

Original article

Cross sectional study of Pulmonary Functions Tests in welders of Bangalore city

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Abstract

Background: Occupational Asthma (OA) is a major cause of respiratory morbidity and the most common cause of non acute lung disease in the industrialized world. The incidence of OA in developed country is increasing, while in developing countries is still unknown.

Objectives: To assess pulmonary functions of welders and to determine the respiratory morbidity in relation to duration of welding exposure.

Methods: This cross sectional study included 100 metal electric arc welders, who are working without the benefit of welding fume control ventilation or any respiratory protective measures. A pre structured questionnaire was used to record the clinical, sociodemographic profile . Pulmonary function test (PFT) parameters were recorded by spirometer .

Statistical analysis used: Chi square and independent t test were applied.

Interpretation & Results: Seventy one welders had normal lung functions. The twenty eight welders showed significant reduction in FEV₁/FVC (p<0.05) suggestive of obstructive lung pattern and one welder had increase in FEV₁/FVC (p<0.05) suggestive of restrictive lung pattern on long term exposure (>5yrs).

Conclusions: Impaired pulmonary functions in welders were related to duration of welding exposure.

Key-words: Pulmonary functions, Respiratory morbidity, Welders
