

Antidepressants in Pregnancy: Strictly on a Need to Know Basis

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The use of psychotropic medications in pregnant and lactating women is increasing but both clinicians and consumers question frequently whether their use is safe. For patients with mild-moderate disease, the risk-benefit decision may be more challenging than for those who are severely and persistently mentally ill. The largest amount of safety data regarding teratogenicity and long-term neurobehavioral development exists for the antidepressants. However, in 2004, the FDA issued a public advisory that exposure to serotonergic antidepressants in the third trimester may be associated with transient neonatal complications. In 2005 and 2006, data were released that have raised concerns about increased risks of birth defects and infant complications related to SSRI/SNRI exposure in utero. This presentation is designed to facilitate rational clinical decision making in the treatment of perinatal depression with particular attention to a critical analysis of the literature. The limitations of the available studies on pharmacotherapy and on child development in treated and untreated maternal depression and anxiety will be discussed.

References: 1. Chambers, C. D., S. Hernandez-Diaz, et al. (2006). "Selective Serotonin-Reuptake Inhibitors and Risk of Persistent Pulmonary Hypertension of the Newborn." *N Engl J Med* 354(6): 579-587. 2. Kallen B, Olausson, P.: Antidepressant drugs during pregnancy and infant congenital heart defect. *Reproductive Toxicology* 2006; 21:221-222.

The "New" Adolescent Sexuality

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This presentation challenges basic assumptions about the meaning of adolescent sexuality. It discusses the terms sexually active, virginity/abstinence, sexual orientation, and sex education with reference to research, policies, and popular culture, including Internet influences on adolescent sexuality. The author notes a scarcity of research on adolescent sexuality outside of the traditional focus on sexual intercourse and teen pregnancy, and a particular lack of longitudinal data to verify changes and trends. She concludes that further research is necessary to establish consistent definitions of adolescent sexuality and criteria for examining the topic. Healthcare practitioners are encouraged to challenge their assumptions of what it means for an adolescent to be sexually active. The author recommends avoiding the assumption that adolescent patients have basic knowledge of STDs and safer sex, even if they are sexually experienced.

Depression in Women with Pelvic Organ Prolapse

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Objective: To assess depression scores in women with and without pelvic organ prolapse (POP) as an ancillary analysis of a study evaluating the impact of POP on a woman's body image.

Methods: Patients were enrolled from a general gynecology practice and a urogynecology referral practice. Cases and controls were 40 years of age or older. The Pelvic Organ Prolapse Quantification (POP-Q) examination was performed on all subjects to determine vaginal support stage. Cases were defined as women with symptomatic pelvic organ prolapse, POP-Q stage \geq II and answering "yes" to one or both of the following questions: 1) Do you usually have a sensation of bulging or protrusion from the vaginal area? and 2) Do you usually have a bulge or something falling out that you can see or feel in the vaginal area? Controls were defined as not having symptomatic pelvic organ prolapse, POPQ stage \leq I and answering "NO to both of the above questions. Subjects completed a self-administered questionnaire packet which included the following measures: 1) The Body Image Quality of Life Inventory (BIQLI); 2) The Body Exposure during Sexual Activity (BESAQ); 4) The Pelvic Floor Distress Inventory (PFDI) and The Pelvic Floor Impact Questionnaire (PFIQ); 5) The Patient Health Questionnaire-9 (PHQ-9); 6) The Pelvic Organ Prolapse/Urinary Incontinence Sexual Questionnaire (PISQ); and 7) a summary sheet assessing standard demographic and pertinent surgical history. The PHQ-9 is a validated measure of depression severity. PHQ-9 was scored in two ways: 1) total scores were calculated, scores of greater than or equal to ten correlate with moderate to severe depressive symptoms; and 2) scores were calculated using the office coding algorithm (Spitzer et al) which categorizes scores into major depressive syndrome and other depressive syndrome.

Results: A total of 78 cases and 69 controls were enrolled and had completed questionnaires. Mean age of cases and controls was 60 and 54 yrs respectively. Cases were more likely to have undergone prior hysterectomy, prior prolapse and incontinence surgeries. Twenty three percent of cases had total PHQ-9 scores greater than or equal to 10 compared to 10% of controls. Using PHQ office coding algorithm, nineteen percent of cases had any depressive syndromes (major or other) while only 6% of controls had any depressive syndrome. Multivariable logistic regression models were developed with the dependent variable defined as the cases and controls and the controls served as the reference group. When PHQ-9 scores were dichotomized as \geq 10 (which includes moderate to severe depressive symptoms) and $<$ 10, cases were 5 times more likely to have a PHQ-9 greater than 10. When PHQ-9 was scored for major and other depressive syndrome, cases were 5-6 times more likely to have major depressive or any depressive syndrome.

