J Physiol Pharmacol. 2011 Dec;62(6):669-75.

Antipyretic activity of N-acetylcysteine.

Wrotek S, Jedrzejewski T, Potera-Kram E, Kozak W.

Department of Immunology, Institute of General and Molecular Biology, Nicolaus Copernicus University, Torun, Poland.

Abstract

N-acetylcysteine (NAC) has been used primarily as a mucolytic agent for the treatment of respiratory diseases. It has been recently suggested that NAC also possesses some anti-inflammatory properties. The aim of the present study is to investigate the effects of NAC on fever provoked either by bacterial lipopolysaccharide (LPS) or a turpentine-induced aseptic abscess in the rats. The body temperature (Tb) and the motor activity of the Wistar rats were measured using biotelemetry system. NAC (200 mg/kg) was injected intraperitoneally (i.p.) One hour prior to the injection of LPS (50 μg/kg; i.p.) or turpentine (100 μl/rat; subcutaneously) into separate groups of rats. The injection of NAC into normal non-febrile rats did not alter the animal circadian rhythm in Tb and activity. Pretreatment of rats with NAC resulted in the reduction of both infectious and aseptic fevers. Fever in rats was associated with inhibition of the motor activity and loss of body weight. Treatment with NAC diminished the decrease of motor activity and had no effect on the reduction of body weight in rats injected with LPS. It did, however, attenuate the drop of body mass in rats challenged with turpentine oil. Based on these data one may conclude that NAC, in addition to its mucolytic, antioxidant and anti-inflammatory properties, may be considered as a therapeutic fever-modulating agent under certain clinical circumstances.

PMID: 22314570 [PubMed - in process] Free full text

⊕ Publication Types

⊕ LinkOut - more resources