

# **Perinatal Depression**

Media Conference: Exploring the interface between media and reproductive psychiatry *Facilitator's Guide* 

### Contributors

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### **Overview**

Popular media frequently touches on issues germane to reproductive psychiatry, such as postpartum depression, stress in pregnancy, and breastfeeding. Well-known celebrities such as Gwyneth Paltrow and Chrissy Teigen have voiced their experiences with maternal mental health to millions of people worldwide. However, the tone of the messages arising from the media can be tinged with stigma. 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 data and statistics cited in the lay media in an accurate, reassuring, and clinically relevant manner. Thus the goal of this module is to have residents build communication skills that enable them to serve as knowledgeable and thoughtful representatives of reproductive psychiatry to a lay audience.

Each session consists of three parts: 1) reviewing and critique a piece from the popular media (such as from newspaper articles or social media); 2) appraising the comparable medical literature; and 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 its findings with the information portrayed in the media. For the purposes of this exercise, the most relevant parts of medical literature are the abstract, the introduction, and the discussion. The aim is not to have an in-depth, "journal-club" analysis of the article (which is an important skill for residents to master elsewhere in their training), but rather to delineate in broad strokes the gaps between the information presented by the media portrayal and by the medical literature.

Sessions usually last 50 minutes, but can modified, depending on the number of media items and articles selected. The media conference is tailored for PGY-4 psychiatry residents but can be modified for any resident trainee group. A small group setting with time and space to work within break-out groups is recommended. After review of the media items and the medical literature, the group will divide up into small groups of 2-3 residents to role-play the clinical interaction.

This module can be tied-in with the statistics modules, so that residents can review statistic concepts first then apply them to the media/literature module.

### **Selection of Content**

Content can either be selected in advance or selected at the time of the session. The faculty and resident group may pre-select a topic that is of particular interest to the group and distribute the media item and the article one to two weeks prior to the session. Alternatively, if there is a media item of particular interest to one or more of the trainees, they can bring the item to the session and the relevant literature can be appraised in the session in real time by the faculty and trainees, using a laptop and projector.





# **Learning Objectives**

By the end of this module, participants will:

- 1) Demonstrate the ability to analyze reproductive psychiatry issues as portrayed in the lay media
- 2) Be able to locate and analyze relevant scientific literature as it relates to the issue raised in the media

3) Be able to communicate thoughtfully and accurately with a lay audience (e.g. a patient in a reproductive psychiatry consultation)

### **Resources required**

- 1) A faculty moderator
- 2) Samples from media
- 3) Relevant article references
- 4) Laptop (with internet access) and projector

### Structure of the session

Presentation of media items (10 minutes): Faculty and residents together will review the media item (s)
Review of medical literature (10 minutes): Faculty and residents together will briefly assess the comparable medical literature

3) Role-play with case example (15 minutes): Small groups of residents will role-play a psychiatrist/patient discussion

- 4) Large group discussion (10 minutes)
- 5) Wrap-up and Q+A (5 minutes)

### Presentation of media items

Newsweek article: "Antidepressants Used During Pregnancy May Significantly Increase Autism Risk" http://www.newsweek.com/antidepressants-used-during-pregnancy-may-significantly-increase-autism-risk-404929

NBC News: "Pregnant Women on Antidepressants More Likely to Have Child With Autism" http://www.nbcnews.com/health/mental-health/pregnant-women-antidepressants-more-li kely-have-autistic-childn479666?cid=sm\_tw

## Critique of media coverage

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

Elicit the following:

- Women who take SSRIs in pregnancy have a significantly increased risk of autism in their offspring
- Women who take SSRIs in pregnancy may be "causing" autism in their offspring

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

- Widespread use of antidepressants

- While experts featured in the pieces are emphasizing the low absolute risk and the limitations of the study, the headlines and visual graphics are focused on the relative risk (e.g. 87% increase in risk)

- Use of the word "significant" is confusing in this context as the meaning of the word in the general population (i.e. to indicate importance) differs from the scientific meaning of statistical significance

3. What is the "face validity" of the article?

Elicit the following:

- Some studies have noted an increased rate of ASD in babies exposed to SSRIs in pregnancy, although the nature of this association is unclear

- The article, as it evolves, become more balanced in its reporting





# **Appraisal of Scientific Literature**

Source material for media article:

Boukhris et al (Feb 2016): http://jamanetwork.com/journals/jamapediatrics/fullarticle/2476187?utm\_source=TWITT ER&utm\_medium=social\_jn&utm\_term=304204704&utm\_content=press\_release%7Car ticle\_engagement&utm\_campaign=press\_release&linkId=19568755

1. What is the study design? What 'level' would this study design be? What are the strengths and limitations with this study design?

