

Session title: Female fertility

Session type: Poster viewing

Presentation number: P-332

★ Abstract title:

The effect of recent contraceptive use on the probability to conceive: A comparison between hormonal contraceptives and a fertility awareness-based method

O. Lundberg¹, E. Berglund Scherwitzl², H. Kopp Kallner³, J. Trussell⁴, K. Gemzell Danielsson⁵, R. Scherwitzl².

¹Natural Cycles, Science, Stockholm, Sweden.

²Natural Cycles Nordic AB, Science, Stockholm, Sweden.

³Karolinska Institutet, Department of Clinical Sciences at Danderyd Hospital, Stockholm, Sweden.

⁴Princeton University, Office of Population Research, Princeton, U.S.A..

⁵Karolinska Institutet, Department of Women's and Children's Health, Stockholm, Sweden.

Study question:

Are there differences in short- and long-term conception probabilities between women who recently used a fertility awareness-based contraceptive method and women who recently used hormonal contraceptives?

Summary answer:

Results in this study suggest that FAB methods used for contraception increase short-term pregnancy rates with respect to hormonal contraceptives, but not long-term pregnancy rates.

What is known already:

Previous studies have indicated that the use of techniques associated with fertility awareness-based methods for contraception may enhance pregnancy rates for women trying to conceive. Such studies have so far mainly treated various versions of the so-called Billings method and the sympto-thermal method. Several previous studies also show that the use of hormonal contraceptives may instead reduce the short-term probabilities to conceive. Most studies do not find any long-term effect of hormonal contraceptives on fecundity.

Study design, size, duration:

The study is a real-life prospective observational study of women who use a mobile fertility monitoring application (Natural Cycles) in attempting to become pregnant. A total of 2934 women planning a pregnancy using the mobile application Natural Cycles between August 2014 and June 2016 were included. Of these women 1638 were previous users of hormonal contraceptives and 1296 had previously used the fertility awareness-based method provided by the Natural Cycles application to prevent pregnancies.

Participants/materials, setting, methods:

Users were included if they registered as users of the mobile contraceptive app with the intent of planning a pregnancy between August 2014 and June 2016. Comparisons were performed using two complementary methods: We calculated the average Time to Pregnancy (TTP) for all women who became pregnant during the time of the study, and performed Kaplan-Meier life-table analysis to analyze the cumulative probabilities of pregnancy including all women who entered the study.

Main results and the role of chance:

We found an average Time To Pregnancy of 2.3 (95% CI: 2.1-2.4) cycles for the women who had used Natural Cycles to prevent pregnancies, compared to 3.7 (95% CI: 3.4-3.9) for women who used hormonal contraceptives prior to attempting to become pregnant. We used Kaplan-Meier life-table analysis to compare the time to reach 30% cumulated pregnancy probability for the two groups and found the time for women previously on hormonal contraceptives to be 1.6 (95% CI: 1.5-1.8) times longer than the time for women previously using Natural Cycles. When comparing 13-cycle cumulated pregnancy probabilities

there were no significant differences between the two groups.

Limitations, reasons for caution:

The results do not provide a comparison of neither method to other non-hormonal method of contraception. The study population only contains women who decided to use an application for fertility monitoring, which may lead to a selection bias compared to the average population.

Wider implications of the findings:

The result is likely widely applicable to women who uses fertility awareness methods prior to planning a pregnancy. The results presented in this study may be of interest to women planning to become pregnant in the near future as well as for healthcare professionals counseling women on contraception and fertility.

Trial registration number:

Not applicable

Keywords:

Contraception

Time to pregnancy

Female fertility

Mobile application

Fertility awareness