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Effects of repeated sauna treatment on ventricular arrhythmias in patients with chronic heart failure

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Abstract

Background: The aim of the present study was to determine whether repeated 60 degrees C sauna treatment improves cardiac arrhythmias in chronic heart failure (CHF) patients, because ventricular arrhythmias are an important therapeutic target in CHF.

Methods and results: Thirty patients (59+/-3 years) with New York Heart Association functional class II or III CHF and at least 200 premature ventricular contractions (PVCs)/24 h assessed by 24-h Holter recordings were studied. They were randomized into sauna-treated (n=20) or non-treated (n=10)

groups. The sauna-treated group underwent a 2-week program of a daily 60 degrees C far infrared-ray dry sauna for 15 min, followed by 30 min bed rest with blankets, for 5 days per week. Patients in the non-treated group had bed rest in a temperature-controlled room (24 degrees C) for 45 min. The total numbers of PVCs/24 h in the sauna-treated group decreased compared with the non-treated group [848+/-415 vs 3,097+/-1,033/24 h, p<0.01]. Heart rate variability (SDNN, standard deviation of normal-to-normal beat interval) increased [142+/-10 (n=16) vs 112+/-11 ms (n=8), p<0.05] and plasma brain natriuretic peptide concentrations decreased [229+/-54 vs 419+/-110 pg/ml, p<0.05] in the sauna-treated group compared with the non-treated group.

Conclusion: Repeated sauna treatment improves ventricular arrhythmias in patients with CHF.

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