

عنوان مقاله:

Interaction of sperm with endometrium can regulate genes involved in endometrial receptivity pathway in mice: An experimental study

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خلاصه مقاله:

Background: Many researchers consider implantation and endometrial receptivity as pertinent issues in reproductive science by. Although, several experiments have been performed and their results evaluated, yet there is no confirmed evidence about the related factors and the role of sperm in endometrial receptivity. **Objective:** To investigate the effect of the sperm-endometrium interaction in regulating genes involved in the endometrial receptivity pathway. **Materials and Methods:** In this experimental study, 10 male and 30 female NMRI mice were included, and half of the male cases were vasectomized. The subjects were divided into two groups as follows; group 1 (case) comprised of 15 females mated with 5 non-vasectomized male mice, while group 2 (control) consisted of 15 females mated with 5 vasectomized males. Cases were sacrificed and assessed after 36 hr and the endometrial tissue was extracted and kept at -80°C until the next use. The expression of the endometrial receptivity pathway genes, including VEGF, HBEGF, FGF2, EGF, LIF, LIFR, HOXA10, MUC1, PGR, and CSF, was examined in both groups. For statistical analysis, an independent samples test (Mean \pm SD) was used. **Results:** The mRNA levels of LIF ($p = 0.045$), LIFR ($p = 0.040$), MUC1 ($p = 0.032$), VEGF ($p = 0.022$), EFG ($p = 0.035$), and FGF2 ($p = 0.040$) were significantly upregulated in the case group compared with the control group. **Conclusion:** Finally, seminal plasma was observed to be effective in expressing the involved genes in the successful implantation pathway, including LIF, LIFR, MUC1, VEGF, EGF, and FGF2.

کلمات کلیدی:

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