

## **The reliability and efficacy of a hormone monitoring device for fertility control.**

M. Guida, S. Bramante, G. Acunzo, G. Lavitola, M. Pellicano, D. Cirillo, C. Nappi

Department of Obstetrics and Gynaecology , University of Naples "Federico II", Naples, Italy

**Objective:** To evaluate the efficacy of urinary test "Persona" in the recognition of the fertile period and the prediction of the ovulation comparing with hormonal assay and monitoring the follicular growth by ultrasonography.

**Design and Methods:** Twenty women have used "Persona" for 13 cycles (260 cycles). This personal hormone monitoring device measures changes in concentrations of oestrone-3-glucuronide and luteinizing hormone (LH), and estimates the fertile days which are displayed by a red light. Inclusion criteria were: age 22-45, regular menstrual cycles (23-35 days), absence of the polycystic ovary syndrome, steadiness of their relationship. The participants underwent to vaginal ultrasonography in several days (one of the first 7 "green days" from beginning of menses, the first "red day" of the cycle, the ovulation day "O", and the first "green day" after ovulation) and to determination of blood concentration of LH, in the ovulation day, and progesterone, in the 21st day of cycle. **Results:** Vaginal ultrasonography was in accordance to predictions of "Persona" in the 96,1% (250 cycles) in one of the first "green day", in the 94,2% (245 cycles) in the first "red day", in the 98,5% (256 cycles) in the first "green day" after ovulation and in the 91,1% (237 cycles) in the ovulation day. All participants with ultrasonographic evidence of ovulation had a concentration of LH included in 13-71 mIU/ml range and of progesterone included in 12-50 ng/ml range that represented another evidence and a confirm of ovulation.

**Conclusions:** These results suggest that the "Persona" device is actually effective in the recognition of the fertile period but a correct working of the microcomputer is crucial for the best reliability of method. The method seems a welcome alternative for couples who want to use natural family planning .

**References:** Bonnar, Br.J.Fam.Plan.1999,24 - Guida, Fert. Ster.1999,72,900-4