

SEXUAL DIMORPHISM OF NITROGEN MONOXIDE RATE AND LIPID PEROXIDATION AT EARLY AGE: OBSERVATION AFTER 4H, 24H, 48H OF INFECTION WITH LIPOPOLYSACCHARIDE

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Inflammation is a defense reaction of the body's immune system to harmful external aggression such as a bacterial infection. Moreover, it is an important source of oxygen radicals produced directly by activated phagocytic cells that are the site of a phenomenon called oxidative explosion. This work was done to find out whether infection with early lipopolysaccharide (LPS) administration can result in changes in nitric oxide levels and lipid peroxidation in the central nervous system, specifically prefrontal cortex and the hippocampus. Male and female wistar rats at 7 days of age were divided into 2 groups: a control group receiving an intraperitoneal injection (ip) of PBS, the second group treated with LPS (250 µg / kg, ip). The results show that the rate of nitric oxide in the hippocampus in a physiological state during the 3 days postnatal (7, 8, and 9) increases in females at the age of 8 days and decreased later, but in males, the rate increases with age. Also at the level of chlorpyrifos (CPF), we observed increased rate of nitric oxide in both sexes without any sexual dimorphism. The rate of lipid peroxidation at a physiological state is increased at the age of 8 and 9 days for both sexes compared to 7-day-old rats. But once after an infection induced by the LPS, it was observed that the rate of lipid peroxidation in the hippocampus and prefrontal cortex at an age of 7 days is increased for both sexes, but on the 8th day we found a sexual dimorphism and at PDN9 age the lipid peroxidation rate is increased in males than females. It is concluded that postnatal injection of LPS induces a decrease in nitric oxide rate, and an increase in lipid peroxidation in the prefrontal cortex and the hippocampus.

Biography

Najlae Elfathi has completed his/her Bachelor's degree in Physics Chemistry in 2010. In 2014 she, did life science in biology, & in 2017 she did Master on neurocognition human and health of the population, and now, she is pursuing PhD (1st Year) on early neuroinflammation and glial activation

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