Cases were 2 times more likely to have undergone a prior hysterectomy.

Conclusions: To date there is no literature investigating the association of depression and pelvic organ prolapse. This data suggests that women seeking treatment for pelvic organ prolapse are 5-6 times more likely to have moderate to severe depressive symptoms compared to controls without pelvic organ prolapse.

Supporting the Couple with Genital Pain: Beyond the “Two Crummy Choices”

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The impact of female genital pain on individuals and couples includes depression, anxiety, somatic complaints, psychological distress, interpersonal sensitivity, and poor relationship adjustment. In addition, sexual concerns are common, including decreased desire, arousal, orgasm, sexual satisfaction and quality of life, as well as increased sexual avoidance, poor sexual self confidence, increased fears regarding interpersonal and sexual relationship. To address these consequences of genital pain, multidisciplinary approaches are recommended. The couples/marital therapy may include normalizing the patient and partners’ reactions to genital pain. The introduction of the model, “The Two Crummy Choices”, where each partner is vulnerable to experiencing guilt and/or regret as the result of inadequate sexual options, may assist the couple to articulate their sexual needs and concerns. Encouraging sexual activities that are pain free and sexually satisfying, including education about sexual responsiveness and maintaining one’s sexual connection with partner, masturbation and sexual play, enlarging the couple’s sexual repertoire, and planning for sexual encounters with reasonable expectations, may benefit couples troubled by genital pain disorders.

Inhibin B as a Potential Biological Marker of Premenstrual Syndrome

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Objectives: Studies indicate that women with premenstrual syndrome (PMS) have normal levels of reproductive hormones, but respond abnormally to hormonal changes during the menstrual cycle. However, the “Aberrant Inhibin B Model” proposes that high levels of inhibin B relative to the age-related norm may to be associated with PMS or premenstrual dysphoric disorder. The hypotheses were that the levels of and follicular phase rise in inhibin B, a hormone

indicative of ovarian reserve and follicle development, are associated with symptoms of PMS.

Study Design: Twenty-seven females prospectively rated symptoms of PMS and functioning daily for one menstrual cycle; completed a health history and psychiatric diagnostic interview; and gave blood samples on day 3, or days 3 and 9 of the cycle. The definition of PMS was having one or more symptoms of the syndrome differentiated from those of other psychiatric disorders and associated with functional impairment.

Results: Females with versus without PMS had higher levels of inhibin B on day 3 (100.70 pg/mL \pm 41.19 vs. 59.08 pg/mL \pm 35.58) whether ($P = .008$) or not ($P = .01$) effects of age were controlled. The slope of inhibin B was more positive for females with PMS (7.14 \pm 4.98 vs. 0.54 \pm 5.98; $P = .047$), and for those with more symptoms of PMS whether ($P = .035$) or not ($P = .024$) effects of age were controlled. Inhibin B (day 3 or slope) explained 24% of the variance in the presence of PMS.

Conclusion: For the first time, evidence suggests that inhibin B level may be a biomarker of PMS and may have potential clinical utility as an aid to the diagnosis of the syndrome. The “Aberrant Inhibin B Model” explains how high levels of inhibin B relative to the age-related norm could come to be associated with PMS or premenstrual dysphoric disorder.

References: 1. Schmidt, P.J., Nieman, L.K., Danaceau, M.A., Adams, L.F., Rubinow, D.R., 1998. Differential behavioral effects of gonadal steroids in women with and in those without premenstrual symptoms. *N. Engl. J. Med.* 338, 209-16. 2. Klein, N.A., Houmard, B.S., Hansen, K.R., Woodruff, T.K., Sluss, P.M., Bremner, W.J., Soules, M.R., 2004. Age-related analysis of inhibin A, inhibin B, and activin A relative to the intercycle monotropic follicle-stimulating hormone rise in normal ovulatory women. *J. Clin. Endocrinol. Metab.* 89, 2977-81.

Cesarean Delivery on Maternal Request: When is it Reasonable?

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Cesarean Delivery on Maternal request (CDMR) is a growing philosophical and ethical phenomenon. Extensive studies from the NIH and Canada have not found a significant difference in the risk:benefit comparisons of planned vaginal birth vs. CDMR, with certain precautions. Thus, the ethical issue of autonomy becomes a dominant theme in our discussions. We must be careful to understand our prejudices and cultural biases when we discuss CDMR with our patients.

