

## 漢薬丹参に含まれる虚血性心疾患に対する心筋の保護物質

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### Possible active components of Tan-Shen (*Salvia miltiorrhiza*) for protection of the myocardium against ischemia-induced derangements

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**ABSTRACT** Extract of Tan - Shen (*Salvia miltiorrhiza*, Labiatae), a Chinese traditional crude drug, was reported to show beneficial activity for heart disease. Chemical examination on the extract was performed on the basis of screening for protective action on the ischemic myocardium. Isolated hearts were subjected to hypoxic perfusion for 20 min, followed by 45 min reoxygenation, and the recovery of cardiac contractile force and changes in UV absorbance of the perfusate were examined. Among the components isolated, tanshinone I, cryptotanshinone, and tanshinone VI elicited a significant enhanced recovery of the contractile force upon reoxygenation. This was associated with a decrease in the increase in UV absorbance of the perfusate, suggesting the preservation of ATP metabolites in the myocardium. This, in turn, may enhance the restoration of ATP upon oxygen-replenishment. The results suggest that tanshinone I, cryptotanshinone, and tanshinone VI can protect the myocardium against ischemia-induced derangements.

抄録 心筋梗塞・狭心症の虚血性心疾患に対する活性物質の研究で、漢薬・理血薬の一つとして繁用されている丹参につき、新たに考案された虚血性心疾患病態モデル（摘出心臓に対する血液遮断と低酸素負荷）を利用した有効成分の検索を行った。その結果、既知タンシノン類と共に新規化合物タンシノンV・VIを物理化学的方法で構造解析を行った。虚血性心疾患モデルでの実験で、タンシノンI・VIとクリプトタンシノンが有意に心収縮力を回復し、虚血時のATPの流出を抑制した。以上の事実は丹参、とりわけタンシノンVIが虚血時の心筋に対し有意にその機能を修復することを示唆している。