Effects of modified Shoutaiwai recipe on integrin β3 and leukemia-inhibitory factor in endometrium of controlled ovarian hyperstimulation mice during the implantation window

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ABSTRACT. We investigated the effects of a modified Shoutaiwai recipe on integrin β3 and leukemia-inhibitory factor (LIF) in the endometrium of controlled ovarian hyperstimulation (COH) mice during the implantation window. Seventy non-pregnant mice were randomly divided into 3 groups: a traditional medicine (TCM) treatment group (N = 30), an aspirin treatment (N = 30) group, and a control group (N = 10). After the model was successfully established, mice in the drug treatment groups and the control group were respectively treated with the modified Shoutaiwai recipe, aspirin, or 0.9% physiological saline. During the implantation window of mice, the middle segment of the mouse uterus was recovered, and integrin β3 and LIF expressions in the endometrium were respectively detected using an immunohistological two-step method and reverse transcription-PCR. Expressions of integrin β3 and LIF in the endometrium of mice in the TCM treatment group were
significantly increased compared to aspirin-treated and control mice, and those of aspirin-treated mice were increased compared to the control group. Our modified Shoutaiwai recipe may improve the endometrial receptivity of COH mice by increasing the expression of integrin β3 and LIF in the endometrium during the implantation window.

**Key words:** Modified Shoutaiwai recipe; Controlled superovulation; Implantation window; Endometrial receptivity; Integrin β3; Leukemia inhibitory factor