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TITLE

LEVONORGESTREL EMERGENCY CONTRACEPTIVE PILLS (LNG-ECPS): THEIR MAIN MECHANISM OF ACTION (MOA) CANNOT BE ANTI-OVULATORY.

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ABSTRACT

Context – LNG- ECPs are marketed as emergency contraceptives; their mechanism of action (MOA) is reported to be ovulation inhibition/delay. We pointed out that they can never inhibit or delay ovulation, unless taken in the first fertile day of the cycle (Gynecol Endocrinol 2011,27:439). In the most fertile days they allow ovulation, but the luteal phase is insufficient or short (Contraception 2001,63:123; 2001,64:227; 2007,75:372) and so unfavourable to implantation needs.

Objectives & Methods – We analyzed Literature and EMA documents to verify the correctness of official information.

Results –LNG is known to be ineffective in delaying ovulation in the preovulatory days, the most fertile. Noè administered LNG before ovulation to women that had unprotected sex in the fertile days: over 70% of them had regular ovulations, but none of the expected pregnancies did appear (Contraception 2010,81:414). Brache (Contraception 2013,8:611) reported that “LNG is not different from placebo in inhibiting follicular rupture in the advanced phase of the cycle”; contradicting herself, in the FIGO and ICEC Statements (2008,2011,2012) on LNG MOA (<http://www.esrh.eu/about-esc/news/how-do-levonorgestrel>) she stated that “inhibition or delay of ovulation is LNG-ECPs’ principal and possibly only mechanism of action” (<http://www.sipre.eu/>). In the 2016 EPAR on ellaOne – Product Information/human/001027/WC500023670 (Table at page 9) it is shown that LNG-ECPs are placebo-like in delaying ovulation in the fertile days.

Conclusions –LNG-ECPs, taken in the fertile period, mostly allow ovulation. When LNG is taken in the most fertile (preovulatory) days ovulation occurs but the luteal function is impaired. In case of fertilization, the embryo will hardly find a hospitable endometrium. In spite of this, the Package leaflet reports for LNG an anti-ovulatory MOA. Information is not correct.

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