Delaying Ovulation for the Sake of Fertilization

Liat Weinstock

The Jewish ritual purification bath, or mikveh, is widely discussed in Jewish law. Dating back thousands of years, women have been required to fully immerse themselves in a bath of rainwater or in a flowing spring following menstruation and prior to engaging in sexual intercourse. The rules governing the immersion preparation process, timing, and procedure are very detailed and broad, touching on many other areas of halacha, Jewish law. Amazingly, an ancient Talmudic text discusses artificial insemination while bathing. Ben Sira was the child born of artificial insemination. His father, Yirmiyahu, was attacked while bathing, causing him to ejaculate into the water. Later, Yirmiyahu’s daughter immersed into the bath and was impregnated from this ejaculate; Ben Sira was the child born from this incident (Even Hazer, Chelkat Mechokhek Os 1:8).

It comes as no surprise that infertility and its ramifications in Jewish law are highly interconnected with the laws of mikveh. Not only are treatments like in vitro fertilization (IVF) complicated by the laws of mikveh, but, in some cases, the laws of mikveh themselves may even be the cause of infertility.

A brief overview of the basic rules of mikveh is necessary in order to understand the complications that the mikveh may cause for infertility treatment. Women are required to immerse in the mikveh following a period of niddah, or menstruation (Vayikra 15:19). According to rabbinical Jewish law, a woman is considered ritually unclean for a minimum of twelve days during her menstrual cycle. This twelve-day period has two phases, a menses period and a clean period. According to rabbinic Jewish law, the menses period lasts as long as she has menstrual bleeding, but it must be for a minimum of five days. Therefore, if a woman bleeds for less than five days, she must still wait five days before the second “clean period” begins (Yoreh Deah 196:11). When the second phase begins, a woman must count seven clean days, called sheva neki‘im. Until this count is successfully completed, she remains ritually impure and forbidden to engage in sexual and other intimate activity with her husband. To ensure that seven clean days elapse, a woman must conduct periodic self-examinations. If a woman finds uterine blood during those seven days, she must restart her count and may only go to the mikveh once she has concluded seven consecutive full days with no bleeding (Niddah 66a).

For couples wishing to observe the rules of mikveh and to maintain normative sexual relations, IVF treatments pose a problem. The procedure of egg retrieval may cause the woman to bleed from the laceration. In halacha, only blood from the uterine lining will cause a woman to restart counting, whereas dam makkah, or blood as a result of trauma, does not make a woman ritually impure (Niddah 66a). Thus, a woman with non-uterine bleeding caused by egg retrieval does not have to restart counting her clean days. On the other hand, uterine bleeding would trigger a restart of the count. When a woman conducting a self-examination following egg retrieval discovers blood staining, she may not be able to distinguish between dam niddah, uterine blood, that would cause her to recount, from dam makkah, which would not cause her to recount the sheva neki‘im. It is for this reason that many rabbis recommend women undergo egg retrievals only after immersing in the mikveh.

If rabbinic advice is followed, it may conflict with typical IVF procedures, which generally call for egg retrievals on the eleventh day of the menstrual cycle; one day short of the minimum number of days preceding mikveh dictated by halacha. Medical advances offer a solution to this problem for many Jewish women. By delaying ovulation, doctors can postpone egg retrieval until a woman has immersed into the mikveh, thereby rendering her no longer niddah and not at risk for these potential halachic issues. A recent study was done by physicians at The Ronald O. Perelman and Claudia Cohen Center for Reproductive Medicine, Weill Cornell Medical College, examining the effect of delaying ovulation to allow women to immerse in the mikveh before egg retrieval [1].

In normal ovulation, the process is quite simple. The hypothalamus releases the hormone gonadatropin releasing hormone, or GnRH. This hormone then stimulates the pituitary gland to release the luteinizing hormone (LH) and follicle stimulating hormone (FSH), which are responsible for stimulating the production of estradiol (a specific estrogen), and, in turn, ovulation. Knowing this, the physicians in the study delayed ovulation by treating the patient with GnRH antagonists and estradiol patches. The GnRH antagonists interrupted the functioning of GnRH, thus delaying ovulation, while the estrogen patches curtailed menstrual bleeding and further suppressed FSH. The study found that overall, extending the menstrual cycle by an average of four days allowed women to go to the mikveh prior to egg retrievals without decrement in pre-embryo implantation, clinical pregnancy, or live birth rates as compared to controls [1].

Researchers have found that delaying ovulation benefits infertility treatment in non-IVF patients as well. The laws of mikveh prevent sexual intercourse for at least the first 12 days of the menstrual cycle, even for women with short periods of menstrual bleeding. As a result, women who have short periods ovulate sufficiently before going to the mikveh, making conception unlikely once they are able to engage in sexual intercourse, since they have missed the optimal window of fertility. In these cases, estradiol treatments can lower FSH levels and allow for extension of the follicular phase until she can immerse in the mikveh [1]. Therefore, by delaying ovulation, these women can observe the laws of mikveh and increase their chances for conception.

This study is an example of the symbiotic relationship between science and halacha, where science comes to the aid of couples wishing to observe halacha and takes advantage of the toolbox of scientific solutions to fertility problems.
Acknowledgements:

I would like to thank Dr. Harvey Babich for introducing me to this topic and for his help in conducting research in this area of study. I would also like to thank Rabbi Dr. Aaron Glatt, M.D. and Rabbi Dr. Richard Weiss, M.D. for their help with the Torah content of this article.

References: