

# Efficacy of a stress management program for patients with hepatocellular carcinoma receiving transcatheter arterial embolization.

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Transcatheter arterial embolization (TAE), a common treatment for patients with unresectable hepatocellular carcinoma (HCC), can provoke severe physical discomfort and psychologic stress. The purpose of this study was to investigate the effect of a combination of health education, muscle relaxation, and back massage on reducing physical and psychologic stress in HCC patients receiving TAE. A quasi-experimental design was used. Forty patients with HCC (30 men and 10 women) with a mean age of 57 +/- 12 years were recruited and randomly assigned to the control or experimental group. The effectiveness of the stress management program was evaluated using a knowledge questionnaire, a worry inventory, a state-trait anxiety inventory, and a physical distress scale. After completing the stress management program, the experimental group had a greater mean increase in knowledge score than the control group (5.1 vs 0.8,  $p < 0.0001$ ) and a greater mean decrease in worry score (-8.2 vs 1.1,  $p < 0.0001$ ). The mean decrease in the anxiety score in the experimental group was also significantly greater than in the control group before TAE (-5.8 vs 3.2,  $p < 0.001$ ) and 2, 4, 6, and 7 days after TAE (-8.2 vs 7.1,  $p < 0.001$ ; -8.7 vs 3.2,  $p < 0.001$ ; -9.8 vs -2.1,  $p < 0.05$ ; -11 vs -0.9,  $p < 0.05$ ). The patients in the experimental group had a smaller mean increase in physical distress score than the control group at 2, 4, 6, and 7 days after TAE (34.7 vs 50.2, 20.9 vs 29.6, 10.6 vs 18.2, 3.9 vs 11.2, all  $p < 0.05$ ). This stress management program effectively reduces the stress of HCC patients undergoing TAE.