

There is an increasing evidence of a positive correlation between asthma and obesity in children and adults. Adipokines regulate several metabolic and inflammatory functions. Several studies have shown that reactive oxygen species (ROS) play a key role in initiation as well as amplification of inflammation in asthmatic airways. This study is to highlight the oxidant-antioxidant imbalance in relation to adiponectin level in asthmatic children in Hilla province of Babylon.

Adiponectin , glutathione , total antioxidant and malondialdehyde were measured in 100 children; 60 newly diagnosed with asthma and 40 non asthmatic children with the comparable age and sex were enrolled in this study. Asthmatic children subdivided in two groups 30 patients in each group(obese and non-obese). Ages of patients and control ranged between (2years -12 years). The study was carried out in Babylon Teaching Hospital for Gynecology & Pediatrics in Babylon Province.

Adiponectin and total antioxidant were estimated by ELISA technique, glutathione by HPLC and malondialdehyde by spectrophotometer. There was a negative significant correlation between adiponectin with glutathione and positive significant correlation between total antioxidant and malondialdehyde.

The results revealed the existence of an oxidant-antioxidant imbalance among obese asthmatic children, in parallel to changes in adipokines level.