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The effect of a single session of 30-min mindful breathing in reducing fatigue among patients with haematological cancer – a randomised controlled trial

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Abstract

Background: Patients with haematological cancer had considerable symptom burden, in which fatigue was the most prevalent. Almost 70% of haematological cancer patients reported fatigue.

Methods: We conducted a parallel-group, non-blinded, randomised control trial at the haemato-oncology unit of University Malaya Medical Centre, from 1st October 2019 to 31st May 2020. Patients included were ≥ 18 years, had histopathological diagnosis of haematological cancer, and fatigue score of ≥ 4 based on the fatigue subscale of Edmonton Symptom Assessment System (ESAS). Patients allocated to the intervention group received standard care plus a guided 30-min mindful breathing session, while those in control group received standard care. The study outcomes include fatigue severity according to the fatigue subscale of ESAS, visual analogue scale of 0 – 10, and Functional Assessment of Chronic Illness Therapy Fatigue Scale Version 4, at minute 0 and minute 30.

Results: Of 197 patients screened, 80 were eligible and they were equally randomised into 30-min mindful breathing versus standard care. Lymphoma (58.9%) was the commonest haematological malignancy, followed by multiple myeloma (13.8%), acute leukaemia (11.3%), myeloproliferative neoplasm (6.3%), chronic leukaemia (5.0%) and myelodysplastic syndrome (5.0%). There was no difference in the demographic and clinical characteristics between the 2 groups.

At minute 0, both arms of patients had similar ESAS-fatigue score (median, 5) and FACIT-fatigue score (mean \pm SD, 24.7 ± 10.6 for intervention group versus 24.7 ± 9.7 for control group). At minute 30, intervention group had lower ESAS-fatigue score (median, 3 versus 5) and FACIT-fatigue score (mean \pm SD, 17.1 ± 10.5 versus 24.8 ± 11.3) compared to control group. Both the ESAS-fatigue score reduction (median, -2 versus 0 , $p = 0.002$) and FACIT-fatigue score reduction (mean \pm SD, -6.7 versus $+0.8$; $p < 0.001$) for the intervention group were statistically significant. The calculated effect size Cohen's d was 1.4 for between-group comparison of differences in total FACIT-fatigue score.

Conclusions: Our results provide evidence that a single session of 30-min mindful breathing was effective in reducing fatigue in haematological cancer patients. On top of all the currently available methods, 30-min mindful breathing can prove a valuable addition.

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