Elicit the following:

- Cohort

- Level II-2 evidence

- While the Quebec Pregnancy/Children Cohort is a prospectively designed project, this particular study was a retrospective study. A group of subjects with a particular outcome (e.g. autism) are compared to a group without that outcome.

- Strengths with this study design:

Allows for a high n and thus high statistical power and ability to study less common exposures and outcomes Allows for measurement of absolute and relative risk

- Problems with this study design:

Lack of control of confounders (differences between groups related to other factors)

Criteria for determining exposure is inadequate

Data available to investigators may lack complexity (i.e. this study looks at ASD in a dichotomous way, whereas ASD actually presents clinically as a spectrum; thus there is not accounting for the clinical severity of the cases of ASD identified in this study).

Can show correlation but not causation

2. What types of confounding should you think about in this study?

Elicit the following:

- Confounding by indication. In this study, investigators were not able to adjust for family history of ASD (due to reduced n and thus decreased statistical power), smoking status, or BMI (due to lack of data on these variables). Furthermore, while the results section mentions that women using ADs were more likely to have had another child with ASD than women not using ADs, this is not mentioned as a potential confounding variable. Thus, it is possible that any or all of these variables may be contributing to the association between maternal AD use and increased risk of ASD in offspring.

- Confounding by active illness. Investigators in this study attempted to assess confounding by "history of depression," but could not account for the severity of depressive symptoms present during pregnancy. As it is likely that women who take ADs during pregnancy are likely to have more severe symptoms of depression vs. women who do not take ADs during pregnancy, this leaves open the question of whether or not the correlation is actually due to the underlying disease.

*3.* How does the difference between absolute and relative risk shape the article? *Elicit the following:* 

-Reader may see a large percentage value (87%) and erroneously conclude that SSRI use strongly "causes" autism

### Other medical literature related to this topic:

Sorenson et al (Nov 2013): https://www.ncbi.nlm.nih.gov/pubmed/24255601

What is the central finding of this article?

*Elicit the following:* 

- When potential confounding factors (such as indication for treatment), there was not a significant association between prenatal SSRI exposure and autism spectrum disorder in offspring



#### Andrade (Sep/Oct 2017): https://pubmed.ncbi.nlm.nih.gov/28994903/

#### What is the central finding of this article?

*Elicit the following:* 

-Antidepressant exposure during pregnancy is associated with an increased risk of ASD in the offspring, but risk is decreased after adjusting for confounding variables and is mostly no longer statistically significant after adjusting for maternal mental illness.

-Antidepressant exposure is associated with an increased risk of ASD in the offspring even when exposure is limited to the preconception period, when the drugs cannot have a physiological effect on the fetus.

-Findings suggest that maternal mental illness is an important determinant of the risk of ASD associated with antidepressant exposure during pregnancy.

#### Andrade et al (Sep/Oct 2017): https://pubmed.ncbi.nlm.nih.gov/29099558/

#### What is the central finding of this article?

#### Elicit the following:

-At least some of the new data strengthen the conclusion that antidepressant use during pregnancy is likely to be a marker of more severe illness and that inadequately measured, unmeasured, or unknown genetic, behavioral, and environmental confounds associated with more severe illness (rather than the antidepressant exposure by itself) may be responsible for the increased risk of ASD.

#### **Role-playing Exercise**

Trainees should separate into groups of 2 or 3 with one trainee playing the role of reproductive psychiatrist and one or two trainees playing the role of patient who desires to become pregnant or couple.

#### Sample Clinical Case

Mary B. is a 33-year-old married woman with a history of anxiety and depression, past medical history of migraines, G0P0, no history of suicide attempts or hospitalizations, family history of depression in paternal grandfather, who has been effectively treated with a combination of medication and psychotherapy. She seeks a preconception consultation regarding the use of SSRIs in pregnancy. She brings her husband, Julien, to the consultation and wishes for them to attend the session together.