First-time Mothers' Experiences of Childbirth Perspective on Psychological Reactions to the Body

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Objectives: The goal of the current study was to assess a woman's psychological responses to the physical experiences of first childbirth evaluating specifically genital anxieties – literal and metaphorical. Literal genital anxiety is defined as fear of loss of or damage to the genitals or loss of reproductive function (Mayer, 1985, Richards, 1996). Metaphorical genital anxiety is defined as anxiety about not measuring up as a woman.

Design: A mixed methods design was employed for interviews of 31 nulliparous women. The STAI and W-DEQ were administered, as was a semi-structured interview, between 36-40 weeks gestation and again on average of 35.5 days postpartum. Qualitative data from the semi-structured interviews were coded, analyzed and compared with quantitative results.

Results: Paired difference t-tests were conducted to evaluate directional change in the scores on the STAI and W-DEQ and a correlational analysis was conducted to look at the relationship of the scores pre- and post-delivery. Expectedly, trait anxiety scores (STAI-T) remained constant and fear scores (W-DEQ) decreased. Surprisingly, state anxiety scores remained constant. Qualitative findings showed literal genital anxiety decreased but metaphorical genital anxiety increased following childbirth. For those women whose state anxiety scores increased there was also a notable increase in metaphorical anxiety.

Conclusions: While fear of childbirth and literal genital anxiety decrease following childbirth, anxieties about having performed as a good enough woman increase postpartum. Qualitative data illustrate a current social pressure, experienced as an unspoken norm regarding womanhood, emerging. Competence regarding labor and delivery is defined as a vaginal delivery with no medication or intervention. Feelings of inadequacy regarding a sense of performance related to feelings about being a woman are prevalent and confirm metaphorical genital anxiety as a relevant present issue.

References: 1. Elise, D. (1998). The absence of the paternal penis. *J Amer Psychoanal Assn*, 46: 413-442. 2. Mayer, E. (1985). 'Everybody must be just like me': observations on female castration anxiety. *Int J Psycho-anal*, 66: 331-347. 3. Olesker, W. (1998) Female genital anxieties: views from the nursery and the couch. *Psychoanal Q*, 67: 276-294. 4. Richards, A (1996). Primary femininity and female genital anxiety. *J Amer Psychoanal Assn*, 44S: 261-281. 5. Spielberger, C. (1983). *State-Trait Anxiety Inventory for Adults: Sampler set, Manual, Test scoring key*. California: Mind Garden. 6. Wijma, K., Wijma, B., Zar, M. (1998). Psychometric aspects of the W-DEQ; a new questionnaire for the measurement of fear of childbirth. *JPOG*, 19: 84-97.

Variables Associated with Cognitive Function in Ovarian Cancer

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Objective: To evaluate the effect of patient characteristics and chemotherapy on cognitive function (CF) in women with ovarian cancer.

Study Design: Ovarian cancer patients with at least one, but no more than two, regimens of first line, intravenous, platinum based, chemotherapy, were administered a 30 minute clinical interview by trained interviewers following informed consent. CF was measured using the Trail Making Test (TMT) Parts A and B, the Digit Span and Digit Symbol Subtests from the Wechsler Adult Intelligence Scale III (WAIS-III); neurotoxicity symptoms were evaluated using the Functional Assessment of Cancer Therapy Neurotoxicity questionnaire (FACT/GOG-Ntx); depression and anxiety were assessed with the Center for Epidemiological Studies-Depression Scale (CES-D) and the State-Trait Anxiety Inventory (STAI); perceived difficulties with CF were assessed using the self-report Cognitive Difficulties Scale (CDS); stage of cancer (SOC) and number of chemotherapy cycles received were recorded. Parametric and nonparametric correlation coefficients were determined using SPSS.

Results: 41 patients have been enrolled to date (mean age 61, range 39-88); data were excluded for one patient that exceeded 3 SD from the mean. Age was negatively correlated with measures of attention (longer time on TMT A, $r=.317$, $p=.043$ and poorer performance on the Digit Symbol Subset of the WAIS, $r=-.612$, $p<.001$) and executive function (longer time on TMT B, $r=.364$, $p=.019$). SOC was associated with decreased executive function ($r=.358$, $p=.021$) and positively associated with state anxiety ($r=.371$, $p=.017$). The number of cycles of platinum chemotherapy was positively correlated with neurotoxicity ($r=.337$, $p=.031$), but was not significantly associated with objective or perceived measures of CF. Perceived cognitive difficulties were positively correlated with depression ($r=.509$, $p=.001$) and neurotoxicity ($r=.494$, $p=.001$).

Conclusions: Patients' report of cognitive difficulty may be more closely associated with depression and residual neurotoxic effects than objective deficits in CF.

Brief Psychotherapy for Pregnant Women Psychologically Traumatized by a Previous Pregnancy

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Pregnant women who experience physical and psychological traumas as a result of a previous pregnancy or childbirth often experience posttraumatic symptoms during a subsequent pregnancy, labor, or delivery. As many as one-third of women rate their labors as traumatic, up to 25% develop post traumatic stress disorder (PTSD), and up to 32% develop sub-clinical PTSD even after an objectively uneventful childbirth. Illness, complications, and medical and surgical interventions have all been reported to result in PTSD in pregnancy and childbirth.

Study Objectives: To develop a psychotherapy treatment manual for pregnant women who have suffered psychological trauma as a result of a previous pregnancy, labor, or childbirth. The aim is to reduce anxiety and enhance distress tolerance.

Design: Pregnant women aged 18 and older will be recruited to participate in six sessions of a somatically-based individual psychotherapy which will include a post-partum session. Therapy will include education about the effects of trauma and strategies for healing, teaching somatic resources to reduce psychological distress, and encouragement of the woman's sense of connection to her baby. Pre/post clinical assessments will include narrative interviews and measures of traumatic symptoms, somatization, and dissociation.

Results: The primary result will be a psychotherapy manual informed by an analysis of narrative interviews with participants regarding elements of therapy that helped or hindered change.

Conclusions: Somatically oriented approaches to psychotherapy may facilitate short-term stabilization of post-traumatic symptoms, and be useful in preventing retraumatization during childbirth among women with a history of a previous traumatic delivery. As of yet there is no published research on psychotherapy with this population. Once a manual is developed it may be tested in larger samples.

Maternal Affective Symptoms and Infant Healthcare Utilization: The Mediating Role of Parenting Self-Efficacy

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Objectives: There is a paucity of research examining infant healthcare utilization (HCU) and methodological inconsistencies across previous studies. Prior research suggests that maternal sociodemographic variables (e.g. maternal education level, employment status, family size) and maternal HCU are significant predictors of infant HCU. Research examining adult and child HCU suggests that psychological variables such as negative affect (both anxious and depressive) and self-efficacy are related to healthcare use. This study examines maternal anxious and depressive symptoms as well as parenting self-efficacy over the first six months postpartum in the prediction of infant HCU.

Study Design: 250 mothers completed measures of sociodemographic variables, a measure of anxiety, depression, and overall negative affect (the Mini-MASQ), and a measure of parenting self-efficacy (the MEQ), at recruitment on the maternity ward and at two-, four-, and six-months postpartum. Mothers completed bi-monthly interviews for six-months examining their own and their infant's HCU. At six-months postpartum, infant medical records were examined for number of visits and associated diagnoses.

Results: The primary hypothesis states that anxiety symptoms will moderate depressive symptoms' influence on infant HCU both directly and indirectly through the mediating affect of parenting self-efficacy. Descriptive analyses of the sample, frequency distributions of infant diagnoses, and hierarchical regression analyses modeling infant HCU will be presented.

Conclusions: Infant medical visits could be used to screen for maternal symptomatology in order to foster early intervention efforts specifically targeting enhancing parenting self-efficacy. Identified infants would likely be exposed to fewer medically unfounded visits and procedures, resulting in reduced stress on the infant, the family, and the healthcare system.

References: 1. Casillas, A. & Clark, L. A. (2000, May). The Mini Mood and Anxiety Symptom Questionnaire (Mini-MASQ). Poster presented at the 72nd Annual Meeting of the Midwestern Psychological Association, Chicago, IL. 2. Teti, D. M. & Gelfand, D. M. (1991). Behavioral competence among mothers of infants in the first year: The mediational role of parenting self-efficacy. *Child Development*, 62, 918-929.

Prevalence of Psychiatric Disorders among Urban Postpartum Mothers Attending Well-Child Care Visits

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Background: Maternal depression studies that use depression screening tools suggest that among urban low-income women attending well childcare (WCC) visits in the postpartum year, approximately one-third will have high levels of depressive *symptoms*. Symptoms may not equate to actual diagnoses. No studies to date have explored the prevalence or types of *psychiatric diagnoses* in these new mothers.

