# The correlation of pulmonary - aortic index with airway obstruction severity and quality of life in chronic obstructive pulmonary disease


## Abstract

### Introduction

Chronic obstructive pulmonary disease (COPD) is the fourth leading cause of death and a leading cause of chronic disability in the world. The aim of this study is determination of relationship between pulmonary index and aorta with sever airway obstruction and quality of life in patients with chronic obstructive pulmonary (COPD).

### Material and Methods

In this study demographic information of patients with COPD were selected and recorded in check list and severity of airways obstruction was identified by spirometry, then classified according to the GOLD criteria. After CT scan of chest in HIS system, the pulmonary- aortic index was measured and life quality in patients were evaluated and recorded with CAT questionnaire.

### Results

In this study that carried out on information of 140 patients with COPD, 81.4% of patients were men and the mean age was 65.94 years. The mean BODE index in patients was 3.86. Furthermore, 37.1% of patients were with mild dyspnea with score one based on MMRC criteria. In evaluating the quality of life in patients was observed that 48.6% of patients had score in 0-9 range, 30% were in 10-20, 17.1% in 21-30 and 4.2% in 31-40 ranges. The mean pulmonary-aortic index in patients was 0.90 and 64.3% were with index less than 1. Evaluation of data showed that with increased pulmonary- aortic index, the GOLD criterion ($p<0.001$), MMRC ($p<0.001$), BODE ($p<0.001$) increased and CAT quality of life decreased ($p<0.001$).

### Conclusion

Results of this study indicated that there is a relationship between increased pulmonary-arterial index in patients with COPD and sever obstruction based on the GOLD criteria, severity of dyspnea (MMRC), BODE index and life quality for these patients.



**Key words:** CAT, COPD, GOLD, BODE , MMRC