

What is the real evidence that endometrial injury improves IVF outcomes?

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Endometrial scratching (injury) has been proposed as a method to increase implantation rates when performed in the cycle immediately preceding ovarian stimulation for IVF.

Over the last decade, the use of mechanical endometrial scratching to improve endometrial receptivity has been investigated. The proposal is that endometrial injury increases uterine receptivity due to the mechanism associated with endometrial healing following injury. This process involves the secretion of cytokines, growth factors, interleukins and immune cells, such as macrophages and dendritic cells, which are crucial for the implantation process. Since the first research publication in 2003 by A. Barash and his colleagues, many investigators have examined the impact of endometrial injury on IVF-embryo transfer (ET) outcomes. The benefits of mechanical endometrial scratching on fertility outcome have been shown by several randomized controlled trials and meta-analyses. Although the majority of the trials have found benefits in implantation rates, there is still limited data concerning the number of cycles in which injuries should be performed, the optimal timing and the population that might benefit from the procedure.

Although several studies showed promising results on the advantages of endometrial injury, the quality of the studies presented has been criticized. The lack of uniformity in both patient selection criteria and treatment protocols raised questions concerning study reliability; moreover, most of the studies were performed on a small number of participants.

When considering the value of endometrial injury in order to improve endometrial receptivity, one must consider the population that might benefit from this procedure because a wide range of pathologies may play a part in the different causes of implantation failure.