Objective: To describe the prevalence of psychiatric diagnoses among mothers attending WCC visits in their infant's first year in an urban, academic pediatric clinic.

Design/Methods: A random sample of mothers, ages 18 and older, whose children were seen at WCC visits in the first year at a large urban academic pediatric primary care clinic were recruited for this study. They were asked to return for an interview which included a 1-2 hour semi-structured diagnostic psychiatric interview (Structured Clinical Interview for DSM-IV or SCID) by a trained interviewer. The SCID is the "gold standard" for assessing 33 DSM Axis I diagnoses in adults.

Results: A total of 198 women completed the interview. They were primarily in their mid-20's (mean 24.6yrs), African-American (69%), unmarried (68%), had a high school education or less (80%), more than 1 child (58%), and were receiving public insurance (85%). 73 women (37%) received a diagnosis of major depression, and an additional 38 women (19%) had minor depression. The onset of depression began during pregnancy in more than half (58%) and approximately one-third (34%) began in the postpartum year. In addition, 37 women (19%) had an anxiety disorder. The most common anxiety disorders included, PTSD (N=17, representing 9% of the total sample), obsessive compulsive disorder (N=11, 6%), and social phobia (N=11, 6%). Also, 27 women (14%) had both anxiety and depressive disorders and 12 (6%) had two or more anxiety disorders. Finally, 16 women (8%) had an active substance use disorder. Altogether, 122 women (62%) had at least one of the above psychiatric disorders.

Conclusions: A very high burden of psychiatric illness exists among low-income, urban mothers who attend WCC visits. In addition to more than half of women having either major or minor depression, a high percentage had anxiety disorders, or a combination of disorders. Prompt recognition and effective treatment of mental health disorders among urban mothers is needed.

Paroxetine Use in Pregnancy and Cardiovascular Defects

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Background: Paroxetine (Paxil®) is an SSRI, used for the treatment of depression, obsessive compulsive disorder, anxiety disorders and premenstrual dysphoria. Until recently, no studies had associated SSRIs as a group with an increased risk for major malformations above the 1% - 3% baseline rate. However, in the past year, several studies noted specifically, an increase risk of cardiovascular defects associated with paroxetine, compared to other antidepressants within its class.

Objective: To determine whether paroxetine increases the risk of cardiovascular defects in infants of women exposed during the first trimester of pregnancy.

Methods: We collected prospectively ascertained cases of infants from Teratogen Information Services throughout the world, exposed to paroxetine in the first trimester of pregnancy and compared them to a non-exposed Motherisk cohort. We also contacted the authors of data base studies that had been published on antidepressants as a class, to determine how many of these women had been exposed to paroxetine and the rates of cardiovascular defects in their infants.

Results: We were able to ascertain the outcomes of (1013) infants from 8 services. The rate of heart defects in the paroxetine group was 0.7% versus 0.7% non-exposed group. The combined rate in the data base studies was 1.5%.

Conclusion: Paroxetine does not appear to be associated with an increase risk for cardiovascular defects following use in pregnancy, as the incidence in more than 3000 infants were well within the population incidence of 0.7% to 1.2%.

The ReproPsych Group

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On Sunday May 21st 2006, a meeting was held in Toronto that brought together clinicians and researchers in the field of reproductive mental health. Many of our members are very well known in this area and have published numerous papers in the peer reviewed literature on this subject. We formed this group to keep abreast of the current literature and to analyze each paper carefully following publication, especially when there has been extensive media coverage. Our goal is to provide balanced information so that healthcare providers can make informed evidence-based, risk assessments about the treatment of psychiatric conditions during pregnancy. Our activities to date, have included a letter (in press) to the editor of a journal, detailing our concerns regarding a publication that we felt was not in the best interests of the patients or their health care providers.

References: 1. Woode W, Einarson A, Letter to the editor re paroxetine (in press) *Annals Pharmacotherapy* 2006; 2. Cohen LS, Altshuler LL, Harlow BL, Nonacs R, Newport DJ, Viguera AC, Suri R, Burt VK, Hendrick V, Reminick AM, Loughhead A, Vitonis AF, Stowe ZN. Relapse of major depression during pregnancy in women who maintain or discontinue antidepressant treatment. *JAMA*. 2006 Feb 1;295(5):499-507.

Barriers to Care for Antenatal Depression

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Study Objectives: Women access healthcare for depression during pregnancy at alarmingly low rates. Low-income pregnant women are particularly unlikely to seek mental health treatment despite rates of antenatal depression that are high. The purpose of this study was to explore why many depressed pregnant women do not access mental health treatment, with an emphasis on low-income women.

