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Results: Endogenous GHB levels before taking SO ranged from 5.81–7.60μM in milk. GHB levels were 2- to 4-times higher 4 hours after the first SO dose (10.44–23.88μM) and 3–5 times higher 4 hours after the second dose (8 hours after first dose; 14.60–34.01μM). In general, GHB levels returned to endogenous levels 6–10 hours following the second SO dose, however variability was observed between patients and pregnancies. Higher GHB levels in breast milk were observed with higher SO doses for both patients.
Conclusion: SO is transmitted to breast milk. Despite its short half-life, GHB concentrations remained 2- to 5-times higher than endogenous levels 4 hours after both nighttime doses. To avoid excess GHB exposure, mothers who take SO and breastfeed should consider expressing and discarding their morning milk. Future work should examine breast milk GHB levels after chronic SO use and determine whether GHB levels change as milk composition changes across the postpartum period.
Support (If Any): Department of Medicine, Brown University. UH Rainbow Babies & Children's Hospital.

0824

SLEEP IN THE POSTPARTUM: ACTIGRAPHY AND SLEEP DIARY DATA

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Introduction: We investigated maternal and infant sleep during in the post-partum period, and examined the relationships between maternal and infant sleep patterns.
Methods: Participants were 5 primiparous mothers and their infants. Mothers were recruited from the postpartum unit at the Jewish General Hospital. Only mothers who had a singleton, healthy, normal birth weight infant following a vaginal birth, who were living with a partner, were included. At two time periods, when infants were 2 and 6 months old, mothers recorded their own and their infants' sleep patterns over 7 consecutive days, using a sleep diary as well as wearing actigraphs (MicroMini-Motionlogger (25 grams, Ambulatory Monitoring Inc., Ardsley, N.Y.). Mothers wore the actigraph on their wrist while infants wore it on their ankle.
Results: Although there was substantial variability in total sleep time across nights, actigraph and diary data indicate that, over a 24-hour period, infants consistently slept more than their mothers, both at 2 and at 6 months postpartum. Actigraphs indicated a median of 7.91 hours' total sleep time for mothers at 2 months and 8.55 hours of sleep at 6 months postpartum. Infants slept 11.04 hours at 2 months and 11.64 hours at six months. Infants also had more disrupted sleep than their mothers, with a higher frequency of separate sleep periods at both time periods. Total nocturnal sleep time generally improved for both mothers and infants over time but number of 24- hour sleep episodes did not appear to change.
Conclusion: Despite the significant sleep disruption (seen objectively in frequent awakening) that the postpartum period brings, mothers appear to be getting a "normal" amount of sleep over a 24-hour period at both 2 and 6 months postpartum. Although sleep diary and actigraphy data result in different numerical values, the two measures confirm the mothers' resilience over this life transition.
Support (If Any): -

0825

FEMALE REPRODUCTIVE HORMONES AND HOT FLASHES IN PERIMENOPAUSAL SLEEP DISRUPTION

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Introduction: Perimenopausal sleep disruption is caused primarily by nocturnal hot flashes (nHF). However, evidence suggests that this is not the only etiology. Changes in gonadal steroids (estradiol and progesterone) may also underlie perimenopausal sleep disturbance. We evaluated if hormone dynamics have an independent contribution to sleep disturbance during the menopause transition. We hypothesized that sleep fragmentation would be associated with hypo-estrogenism and anovulation, indicated by lack of progesterone, especially when nHF are infrequent.
Methods: Daily sleep and HF diaries and weekly serum estradiol and progesterone were obtained for 2 months in perimenopausal women with untreated mild depressive symptoms and no primary sleep disorder (N=50). Weekly mean number of awakenings, wake-time after sleep-onset (WASO), sleep-onset latency, sleep efficiency and nHF frequency were calculated. Repeated-measures linear regression was used to examine associations of gonadal steroids and nHF with sleep parameters, after adjusting for age, depressive symptoms, and the interaction with nHF.
Results: Forty-five (90%) women reported nHF. Seven (14%) women were hypo-estrogenic and 23 (46%) had 1+ progesterone peak. nHF were adversely associated with all sleep parameters ($p \leq 0.02$). Independent of nHF, women reported more awakenings if they were hypo-estrogenic (mean 2.7 vs. 1.5, $p<0.001$). This association was observed when nHF were infrequent ($p<0.006$) but not when frequent ($p=0.57$). The association between lack of progesterone and more awakenings ($p=0.03$) became non-significant after adjusting for nHF. Gonadal steroids were not associated with other sleep parameters, nor were depressive symptoms associated with sleep disturbance.
Conclusion: While nHF are strongly linked with sleep disruption, awakenings are independently associated with hypo-estrogenism when nHF are infrequent. No other sleep parameters are linked with perimenopausal gonadal steroid changes. These findings suggest that nHF explain the majority of perimenopausal sleep complaints, but that withdrawal of estradiol also contributes to awakenings when nHF are infrequent. These findings suggest that gonadal steroid hormones may play an important role in regulating sleep through neural mechanisms in midlife women.
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0826

GENDER DIFFERENCES IN SLEEP DISORDERS AND SERVICE-ASSOCIATED ILLNESSES BETWEEN ACTIVE DUTY MALE AND FEMALE MILITARY PERSONNEL

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Introduction: Active duty service members (ADSM) are susceptible to disturbed sleep and sleep disorders. Studies to date have focused