ABSTRACT

TITLE: “EVALUATION OF RESPIRATORY IMPAIRMENT BY PULMONARY FUNCTION TEST IN AUTO DRIVERS”

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BACKGROUND: Development of our country has led to rapid urbanization and there is increasing use of automobiles that is aggravating environmental pollution. Auto drivers working in this environment get exposed to the vehicular emissions for years together. The effects of gasoline engine emissions are potentially have greater problems. In the persons exposed to these pollutants, pulmonary function tests are used as screening tests to determine their effects. The fumes contain suspended particulate matter, oxides of sulphur, nitrogen and carbon monoxide and particles present in the emission are reported to be damaging to the lung functions of these individuals. Particles <10 micron in size accumulate in the lung & produces respiratory abnormalities.

AIM & OBJECTIVE:

To evaluate respiratory impairment by pulmonary function test among auto drivers & To compare the pulmonary functions of auto drivers with general population.

MATERIALS: Easy on pc spirometry

METHODS

- Patients who are willing and satisfying the inclusion criteria are to be selected
- Informed consent will be obtained from all the patients taken up for study
- 50 male auto drivers of age between 20 & 50 yrs who were non smokers were taken as study group and 50 healthy Age and sex matched male non smokers of general population were taken as control group.
- Detailed history relevant to the study is taken
- Investigation results which the patients already undergone recently are studied.
- Patient is asked to sit comfortably in an armed chair in upright posture
- Procedure is first demonstrated by the investigator
- Patient is asked to inhale air from atmosphere – maximal inspiration then he is asked to place the mouth piece immediately inside the mouth
- Their lips should be tightly sealed around the mouth piece
- Nose clip is placed immediately
- Patient is asked to expire with maximum effort which they can achieve into the mouth piece so that all the air from lungs is expelled out
• The same maneuver is repeated thrice by each person
• Resting period of five minutes is taken by them in between each maneuver
• FVC, FEV\textsubscript{1}, FEV\textsubscript{1}/FVC,MVV,PEFR results are displayed graphically and as variables
• Two best values out of three is taken and analyzed

**RESULTS:** Data collected will be statistically analyzed and the final conclusion of my study will be submitted.

**CONCLUSION:** From the present study it was concluded that respiratory functions of auto rickshaw drivers who are continuously exposed to emissions from vehicles were significantly reduced.

**KEY WORDS:** Auto drivers, Non-smokers, pulmonary function test.