

Asthma-Obesity Relationship Among Under 5 Years Children In Mosul City

الخلاصة

Introduction: Obesity and its relationship with asthma, as well as its associated risk factors, are common findings among asthmatic school age and older children but limited studies described these associations in infants and preschool children.

Aim of the study: To assess obesity prevalence in asthmatic young children and to investigate the relationships between these two co-occurring conditions

Method and Material: Male and female children (n=271 cases with allergic asthma and n=271 healthy controls) aged less than 60 months were included in this case control study. The children's body mass index (BMI) was calculated using the formula (BMI=Body weight in kg/body height or length (m²), and information was acquired from their parents through direct conversation. Calculated BMI then classified according to the World Health Organization (WHO) growth charts. The data were gathered from November 1, 2022, and May 30, 2023. it was conducted at all hospitals of Mosul City that included pediatric departments.

Results: Both the prevalence of obesity (expressed as BMI on > 97% centile line on the appropriate BMI/age WHO growth chart) and the mean BMI was significantly higher among asthmatic children (36.5%) than non-asthmatics (23 %), (P=0.0007) and (18.24± 3.14 vs 17.49± 2.48 moths, p =0.0021) respectively. Obese asthmatics start their symptoms at a younger mean age (7.91± 7.75 vs 14.61 ± 14.41 months (p<0.0001), with higher frequency of poor control of their symptoms and higher frequency of annual hospital admissions (p<0.00) in comparison to non-obese asthmatic children and such frequency was positively correlated with the increase in the BMI (p ≤ 0.01, R²=0.12). Female gender, cesarean section delivery, bottle milk feeding and positive family history of obesity all were positively associated with obesity among asthmatics in a significant way (p<0.05).

Conclusions: Obesity is highly frequent among asthmatic preschool children and it affects the disease profile in many ways including the age of onset, frequency of severe attacks, and the difficulty in controlling the symptoms. Obesity is also more common among female

than male asthmatic children and it is associated with bottle milk feeding, positive family history of obesity and cesarean section mode of delivery.