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The ovary protective mechanisms of Si-Wu-tang water extract

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[Aim] In our previous study, we found that taking Si-Wu-Tang (SWT) for one month, the LH/FSH ratio would return to normal and the testosterone level decrease. The major pathogenesises of ovarian follicular maldevelopment (OFM) were oxidative stress and aromatase inactivity. In this study, we explored whether SWT could prevent OFM through its antioxidant and aromatase activity.

[Method] The SWT, 4 kinds of SWT-modified formulas and each herb were extracted by boiling water. The antioxidant assay was evaluated by lipid peroxidation inhibition activities. MCF-7 cell were used as an aromatase donor cells. The estradiol level were detected by 17β -Estradiol EIA kit and western blot after treatment with SWT and others for 24 h.

[Result] Compared with SWT, Paeoniae Radix-removed SWT would loss the anti-oxidation effect. The antioxidant activity of Rehmanniae Radix-removed SWT would be enhanced. In the aromatase activity assay, SWT showed the strongest activity, while Rehmanniae Radix-removed SWT showed the lowest activity.

[Conclusion] The structure of traditional medicine was sovereign(君), minister(臣), assistant(佐) and courier(使). The antioxidant effect of the Paeoniae Radix is sovereign. The Rehmanniae Radix is an aromatase promoter in SWT. In summary, the ratio of SWT composition could be altered by driving different functions.