

Inhibitory effects of Saiko-Ka-Ryukotsu-Borei-To on the migration and proliferation of vascular smooth muscle cell

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We have reported that oral administration of Saiko-Ka-Ryukotsu-Borei-To (SRB), a traditional Chinese formulation, inhibited the intimal thickening in carotid artery after balloon injury in cholesterol-fed rats. To elucidate its mechanism, the effects of SRB on migration and proliferation of vascular smooth muscle cell (VSMC) were examined *in vivo* and *in vitro*. We have reported that oral administration of Saiko-ka-Ryukotsu-Borei-To (SRB), a traditional Chinese formulation, inhibited the intimal thickening in carotid artery after balloon injury in cholesterol-fed rats. To elucidate its mechanism, the effects of SRB on migration and proliferation of vascular smooth muscle cell (VSMC) were examined *in vivo* and *in vitro*.

SRB inhibited VSMC migration from the media to the intima in carotid artery 4 days after injury (*in vivo*). The serum obtained from rats administered SRB also inhibited VSMC migration (*ex vivo*). This "sero-pharmacological" effects using SRB-serum on VSMC migration might be closer to the results obtained by *in vivo* experiments. SRB inhibited VSMC migration and proliferation, and caused at the G2/M (48 - 72 h) cell cycle arrest (200-800 μ g/ml: conventional *in vitro*).

It was found that SRB reduced the intimal thickening by inhibiting VSMC migration and proliferation. Since restenosis of carotid artery after balloon denudation is considered as "accelerated atherosclerosis", these results obtained these studies suggest that SRB may be a promising candidate as a clinical therapeutic strategy in atherosclerosis prevention.