Design: Using a concurrent mixed-methods strategy, pregnant women (N = 1,416) receiving prenatal care in both public and tertiary maternal health care clinics completed measures of depressive symptomatology, willingness to seek treatment for depression or anxiety and perceived barriers to seeking care. Six focus groups focused on help-seeking for depression were conducted with pregnant women.

Results: Among women with Beck Depression Inventory (BDI; (Beck et al., 1961) scores >16 (N=183), 45% were "very willing" to seek care for depression or anxiety in pregnancy. Women in this group were more likely to identify the following barriers to care: cost, lack of insurance, lack of transportation, long waits for treatment, previous bad experience with mental health care, and not knowing where to go for treatment than women with lower BDI scores. Decreases in income were correlated with increasing perception of cost and transportation as barriers. In focus groups women identified similar obstacles and discussed additional concerns about quality of care and trust specific to pregnancy and medication safety.

Conclusion: Results suggest that addressing logistical barriers (such as cost, insurance coverage and transportation) through changes in mental health services and policy will improve access to care for antenatal depression. Moreover, examining and addressing the quality of perinatal mental health care is a critical area of continued research and program development.

The Effect of Depression, Anxiety and Antidepressant use on Maternal Physiological Correlates During Pregnancy

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Objective: The purpose of this study was to examine the effects of maternal adversity (depression and anxiety) on the autonomic modulation of heart rate and the cortisol awakening response (CAR). The effects of antidepressant (AD) use were also examined.

Study Design: Eight-eight pregnant women were studied between 25 and 33 weeks of gestation and were identified as either adversity (n=53) or healthy, control (n=35), based on depression/ anxiety scores and lifetime psychiatric history. Subjects wore a 24-hour Holter recorder to measure time- and frequency-domain measures of heart rate variability (HRV) and provided morning salivary samples for assessment of hypothalamic-pituitary-adrenal function.

Results: Women in the adversity group had significantly reduced time-domain measures of HRV and CAR ($p < 0.050$, $p = 0.060$, respectively), as well as higher heart rates while asleep ($p = 0.006$), compared to controls, controlling for antidepressant (AD) medication. The low frequency/ high frequency (LF:HF) ratio was associated with higher depression scores ($p = 0.047$). Women who were taking AD medication showed improved HRV and an attenuated CAR, in addition to increased baseline cortisol levels. Childhood maltreatment (as measured with the Childhood Trauma Questionnaire total score) was associated with lower baseline cortisol levels immediately following awakening, explaining 24% of the variance.

Conclusions: The autonomic nervous system and the HPA axis are dysregulated in women experiencing depression and anxiety during pregnancy. Women taking AD medication showed a normalization of physiological correlates. Compromised physiological function may affect healthy fetal development. Birth outcomes of this population will also be presented.

Reference: Wadhwa PD (2005), Psychoneuroendocrine processes in human pregnancy influence fetal development and health. *Psychoneuroendocrinology* 30: 724-43.

Screening for Postpartum Depression: Prevalence, Barriers, and Attitudes of Health Care Providers

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Objectives: We aimed to identify barriers to routine screening for postpartum depression, elucidate who conducts routine screening most often, and delineate why providers do not routinely screen.

Study Design: A web-based survey was administered to various health care providers (i.e., physicians specializing in obstetrics / gynecology, midwives, nurses, primary care physicians, and pediatricians). The survey assessed the frequency with which they screen for postpartum depression, why they do not screen, and how knowledgeable providers rated themselves regarding postpartum depression. Demographic information was collected, and examined in relation to other survey responses.

Results: One hundred participants completed surveys, however, recruitment was notably difficult. The majority of participants were obstetricians / gynecologists, nurses, or midwives. Frequency of screening did not vary between obstetricians / gynecologists, nurses, and midwives. Most participants had received some form of education on postpartum depression, and a clinical interview was the most common means by which to screen for the disorder. There were no differences in the rates of diagnosed postpartum depression among those providers that screen routinely versus those that do not. However, number of years in practice and self reported knowledge of postpartum depression was found to predict routine screening. The majority of participants in this sample viewed screening for postpartum depression as their responsibility regardless of specialty, and major deterrents to screening were identified, such as lack of time, among those participants who do not screen routinely for postpartum depression.

Conclusions: Despite limited sample size, the information obtained about routine screening for postpartum depression is clinically useful, and can be used to inform future screening protocols for clinicians by addressing their preferences with respect to screening, as well as capitalizing on their possible strengths.

