

研究業績 英文表記

和文	
表題	SOJ から抽出されたステロイドサポニンの酸化ストレスと炎症反応の抑制効果によるドキシソルビシン誘発性の慢性心不全を改善した
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英文	
Title	Effects of steroidal saponins extract from <i>Ophiopogon japonicus</i> root ameliorates doxorubicin-induced chronic heart failure by inhibiting oxidative stress and inflammatory response
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Abstract	<p>Context: <i>Ophiopogonis Radix</i>, the root of <i>Ophiopogon japonicus</i> (Thunb.) Ker-Gawl (Liliaceae), is a Traditional Chinese Medicine, which has been investigated to possess effective treatment of cardiovascular diseases.</p> <p>Objective: This study evaluates the cardioprotective effects of steroidal saponins extract from <i>Ophiopogon japonicus</i> (SOJ) root against doxorubicin-induced chronic heart failure (CHF) through the amelioration of oxidative stress and inflammation.</p> <p>Materials and methods: A Sprague-Dawley rat model of CHF was established by intraperitoneally injected with DOX. All rats were randomly divided into four groups: Control group, CHF group, CHF + SOJ (100 mg/kg) treatment group, SOJ (100 mg/kg) treatment group ($n = 8/\text{group}$). After six weeks administration, biometric and echocardiography were measured. The levels of biochemical parameters were measured using commercial kits.</p> <p>Results: The values of LVESP, +dP/dtmax, -dP/dtmax, EF and FS increased to 116.20 ± 1.68 mmHg, 2978.71 ± 168.26 mmHg/s, 3452.61 ± 286.09 mmHg/s, $68.26 \pm 5.28\%$ and $31.97 \pm 3.79\%$, respectively; the values of LVEDP, LVESD and LVEDD decreased to 8.85 ± 0.84 mmHg, 8.39 ± 0.45 mm and 12.36 ± 0.87 mm in CHF + SOJ group. In addition, the levels of IL-6, TNF-α and IL-1β decreased to 154.41 ± 7.72 pg/mg protein, 110.02 ± 6.96 pg/mg protein and 39.39 ± 5.27 pg/mg protein, respectively; the relative activity of p38 MAPK decreased to 2.60 ± 0.40 in CHF + SOJ group. Furthermore, the activities of SOD, CAT and GSH-Px increased to 268.77 ± 6.20 U/mg protein, 13.68 ± 0.68 U/mg protein and 316.90 ± 8.08 $\mu\text{mol}/\text{mg}$ protein, and the content of MDA decreased to 4.03 ± 0.43 nmol/mg protein in CHF + SOJ group.</p> <p>Conclusions: SOJ exerts the cardioprotective effect against DOX-induced CHF through suppressing inflammatory and oxidative stress. These results provide evidence that SOJ might be an effective treatment for CHF.</p>
keyword	Cardiovascular, Antioxidant, Cardiotoxicity, Inflammatory Cytokines

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