She reports that she has had anxiety symptoms since high school, when she was treated successfully with cognitivebehavioral therapy. Her anxiety returned at the age of 20 in the context of the sudden death of a close friend, and she was successfully treated with clonazepam and venlafaxine. She was on that combination until several years ago, when venlafaxine was changed to fluoxetine due to symptoms of residual depression. Last year, she attempted to taper off all medications prior to trying to conceive her first pregnancy. Although she intended to be off all psychiatric medications in pregnancy, she had difficulty weaning off. She found that when she got down to Prozac 15 mg daily, her anxiety and depressive symptoms returned. She was switched from Prozac to Zoloft, which her current psychiatrist felt was a preferable choice for pregnancy. Although her anxiety is worse since she altered her medication regimen, it is manageable.

Mary reports that since she is still on Zoloft, she worries that that she will cause adverse outcomes in her future baby due to what she has read about SSRIs in pregnancy online. If she hears about other children with disabilities such as autism spectrum disorder, she often relates these to herself, and worries that her future child might have the same problem. In general, she tends to look up aches and pains on the internet and then worries about the possibility that she might have a particular illness. Other worries include concerns about whether she will be able to get pregnant and whether or not she will get sick. As a general rule, she is very sensitive to bodily changes. For example, she worries that her headaches might be due to a brain tumor despite multiple MRIs and assurances by doctors that she does not have a tumor.



Julien shares many of her concerns regarding options to become pregnant with or without medications. Julien's first cousin has a young child with is "high functioning autism." Julien and Mary are both concerned about the potential for developmental disabilities, in particular autism spectrum disorders, given the struggles they have seen Julien's cousin encounter with his child.

## Sample reproductive psychiatry script

"An association has been reported between autism and maternal use of antidepressants in pregnancy. Although these studies have attempted to control for possible relevant variables, they had multiple limitations, and did not adequately control for severity of maternal mental illness during pregnancy. Other studies have shown no statistically significant increased risk in autistic spectrum disorders in offspring prenatally exposed to SSRI antidepressants.

The great increase in autism diagnoses over the past decades is unlikely to be explained by the gestational use of antidepressants such as SSRIs. Furthermore, maternal depression itself or genetic variables may increase the risk for adverse neurodevelopmental effects in infants and children.

For these reasons, the benefits of treating anxiety and depression in pregnancy must be weighed carefully against any potential risk of harm. Maternal mental illness, often occurring in the context of treatment with antidepressants, complicates our understanding of this issue."

### Patient then asks a series of questions

1. Should I stop my antidepressant? If so, when?

Elicit the following:

- The patient/couple should be counseled that the decision to continue or discontinue antidepressants should be made on a case-by-case basis.

- If a woman has a history of recurrent major depression the risk of recurrence of MDD during pregnancy or postpartum if she discontinues the antidepressant is >50%.

- Patients should not stop antidepressants abruptly

2. What are the risks if I stop my medication? Do depression and/or anxiety affect my pregnancy? *Elicit the following:* 

-The most well-established risk of stopping antidepressant medication is recurrence of major depression.

- Studies have shown that untreated depression and anxiety can negatively affect the fetus through an increased risk of perinatal complications, including increased risk for prematurity, low birth weight, postpartum depression and possibly pre-eclampsia

- There may be an increased risk of colic, disordered sleep, and fussiness in children exposed to perinatal depression and anxiety.

- Studies also show that mood disorders in parents are associated with increased risk of autism spectrum disorder in the absence of antidepressants.

3) If I have ASD in my family, or my partner's family, do I even have a greater risk of ASD in my child if I take antidepressants in pregnancy?

Elicit the following:

- No study has ever investigated the possible additive or combined risk of ASD with both a family history and maternal use of antidepressants in pregnancy.





# Wrap-up and Q+A

1. For the learner role-playing the reproductive psychiatrist: what was challenging about this interaction? Sample answers might include: putting complex information into understandable terms; giving the patient information about risks without further increasing her anxiety; giving information that is necessarily not black and white; trying to reassure patient without dismissing information; acknowledging the limitations of our current data

2. For the learner role-playing the patient: what was it like to be on the "patient" side of this discussion? Was there anything in particular that your partner did that helped you feel more comfortable in your decision-making? *Sample answers might include: psychiatrists seemed confident and/or knowledgeable; she seemed to be neutral/ not "pushing medicine on me;" he explained things to me in easy-to-understand language* 

Additional resources include:

- 1) Reprotox: <u>https://reprotox.org</u>
- 2) MGH website: https://womensmentalhealth.org
- 3) Lact Med: https://toxnet.nlm.nih.gov/newtoxnet/lactmed.html
- 4) PubMed: https://www.ncbi.nlm.nih.gov/pubmed



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