Controlled trial of bright light and negative air ions for chronic depression

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Abstract

Background. This randomized controlled trial investigates the efficacy of two non-pharmacologic treatments, bright light and high-density negative air ions for non-seasonal chronic depression. Both methods have shown clinical success for seasonal affective disorder (SAD).

Method. Patients were 24 (75%) women and 8 (25%) men, ages 22–65 years (mean age±S.D., 43·7±12·4 years), with Major Depressive Disorder, Single Episode (DSM-IV code, 296.2), Chronic (episode duration [ges]2 years). Patients were entered throughout the year and randomly assigned to exposure to bright light (10000 lux, *n*=10), or high-density ($4{\cdot}5\times10^{14}$ ions/s flow rate, *n*=12) or low-density ($1{\cdot}7\times10^{11}$ ions/s, *n*=10, placebo control) negative air ions. Home treatment sessions occurred for 1 h upon awakening for 5 weeks. Blinded raters assessed symptom severity weekly with the Structured Interview Guide for the Hamilton Depression Rating Scale – Seasonal Affective Disorder (SIGH-SAD) version. Evening saliva samples were obtained before and after treatment for ascertainment of circadian melatonin rhythm phase.

Results. SIGH-SAD score improvement was 53·7% for bright light and 51·1% for high-density ions *v.* 17·0% for low-density ions. Remission rates were 50%, 50% and 0% respectively. The presence or severity of atypical symptoms did not predict response to either treatment modality, nor were phase advances to light associated with positive response.

Conclusions. Both bright light and negative air ions are effective for treatment of chronic depression. Remission rates are similar to those for SAD, but without a seasonal dependency or apparent mediation by circadian rhythm phase shifts. Combination treatment with antidepressant drugs may further enhance clinical response.

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