

## Evaluation of pulmonary volumes in patients with celiac disease in Afzalipour Hospital, Kerman (2019)

Bijan Ahmadi<sup>1</sup>, Rostam Yazdani<sup>2</sup>, Motahareh Zaherara<sup>3</sup>, Ramin Sabahi<sup>2\*</sup>, Mohsen Shafiepour<sup>2\*</sup>,  
Mohammad Mahdi Hayatbakhsh Abbasi<sup>1</sup>, Sara Shafieipour<sup>1</sup>, Fatemeh Karami Robati<sup>4</sup>

<sup>1</sup>Gastroenterology and Hepatology Research Center, Institute of Basic and Clinical Physiology Sciences, Kerman University of Medical Sciences, Kerman, Iran

<sup>2</sup>Department of Internal Medicine, School of Medicine, Afzalipour Hospital, Kerman University of Medical Sciences, Kerman, Iran

<sup>3</sup>Anatomy Department, School of Medicine, Bam University of Medical Sciences, Bam, Iran

<sup>4</sup>Clinical Research Unit, Afzalipour Hospital, Kerman University of Medical Sciences, Kerman, Iran

### Abstract

**Background:** Celiac disease is a common malabsorptive bowel disease caused by gluten sensitivity that affects other organs of the body in addition to the gastrointestinal tract such as liver, brain and respiratory system. This study aimed to evaluate the pulmonary volumes in patients with celiac disease in Afzalipour Hospital, Kerman.

**Methods:** This cross-sectional descriptive study was performed on all adult patients with celiac disease in celiac registry in Afzalipour Hospital. All patients whose records were complete were included in the study. At this stage, height and weight were measured and their demographic information was recorded in a checklist. Then, according to the standard conditions, spirometry was performed. Data were analyzed by SPSS software version 22.

**Results:** The study cases are comprised of 58 patients with celiac disease. The average age of cases were  $37.59 \pm 18.02$  years. The mean of height was  $157.22 \pm 14.30$  cm and the mean of weight was  $57.09 \pm 17.06$  kg. The results showed that the mean of forced vital capacity (FVC) was  $3.15 \pm 0.93$  liters, the mean of forced expiratory volume in 1 second (FEV1) was  $2.68 \pm 0.76$  liters, the mean ratio of FEV1 to FVC  $83.06 \pm 5.56\%$  and the mean of PEF was  $6.64 \pm 1.61$  liters.

**Conclusion:** The results of this study indicated pulmonary volumes in celiac patients was lower than normal age and sex match population. Further studies to follow up and assessment respiratory problems in these patients were need.

**Keyword:** Celiac Disease, Patients, Pulmonary Volumes