Is the reactivity towards erotic pictures in ERPs during females’ menstrual cycle influenced by sex steroids?

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THEORETICAL BACKGROUND

Associations of sex hormones, neural reaction and behavior across the female menstrual cycle

- Late Positive Potential (LPP) as index for stimuli induced motivational salience and arousal (Hajcak et al., 2010).
- Variation of reactivity towards erotic stimuli in the LPP in dependence of hormonal concentration?
- LPP towards erotic words has been shown to be positively associated with estradiol during fertile cycle phases (Munk et al., 2018)

METHOD

- N = 35 women (M = 24.7±) without hormonal contraceptives
- 3 measures: follicular phase (FO) - Ovulation (OV) - & luteal phase (LU)
- Estradiol, progesterone, and testosterone samples (saliva) using Enzyme-Linked Immunosorbent Assay (ELISA)
- Task: Erotic Picture Stroop Paradigm
- 32 Scalp-electrodes; 320 Trials
- LPP: CP1 and CP2; 400-900ms poststimulus

RESULTS

Manipulation check: Hormonal levels during cycle phases

LPP higher in reaction to erotic than towards neutral pictures

LPP in reaction to erotic pictures negatively associated with progesterone concentration during ovulation

DISCUSSION

- Progesterone during ovulation negatively associated with LPP towards erotic pictures
- No associations with estradiol and reactivity towards erotic pictures in the LPP, although expected
- Distinct reaction patterns towards erotic words vs. erotic pictures?
- Is the strong reaction towards erotic pictures “covering” possible differences (“ceiling effect”)?

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