

GUEST EDITORIAL



Dr. Prof. D.P. Singh
Guest Editor

AIR POLLUTION AND RESPIRATORY HEALTH

A special issue of PJM on respiratory disease is before you. We have tried to include articles of high standards on the different respiratory diseases like bronchial asthma, allergic broncho-pulmonary aspergilosis (ABPA), atopy in patients with bronchiectasis and oral health impacting respiratory diseases written by reputed authors. There are also chapters on air pollution and ILD, progressive fibrosing ILD and clinical approach of OSA (Obstructive Sleep Apnea).

Through this editorial I would like to draw the attention of readers towards the impact of air pollution on lung health. The air pollution outdoor as well as indoor remains a public health problem worldwide. Globally more than 7 million deaths are attributed to house hold and ambient air pollution and surely these deaths are preventable. Air pollution is an invisible killer having immense impact on respiratory system causing increased incidence of COPD, bronchial asthma and lung cancer to those who are exposed to high level of particulate matter (PM). Pollution may trigger asthmatic attacks in pregnant women and her baby is more likely to develop bronchial asthma. Poor quality of air with high air quality index (AQI) may also enhance the risk of lung infections like bronchitis and pneumonia.

The major pollutants in outdoor air are particulate matter of different sizes, nitrogen dioxide, carbon monoxide, ozone and sulphur dioxide. PM is made up of tiny pieces of solids such as dust, dirt and smoke suspended in the air. High levels of PM are found in industrial areas, burning of coal and wood. PM_{2.5} or less in diameter are released from motor vehicles, heavy vehicles on busy roads, power plants and agriculture burning. Burning of garbage, wild forest fire and large scale demolishing and reconstructions are other source of PM. PM_{2.5} is used as main indicator of AQI. AQI may go up in early November due to bonfire. The smoke generated from fireworks may create winter smog. PM₁₀ being larger in size can reach the airways only while smaller sized PM_{2.5} and ultra fine particles can reach alveoli and even cross alveolo capillary membrane and may cause deadly lung cancer.

To reduce the adverse effects of air pollution we should make the patients of airway diseases like bronchial asthma and COPD aware of the bad air quality and warn them to restrict outdoor activities and should wear mask if needed. To improve the air quality of a place, health care professionals should make people and policy makers aware about the serious side effects of air pollution on cardio-respiratory health and other organs of the body. Government should ensure clean environment by banning old vehicles plying on the roads and strict checking of the all vehicles for pollution control. For reducing the indoor pollution smoking and residential wood/coal/cow dung cakes burning should be strictly prohibited. We together should make every effort to make air pollution-free as "Breathing clean air is fundamental right of human beings".

Dr. Prof. D.P. Singh
Guest Editor

MD DTCD FICP FRCP (Glasgow, Edinburg & London)
FACP (USA) FICS FCSI FIACM FIAMS FCCDSI
Head, Department of Medicine
Angika Hospital & Research Centre Bhagalpur
Former Professor & Head
Department of Respiratory Medicine
J. L. N. Medical Coll subsetneq ro Bhagalpur Bihar