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Caligonum Comosume Extract Improves Pregnancy Rate, Live Birth and Ovarian Function in Female Mice Model of Endometriosis

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Abstract

Background: Endometriosis is a chronic disease in which endometrial tissue grows outside the uterus and causes it. It causes severe pelvic pain and infertility problems. Calligonum comosum is a medicinal plant that grows in the desert and is used in traditional medicine for menstrual pain. This plant has been effective in treating endometriosis in mouse models of endometriosis and has also affected fertility and live birth. This study was conducted with the aim of investigating the effect of Calligonum Comosum Total Extract (CCTE) on pregnancy and live birth in a rat model with endometriosis.

Materials and Methods: In this study, 24 NMRI female mice with an age of 8 weeks and an approximate weight of 25-30 grams were studied.

It was created by creating endometriosis-like lesions in NMRI strain mice by surgical method and by creating autologous transplant in the form of removing uterine tissues and transplanting it to the abdominal wall of the mouse itself. Mice were randomly divided into two groups under treatment and control. The treated group received a dose of 50 mg/kg of Tom Scanbil extract, and the control group received normal saline. The growth of the lesion with the formation of cysts was examined by ultrasound imaging in the second week. In the 4th week after transplantation and after Removal of lesions with scanbil extract, pregnancy and live birth, ovarian histology, endometriosis lesions, and growth indicators of newborns were investigated.

Results: The results of this study showed that the pregnancy rate was more than twice in the treated group compared to the control group, and also the live birth rate in the treated group was twice more than the control group ($P<0.05$). Ovarian function was better in the treatment group and pre-antral follicles were more in the treatment group than in the control group and cysts It was also lower in the treatment group than the control group. Also, the endometrial wall in the treatment group was less than the control group ($P<0.05$). The number and size of endometriosis lesions were also significantly lower in the treatment group compared to the control group ($P<0.05$). Growth indices in Babies in the treated group were significantly better than the control group ($P<0.05$).

Conclusion: The total extract of Caligonum comosum had a significant effect on pregnancy and live birth and positive effect on ovarian factors and pseudo-endometriotic lesions and growth indicators of newborns in the mouse model of endometriosis, and it can be a promising treatment. It is suggested that these studies enter the clinical phase and in Study the clinical phase of this extract.

Keywords: Scanbil; Mouse Model; Endometriosis; Pregnancy Rate; Live Birth Rate; Infant Growth Index.