

FULL TEXT LINKS



[Int J Cardiol.](#) 2013 Jul 15;167(1):237-43. doi: 10.1016/j.ijcard.2011.12.064. Epub 2012 Jan 13.

Repeated sauna therapy improves myocardial perfusion in patients with chronically occluded coronary artery-related ischemia

[Mitsuo Sobajima](#)¹, [Takashi Nozawa](#), [Hiroyuki Ihori](#), [Takuya Shida](#), [Takashi Ohori](#), [Takayuki Suzuki](#), [Akira Matsuki](#), [Satoshi Yasumura](#), [Hiroshi Inoue](#)

Affiliations

PMID: 22244482 DOI: [10.1016/j.ijcard.2011.12.064](#)

Abstract

Background: Repeated low-temperature sauna (Waon) therapy relieves ischemic symptoms in patients with peripheral arterial disease. We investigated whether Waon therapy could improve myocardial perfusion in patients with ischemia related to chronic total occlusion (CTO) of coronary arteries.

Methods: Twenty-four patients who had ischemia in the CTO-related area were examined. The severity of ischemia was quantified by thallium-201 myocardial perfusion scintigraphy with adenosine. The Waon group (n=16) was treated daily for three weeks with a 60 °C far infrared-ray dry sauna bath

for 15 min and then kept in a bed covered with blankets for 30 min. The control group (n=8) underwent myocardial perfusion scintigraphy twice with a three-week interval.

Results: In the control group, neither summed stress score (SSS) nor summed difference score (SDS) of myocardial scintigraphy changed. However, Waon therapy improved both SSS (16 ± 7 to 9 ± 6 , $p < 0.01$) and SDS (7 ± 4 to 3 ± 2 , $p < 0.01$), and the improvement was greater in patients with higher SSS and SDS scores at the baseline. Waon therapy extended treadmill exercise time (430 ± 185 to 511 ± 192 s, $p < 0.01$) and improved flow-mediated dilation of the brachial artery (4.1 ± 1.3 to $5.9 \pm 1.8\%$, $p < 0.05$), but tended to decrease the number of circulating CD34-positive bone marrow-derived cells.

Conclusions: Waon therapy improves CTO-related myocardial ischemia in association with improvement of vascular endothelial function. This therapy could be a complementary and alternative tool in patients with severe coronary lesions not suitable for coronary intervention.

Copyright © 2011 Elsevier Ireland Ltd. All rights reserved.

[PubMed Disclaimer](#)

LinkOut – more resources

Full Text Sources

[ClinicalKey](#)

[Elsevier Science](#)

Other Literature Sources

[scite Smart Citations](#)

Medical

[MedlinePlus Health Information](#)