Objective: We conducted this prospective study to expand available information in relation to serum phosphate levels in treatment of acute asthma. 

A-β-adrenergic agonist, salbutamol, was used for this purpose. 

Material and methods: Twenty-six patients who met the inclusion criteria as; age over 16 years, asthma history, and an acute exacerbation were included. Serum blood urea nitrogen, creatinine, glucose were within normal limits in all the patients. None of the patients were on chronic theophylline therapy. Baseline serum phosphate and potassium levels were measured. Nebulized salbutamol (2.5 mg) was used three times at every hour. After 60 min, serum phosphate and potassium levels were measured. 

Results: Serum phosphate levels decreased from 3.7 ± 0.9 mg/dL (baseline) to 3.6±0.9 mg/dL at 60 min. This decrease was not statistically significant (p = 0.373). Serum potassium levels decreased significantly (p < 0.001) from 4.6 ± 0.7 mmol/L (baseline) to 4.3 ± 0.7 mmol/L (60 min). 

Conclusion: Administration of nebulized salbutamol during the emergency treatment of acute exacerbation of asthma is not associated with a statistical decrease in serum phosphate. There was significant hypokalemia. This study indicates that a further study is needed to elucidate the clinical significance of nebulized salbutamol on serum phosphate.

Keywords
Salbutamol, Phosphate, Asthma.