

عنوان مقاله:

Comparative evaluation of NOTCH signaling molecules in the endometrium of women with various gynecological diseases during the window of implantation

محل انتشار:

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خلاصه مقاله:

Objective(s): NOTCH signaling pathway is well known for its role in cell fate, cell survival, cell differentiation, and apoptosis. Some of the NOTCH signaling genes are critical for endometrial function and implantation in animals and appear to play a similar role in humans. The purpose of the current study was to investigate the potential roles of some main components of the NOTCH family in human endometrium during implantation period in common gynecological diseases. Materials and Methods: Endometrial NOTCH receptors NOTCH1, 3, 4 and ligand JAG1, 2 and survivin mRNA expression were investigated using the Q-PCR technique and the amount of the JAG1, 2 proteins was also determined by Western blot. Samples were obtained from 12 patients with endometriosis, 12 patients with repeated implantation failure (RIF), 12 patients with Polycystic Ovary Syndrome (PCOS) and 10 healthy fertile women as a control group. Data were analyzed using SPSS version 18. Group comparisons were performed by one-way ANOVA or Kruskal-Wallis. Results: All patient groups failed to show the expected mid-luteal increase in NOTCH1, JAG 1, 2, and survivin expression as documented in the control group. Moreover, a significant rise in NOTCH3 expression levels was found only in PCOS women. There was a direct correlation between gene expression and protein level for JAG 1, 2. Conclusion: Aberrant NOTCH signaling molecules expression suggests that altered development of the endometrium at the molecular level may be associated with the impaired decidualization and implantation failure in gynecological disorders such as endometriosis, PCOS, and RIF.

کلمات کلیدی:

Endometriosis, NOTCH signaling, PCOS, Repeated implantation-failure (RIF), Window of implantation

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