

## The Impact of the Parental Smoking in the Absolute Lung Volumes of Asthmatic Tunisian Children

Rim Kammoun

Sfax University, Tunisia

### Abstract

**Background:** Exposure to parental smoking is one of the most threatening life problem in the word during childhood and it is unfortunately in increasing. Previous studies have shown a high association between this condition and uncontrolled asthma. To the best to our knowledge, the impact of this association on the body plethysmographic parameters is rarely described.

**Objective:** To determine the impact of parental smoking on the lung volumes of asthmatic children.

**Methods:** We carried out a cross sectional study at the department of Functional Explorations Sfax (Tunisia) between January 2017 and January 2018, including 133 asthmatic children. Regarding to their parental smoke status, we divided our population into two groups exposed GI and none exposed children GII.

**Results:** The two groups were composed respectively of 62 and 71 asthmatics children. A predominance of male gender was observed. The measurement of routine spirometric values, and the body plethysmography were performed by the participants. No statistical significant differences were reported in term of forced expiratory volume in the first second (FEV1s) (L) (%Th), forced vital capacity (FVC) (L), total lung capacity (TLC) (L) (%Th) and FEV1s/FVC ratio between the two groups. Nevertheless, the residual volume RV (L) (%Th) was significantly higher in exposed asthmatic children respectively  $252.52 \pm 59.32\%$  in GI versus  $228.86 \pm 57.28\%$  in GII ( $p < 0.05$ ).

**Conclusion:** Body plethysmography is a sensitive tool to detect pulmonary changes due to smoke exposure that are not currently detected by spirometry.

**Received Date:** 10 August 2022

**Accepted Date:** 14 August 2022

**Published Date:** 29 August 2022

### Biography

Rim Kammoun is from Department of Physiology and Functionnal Exploration, Habib Bourguiba Hospital, Sfax University, Tunisia. She

is a well-known person in the field of pediatric medicine.