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INVOLVEMENT OF NORADRENERGIC´S PROJECTION IN THE POST-TRAUMATIC STRESS DISORDER, A DEMONSTRATION BY AN ALPHA-1 ADRENERGIC ANTAGONIST, THE PRAZOSIN

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Introduction: In the United States of America, lifetime prevalence of the post-traumatic stress disorder (PTSD) varies between 8 and 11 %. The pathophysiology of PTSD is complex, involving the prefrontal cortex, the limbic system which amygdala and the locus coeruleus. We don´t have a specific treatment for this pathology but just a symptomatic treatment.
Objectives and methods: The present review analyzes the results of referenced outcome studies in Medline. The efficacity of prazosin, an alpha-1 adrenergic antagonistis is an evidence to this deregulation.
Aim: Confirm the hypothesis of a noradrenergic dysregulation in PTSD.
Results: Of share its projections with the amygdale, the hippocampus and the prefrontal cortex and the reticular formation, the locus coeruleus is one of the main brain noradrenergic structure. It regulates the vigilance and attention in the alert situations and regulates the fear and anxiety. The locus coeruleus regulates the wakefulness-sleep cycle with this projection with the raphe nuclei and the paraventricular nuclei of hypothalamus. During a stress, activation of locus coeruleus causes a release of norepinephrine responsible for symptoms of avoidance, hyper-arousal, re-experiencing and trauma nightmares. Prazosin, significantly decreases the main clinical symptoms of PTSD and improve global clinical status to placebo in all studies. This results constitutes a harmul evidence to the implication of norepinephrine in the PTSD.
Conclusions: Norepinephrenine is a major actor in the pathophysiology of PTSD. The prazosin is led to become the first-line treatment of PTSD but longer studies in larger samples are necessary to confirm these preliminary findings.

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