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P107. Contributions to Ulipristals mechanism of action as Emergency Contraceptive Agent

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Context:
The mechanism of action of Ulipristal, a progesterone receptor modulators (PRM) as postcoital fertility control agent is a matter of debate. There is agreement that Ulipristal, like Levonorgestrel exhibits strong antiovulatory effects as long as the follicle is below 18 mm diameter large. This explains contraceptive effects at this pre-ovulatory stage of the cycle. There are different views whether Ulipristal exhibits postovulatory contraceptive effects e. g. via endometrial alterations.
Objective:
The anti-ovulatory effects of Ulipristal were confirmed in the guinea pig using a late luteal phase treatment. In addition it was intended to develop a suitable animal model for possible post ovulatory effects of this and new agents
Methods:
Postmating Study: Female Dunkin-Hartley Guinea Pigs were transferred to a male's cage at imminent estrus (vaginal opening) (=day 1). As evidence of mating was detected next morning, a first subcutaneous injection of Ulipristal or vehicle was administered. A second injection followed next day. After sacrifice the animals at day 18 the absence or presence of conceptuses in the uterine horns was recorded.
Main Outcome:
A new animal model for testing postcoital fertility control compounds in the guinea pig is presented. This species can be considered a clinically validated model for studies with PRMs. Antiovulatory and postcoital contraceptive effects are observed at identical daily dose-levels.
Results:
Ulipristal showed significant antiovulatory activity when given preovulatory at doses of 10 mg /animal day. In addition it showed also significant contraceptive activity when given after mating in the guinea pigs. At 10 mg / animal a statistical significant contraceptive effect could be observed (only 1/12 treated animals was pregnant, (p=0, 0129)).
Conclusions:
The data obtained from this new animal model provides further evidence that Ulipristal's activity as postcoital fertility control agent may also be based on postovulatory effects.

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