

## عنوان مقاله:

Evaluation of Pain Tolerance Threshold Following Administration of Anti-TNF- $\alpha$  in REM Sleep-deprived Male Wistar Rats

## محل انتشار:

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## خلاصه مقاله:

**Background and Aim:** The level of Tumor Necrosis Factor-alpha (TNF- $\alpha$ ) changes by REM sleep deprivation. TNF- $\alpha$  is a known biomarker of REM sleep deprivation (RSD). Prior studies have shown that any alteration in REM sleep can increase the amount of TNF- $\alpha$ . Accordingly, the Pain Tolerance Threshold (PTT) is believed to be increased in patients with insomnia after using anti-TNF- $\alpha$  or Infliximab (IFX). The present study aims to demonstrate the effect of IFX and its importance in the pain management of hospital inpatients. **Methods and Materials/Patients:** Seventy-two male Wistar rats in 9 groups were studied after obtaining the approval of the ethics committee of Tehran University of Medical Sciences (CNS.Protocol-ICSS-940816). Remicade was used for inducing the anti-TNF- $\alpha$ . Multiple platform water-tank was used for REM sleep deprivation induction. Pain tolerance was measured on a hot plate apparatus. **Results:** There was a significant increase in the duration of the rats' tolerance on the hot plate between the saline group and the group that received IFX (0.2 mg/kg) ( $F_2 = 8.363$ ) ( $P = <0.001$ ). **Conclusion:** Chronic SD can cause neuronal damage due to neuroinflammatory insult. REM sleep deprivation, in the long run, sensitizes the brain to neurodegenerative insults via the inflammatory mechanism, to some extent through the TNF $\alpha$ -associated pathways.

## کلمات کلیدی:

Pain, Sleep, REM, Immunity System, Anti-TNF- $\alpha$ , Hot-Plate Test, Infliximab

لینک ثابت مقاله در پایگاه سیویلیکا:

