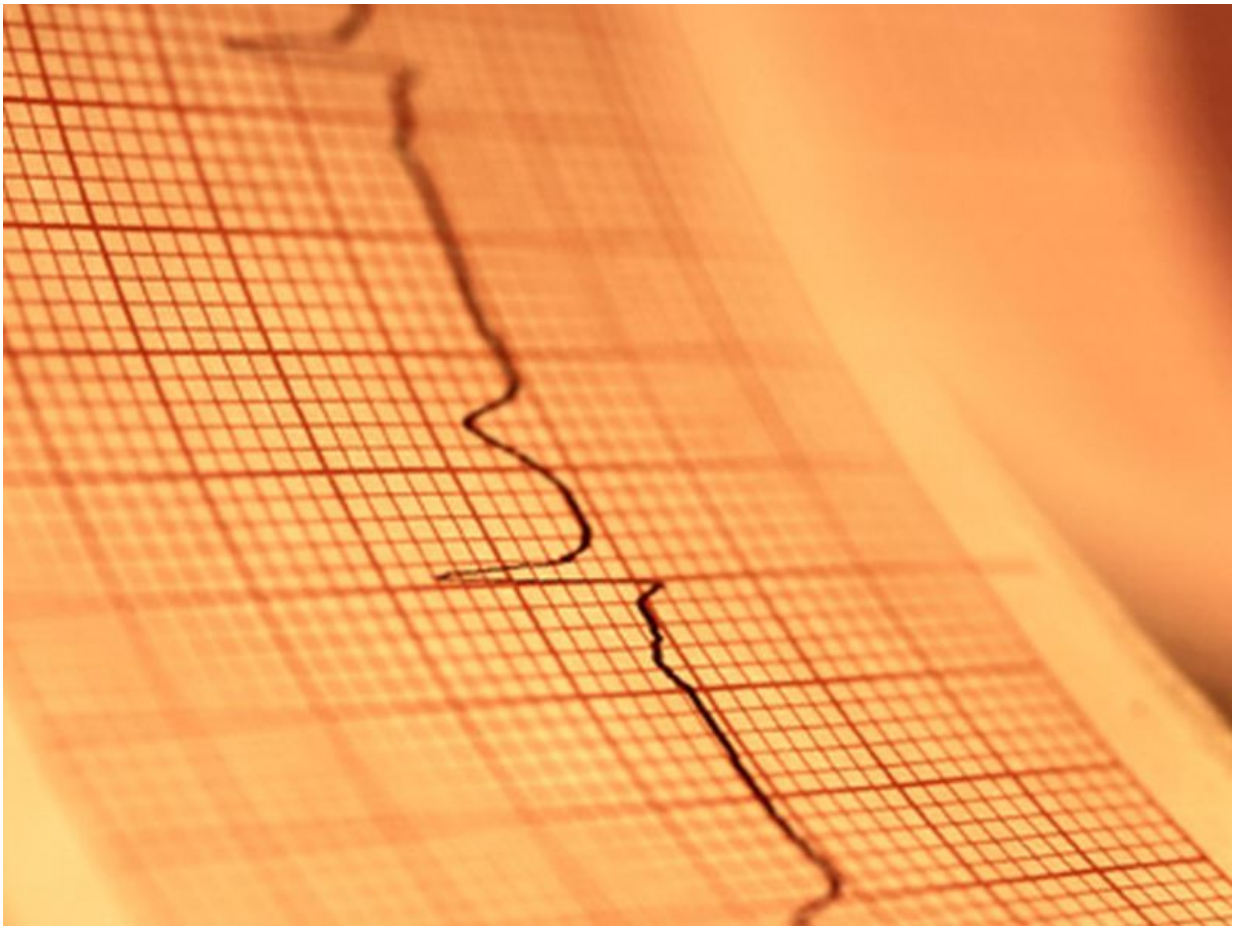
Medical Xpress

Progesterone attenuates drug-induced QT interval lengthening

April 11 2016



(HealthDay)—For healthy females, oral progesterone administration

attenuates drug-induced QT interval lengthening, according to a study published online April 6 in *JACC: Clinical Electrophysiology*.

James E. Tisdale, Pharm.D., from Purdue University in Indianapolis, and colleagues conducted a double-blind crossover study involving 19 healthy females. Participants were randomized to receive progesterone 400 mg or matching placebo once daily for seven days timed to the menses phase of the menstrual cycle, with a 49-day between-phase washout period. Ibutilide was infused over 10 minutes on day seven, after which, QT intervals were recorded; blood samples were collected for 12 hours. To calculate individualized heart rate-corrected QT intervals (QT_cI), subjects underwent electrocardiographic monitoring for 12 hours prior to the treatment phases.

Fifteen participants completed all study phases. In progesterone and placebo phases, the researchers found that the maximum serum ibutilide concentrations were similar (P = 0.43). During the progesterone phase, serum progesterone concentrations were higher (P $_cI$ was significantly lower (P = 0.04); maximum ibutilide-associated QT_cI, maximum percent increase in QT_cI from pretreatment value, and area under the effect (QT_cI) curve during the first hour post-ibutilide were also lower.

"Oral progesterone administration attenuates drug-induced QT_cI lengthening," the authors write.

One author disclosed financial ties to the pharmaceutical industry.

More information: Full Text (subscription or payment may be required)