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Efficacy of Chest Physical Therapy for Inhalation Injury

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Patients with inhalation injury have high risk of complications such as pneumonia which lead high mortality rate. Although the necessity of chest physical therapy (CPT) for those patients is acknowledged, there are few reports. The purpose of this study is to identify the efficacy of CPT for patients with inhalation injury.

【Methods】

We collected data from the patients who were admitted and carried out rehabilitation in our burn center from April 2011 to March 2013. Patients' data includes age, Burn Index, % total body surface area (TBSA) 2nd and 3rd degree burns, intubation, ADL levels, progression of mobilization (edge of bed, standing, ambulation), and Barthel Index (BI). We compared inhalation injury group with no-inhalation injury group.

【Results】

Sixty-eight patients were enrolled. Thirty-four patients were in the inhalation injury group (50%) and thirty-four were in the non-inhalation injury group. The mean of age was 54.5 ± 20.9 years in inhalation injury group, and 63.2 ± 21.4 years in non-inhalation injury group (n.s.) Burn Index was 15.4 ± 16.8 in inhalation injury group, and 14.7 ± 12.1 in non-inhalation injury group. Total body surface area was 22.6 ± 18.6 in inhalation injury group, and 22.4 ± 17.9 in non-inhalation injury group. Twenty-five patients with inhalation injury were intubated, whereas 7 in non-inhalation. ($P < 0.01$) There were no difference in ADL levels, progression of mobilization, BI point at hospital discharge, and respiratory complications between two groups.

【Discussion】

Chest physical therapy for patients with inhalation injury can decrease respiratory complications and might improve ADL levels of the patients at hospital discharge.