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LUNG DISEASE IN BHOPAL GAS VICTIMS

S.K. JAIN AND N.P. MISRA

I. A single inhalation of the toxic gas caused acute lung injury and severe respiratory disease with a high rate of mortality.

2. In the survivors, the pathological changes resolved to a variable extent leaving a large number of patients with residual lung lesions.

3. The disease is characterised p red eminently by obstructive lesions ui the airways—es pecially the smaller bronchioles—with intra and peri-bronchial cellular infiltration, oedema and fibrosis.

4. Additionally, there is alveolar obliteration, cellular infiltration and fibrosis—patchy in distribution in most but may be diffuse in others.

5. Clinically. major symptoms comprise breathlessness on exertion, cough with or without expectoration, reduced work capacity and chest pain—with rales and rhonchi in nearly 50% of them.

6. Lung function testing shows evidence of airflow limitation, alveolar hyperinflation and air trapping; impairment of diffusion in only a few but a normal KCO in all, slight hypoxaemia in nearly 50% but no CO_2 retention.

7. Exercise capacity is limited by dyspnoea and or muscle fatigue often without the patient reaching maximum ventilation or cardiac responses. The explanations are not clear.

8. Clinical and radiological features are poorly correlated with lung function and exercise test data.

CHANGES IN PULMONARY FUNCTION IN VICTIMS OF BHOPAL TRAGEDY

V.K. VIJAYAN *et al*

Clinical, pulmonary function and blood gas studies carried out in symptomatic Methyl Isocyanatc exposed individuals 1-2 months after exposure had revealed that 40% of them had ventilatory impairment. The predominant type of ventilatory defect was combined obstruction and restriction. Five percent of patients with normal physical findings and. normal chest X-rays had abnormal pulmonary function. Arterial hypoxia ($PaO_2 < 85$ mm Hg) was obseived in 69% °f patients in whom blood gas analyses were done. Arterial hypoxia and ventilatory abnormalities were predominantly seen in severely exposed patients. Further studies are required to identify the sub-group of patients with Reactive Airways Dysfunction Syndrome. Long term follow up is essential to identify the pulmonary syndromes due to MIC exposure.