References: 1. O'Hara, M.W., & Swain, A.M. (1996). Rates and risk of postpartum depression: A meta-analysis. *International Review of Psychiatry*, 8, 37-54. 2. Fergerson, S.S., Jamieson, D.J., & Lindsay, M. (2002). Diagnosing postpartum depression: Can we do better? *American Journal of Obstetrics and Gynecology*, 186(5), 899-902.

Bupropion XL in the Menopausal Transition: Effects on Mood, Anxiety, and Menopausal Symptoms

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Objectives: To evaluate the effect of bupropion XL on anxiety and depression in women in the menopausal transition when the dramatic change in sex hormones is associated with new onset and recurrence of depression in women. There is significant overlap between symptoms of depression and the menopausal transition. Treatment with antidepressants is often limited by adverse effects that worsen menopausal symptoms.

Study Design: Twenty women ages 45-55 (mean age 49.80 years) who met STRAW criteria for the late reproductive stage, menopausal transition, or early postmenopause, exhibited symptoms of depression (HAM-D score ≥ 14), anxiety, and menopausal symptoms, and were not receiving hormonal contraceptives or hormone replacement therapy, were entered into a 3 month study of open-label bupropion XL 300 – 450 mg/d.

Results: Mean Hamilton Rating Scale for Depression (HAM-D) score dropped from 21.65 at baseline to 12.60 at study end, with 30% of women achieving remission as measured by a HAM-D score ≤ 7 . Mean Hamilton Anxiety Rating Scale (HAM-A) score decreased from 22.50 at baseline to 13.70 at study endpoint. Two women (10%) discontinued from the study early, 1 after 6 weeks due to an adverse event, and 1 after 2 months secondary to lack of efficacy. Changes in frequency and severity of menopausal symptoms, sexual functioning as measured by the Changes in Sexual Functioning Questionnaire, cognition assessed with the Stroop test, and adverse events, demographics, and laboratory values will also be reported.

Conclusions: Symptoms of depression, anxiety, and the menopause were all reduced in depressed women in the menopausal transition receiving bupropion XL.

References: 1. Cohen LS, Soares CN, Vitonis AF, et al. Risk for new onset of depression during the menopausal transition: the Harvard study of moods and cycles. *Archives of General Psychiatry* 2006;63(4):385-390. 2. Freeman EW, Sammel MD, Lin, H, Nelson DB. Associations of hormones and menopausal status with depressed mood in women with no history of depression. *Archives of General Psychiatry* 2006;64(3):375-382.

Response and Remission in Patients with Recurrent Depressive Disorder Treated with Venlafaxine XR or Fluoxetine: Effect of Gender and Menopausal Status

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Objectives: To evaluate effects of gender and menopausal status on acute-and continuation-phase treatment outcomes in patients with recurrent major depressive disorder (MDD).

Study Design: Treatment by gender and menopausal status interactions were evaluated using data from a multiphase, multicenter, double-blind study of adult outpatients with recurrent MDD randomly assigned to venlafaxine XR (75-300 mg/d; n=821) or fluoxetine (20-60 mg/d; n=275) for 10 weeks' acute-phase treatment followed by 6 months' continuation-phase treatment (n=530, venlafaxine XR; n=185, fluoxetine) for those achieving response/remission at the end of the acute phase. Proportions of men and women in each treatment group achieving response (HAM-D₁₇ score ≤12 or ≥50% decrease from baseline) and remission (HAM-D₁₇ score ≤7) were compared using logistic regression, including assessment of the treatment-by-gender interaction. Effects of menopausal status on outcome were evaluated as described above for gender. Menopausal status was determined based on status at acute phase baseline.

Results: The ITT population was comprised of 781 patients in the venlafaxine XR group (65% women) and 266 patients in the fluoxetine group (61% women). The proportion of women in the overall population who were premenopausal, perimenopausal, and postmenopausal were 69%, 5%, and 26%, respectively. Given the small sample of perimenopausal women, data from these patients were not analyzed. There were no statistically significant differences between venlafaxine XR and fluoxetine in rates of response or remission at acute-phase and continuation-phase end points in men or women or in the subgroups of pre- and postmenopausal women, nor were there significant interactions of gender or menopausal status with treatment.

Conclusions: In this study of patients with recurrent MDD, treatment outcomes with venlafaxine XR and fluoxetine did not differ on the basis of gender or menopausal status. Despite the size of the overall study, our confidence is limited by the relatively small number of perimenopausal and postmenopausal women, particularly in the fluoxetine arm.

