

# To study the efficacy and safety of doxophylline and theophylline in bronchial asthma.

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## Author information

### Abstract

#### **BACKGROUND:**

Asthma is a non communicable chronic disease prevalent all over the world. Two commonly used methylxanthines, theophylline and doxofylline were compared in the study in stable asthmatic patients at recommended doses by various spirometric lung function tests with forced expiratory volume at second one (FEV1) between 50 to 80% of predicted FEV1.

#### **MATERIALS AND METHODS:**

A total of 100 patients were divided in two groups. Group I was administered 300 mg theophylline twice a day and Group II was administered doxofylline 400 mg twice a day orally for six weeks. Spirometric variables symptom score, and adverse effects were recorded at the baseline level and after six weeks of therapy. Data was compared and analysed statistically.

#### **RESULTS:**

The spirometric values of forced expiratory volume in 1 second (FEV1), forced vital capacity (FVC), and FEV1/FVC showed a statistically significant improvement over base line with the use of both theophylline as well as doxophylline, but were not statistically different from each other. There was a statistically significant improvement in peak expiratory flow rate (PEFR) after six weeks of treatment with doxophylline compared to theophylline. It was found that the doxophylline has a better safety profile as compared to theophylline. Adverse events occurred in a greater proportion of patients in the theophylline group.

#### **CONCLUSION:**

In the study it was concluded that both theophylline and doxofylline improved the lung function tests and symptoms in patients of mild Bronchial Asthma, but doxofylline has a better profile in terms of safety.

# Comparative study of the efficacy and safety of theophylline and doxofylline in patients with bronchial asthma and chronic obstructive pulmonary disease.

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## Abstract

### BACKGROUND:

Bronchial asthma and chronic obstructive pulmonary disease (COPD) are the major obstructive disorders that may contribute to the severity in individual patients. The present study was designed to compare the efficacy and safety of theophylline and doxofylline in patients with bronchial asthma and COPD.

### METHODS:

A total of 60 patients, 30 each with bronchial asthma and COPD, were enrolled for the study. Each group of 30 patients received standard treatment for asthma and COPD. Each group was again subdivided into two with 15 patients each, who received theophylline or doxofylline in addition to standard therapy, for a period of 2 months. Each patient was followed up fortnightly for the assessment of efficacy parameters using a pulmonary function test (PFT), clinical symptoms and emergency drug use, and safety was assessed by recording adverse drug reactions.

### RESULTS:

Both theophylline and doxofylline produced enhancements in PFT at different time intervals in both asthma and COPD patients. The maximum beneficial effects were seen at 6 weeks for asthma patients and at 8 weeks for COPD patients for both theophylline and doxofylline.

### CONCLUSIONS:

The comparative study showed that doxofylline was more effective as evidenced by improvement in PFT as well as clinical symptoms, and reduced incidence of adverse effects and emergency bronchodilator use