteria used.

3. What were the placebo and the active arms?

Facilitator elicits the following:

Article 1:

- Placebo: inactive pills

- Active arm: drospirenone 3 mg/ethinyl estradiol 20 mcg administered for 24 days with 4 days of placebo pills

Article 2:

- Placebo: inactive pills
- Active arms: intermittently dosed drospirenone 3mg/ethinyl estradiol 20 mcg (DROS/EE 3mg/20µg) and continuously dosed DROS/EE 3mg/20µg.

4. What were the main outcomes being studied?

Facilitator elicits the following:

Article 1:

- Premenstrual Symptoms as measured by a variety of scales including the Daily Record of Severity of Problems, Premenstrual Tension Scales, the Endicott Quality of Life Enjoyment and Satisfaction Questionnaire, and the Clinical Global Impression Improvement Scales

Article 2:

- Symptoms were primarily measured by the Daily Record of Severity of Problems.

5. What were the conclusions?

Facilitator elicits the following:

Article 1

- Treatment with drospirenone 3 mg/ethinyl estradiol 20 mcg was associated with a 47% reduction in the total Daily Record of Severity of Problems Scale.
- Furthermore, there was a 49% reduction in premenstrual depressive symptoms
 - This reduction in depressive symptoms is similar to that found with SSRIs for treatment of PMDD
 - Physical symptoms are less likely to respond to SSRIs and more to treatment with drospirenone 3 mg/ethinyl estradiol 20 mcg

Article 2

- In all the treatment groups, premenstrual symptoms improved with no significant differences between the groups except for the worst baseline symptom item that didn't reduce as much in the intermittent dosing group.
- This study had a high placebo response rate which is usually seen in many psychiatric disorders and partly due to the strengths of the study which are some of the factors underlying high rates in placebo groups.

6. What are the limitations of this study?


Facilitator elicits the following:

Article 1

- OCPs can change the characteristics of the menstrual cycle which might unblind participants
- drospirenone 3 mg/ethinyl estradiol 20 mcg might have shifted the symptomatic period to the hormone-free interval (instead of the premenstrual interval)

Article 2:

- Study didn't show the same similarities as other studies with regards outcome findings in shorter or nonexistent hormone free intervals.



7. How are the main conclusions drawn from the study different from the media article?

Facilitator elicits the following:

Articles 1 & 2:

- For some women, hormonal oral contraceptives may actually decrease depressive symptoms
- The study uses data to illustrate facts, whereas the article uses personal anecdotes
- Via a randomized placebo-controlled trial, the study is able to illustrate causation