primary studies - published RCT

Melatonin improves sleep and reduces nitrite in the exhaled breath condensate in cystic fibrosis--a randomized, double-blind placebo-controlled study.

Code: PM20025642 **Year:** 2010 **Date:** 2010 **Author:** de Castro-Silva C

Study design (if review, criteria of inclusion for studies)

randomized double-blind, placebo-controlled study

Participants

20 patients with CF. One individual failed to conclude the study. All subjects were clinically stable when studied and without recent infectious exacerbation or hospitalization in the last 30 days.

Interventions

Groups were randomized for placebo (n = 10; mean age 12.1 +/- 6.0) or 3 mg melatonin (n = 9; mean age 16.6 +/- 8.26) for 21 days.

Outcome measures

Actigraphy was performed for 6 days before the start of medication and in the third week (days 14-20) of treatment. Isoprostane and nitrite levels were determined in exhaled breath condensate (EBC) at baseline (day 0) and after treatment (day 21).

Main results

Melatonin improved sleep efficiency (P = 0.01) and tended to improve sleep latency (P = 0.08). Melatonin reduced EBC nitrite (P = 0.01) but not isoprostane. In summary, melatonin administration reduces nitrite levels in EBC and improves sleep measures in clinically stable CF patients.

Authors' conclusions

The failure of melatonin to reduce isoprostane levels may have been a result of the low dose of melatonin used as a treatment.

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See also

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Keywords

Adolescent; Adult; Child; Hormones; Melatonin; Mental Disease-Psychiatric Conditions; Nitrites; pharmacological_intervention; placebo; Sleep Disorders;