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Reduction of Symptoms Related to Negative Interpersonal Relationships, Food, and Water Retention in Women with Premenstrual Dysphoric Disorder (PMDD) Treated with an Oral Contraceptive Containing Drospirenone 3mg/ethinyl estradiol 20mcg in a 24/4 regimen

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Objectives: PMDD is characterized by a variety of symptoms such as irritability, moodiness, feeling anxious, bloating and increased appetite that appear during the luteal phase of the menstrual cycle and disappear after the onset of menses. Symptoms are severe enough to adversely affect activities, work, or relationships. ¹ The numerous premenstrual symptoms attributed to PMDD along with DSM-IV diagnostic criteria² represent formidable clinical challenges to healthcare providers. This analysis evaluated the therapeutic properties of an oral contraceptive (OC) containing drospirenone 3 mg/ethinylestradiol 20 µg administered in a 24/4 regimen (drospirenone /EE 24/4), compared with placebo, on three readily recognizable symptoms groups that commonly affect women with PMDD.

Methods: The primary outcome measure of this multi-center, double-blind, randomized, parallel, clinical trial of 449 women aged 18-40 with PMDD was based on the validated Daily Record of Severity of Problems (DRSP) scale.³ This is a self-reported instrument with a 6-point scale assessing twenty-one premenstrual symptoms and three functional impairment questions. Ten commonly reported symptoms were grouped into three general categories: symptoms associated with negative interpersonal relationships, symptoms associated with food, and symptoms associated with water retention. Mean DRSP scores for the individual symptoms were summed within their respective symptom categories, at baseline and over 3 cycles. Symptom scores were compared between the two treatment groups with a weighted analysis of covariance (ANCOVA) model; 95% confidence intervals for the treatment differences were estimated from the model

Results: Three month treatment with drospirenone/EE 24/4, compared with placebo, resulted in significantly greater reduction of symptoms related to negative interpersonal relationships (-49.67 vs. -38.15; p<0.0001), food (-47.29 vs. -36.84; p=0.0001), and water retention (-42.68 vs. -30.54; p<0.0001). These results are consistent with previously

published primary results of this clinical trial which reported highly significant reduction of total and individual DRSP symptom scores compared with placebo.⁴

Conclusion: The COC drospirenone/EE 24/4 is highly effective in reducing groups of symptoms that negatively impact interpersonal relationships, food, and water retention. Utilizing this simplified approach for initiating discussion about premenstrual symptoms may facilitate improved recognition and treatment of PMDD.

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Menstrual Cycle Characteristics and Symptom Fluctuations in Healthy Women

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Objectives: We examined the cyclicity of individual mood symptoms relative to ovulation and the onset of flow, comparing ovulatory with anovulatory cycles, and ovulatory cycles of normal luteal length with those of short luteal length.

Study Design: This was a secondary analysis of daily symptom diaries from a study of exercise, ovulation and bone loss. “Feeling depressed”, “feeling anxious” and “feeling angry/frustrated” were scored on a scale of 0 to 4 (very intense) and “feeling of self-worth” on a scale of -2 (much less than usual) to 2 (much more than usual) over multiple cycles. A validated basal body temperature-based methodology was used to determine the onset of the luteal phase. Symptom scores were examined over two 15-day intervals centered on ovulation and onset of flow. Cycles were classified as normal, short luteal phase (< 10 days), or anovulatory. Symptom scores were compared in ovulatory and anovulatory cycles, and in normal and short luteal phase cycles.

Results: Data were available from 765 cycles of 62 women. Overall, changes were slight. Mood symptoms followed a “PMS pattern”, least severe during the mid-follicular phase, then worsening until a peak at the onset of flow. Of 739 cycles that could be classified, 532 (72%) were considered normal, 185 (25%) had a short luteal phase, and 22 (3%) were anovulatory. In anovulatory cycles, mood symptoms decreased. Feelings of depression, anger/frustration, and anxiety were highest in the mid-follicular phase and several

days prior to the next menses; they were lowest during menses and just after mid-cycle. Symptoms did not differ based on luteal phase length.

Conclusions: The temporal pattern of mood symptom severity of anovulatory cycles differed from that of ovulatory cycles. This variation from the typical “PMS pattern” could help explain cyclicity with a “non-PMS pattern” previously reported in some cycles of some women.

Reference: Sveinsdottir et al, *Acta Obstet Gynecol Scand*. 2000 Sep;79(9):757-64.