

## Pulmonary Complications of Dengue Infection

**Authors :** Shilpa Avarebeel

**Abstract :** Background: India is one of the seven identified countries in South-East Asia region, regularly reporting dengue infection and may soon transform into a major niche for dengue epidemics. Objective: To study the clinical profile of dengue in our setting with special reference to respiratory complication. Study design: Descriptive and exploratory study, for one year in 2014. All patients confirmed as dengue infection were followed and their clinical profile, along with outcome was determined. Study proforma was designed based on the objective of the study and it was pretested and used after modification. Data was analyzed using statistical software SPSS-Version 16. Data were expressed as mean  $\pm$  S.D for parametric variables and actual frequencies or percentage for non-parametric data. Comparison between groups was done using students' t-test for independent groups, Chi square test, one-way ANOVA test, Karl Pearson's correlation test. Statistical significance is taken at  $P < 0.05$ . Results: Study included 134 dengue positive cases. 81% had dengue fever, 18% had dengue hemorrhagic fever, and one had dengue shock syndrome. Most of the cases reported were during the month of June. Maximum number of cases was in the age group of 26-35 years. Average duration of hospital stay was less than seven days. Fever and myalgia was present in all the 134 patients, 16 had bleeding manifestation. 38 had respiratory symptoms, 24 had breathlessness, and 14 had breathlessness and dry cough. On clinical examination of patients with respiratory symptoms, all twenty-eight had hypoxia features, twenty-four had signs of pleural effusion, and four had ARDS features. Chest x-ray confirmed the same. Among the patients with respiratory symptoms, the mean platelet count was 26,537 c/cmm. There was no statistical significant difference in the platelet count in those with ARDS and other dengue complications. Average four units of platelets were transfused to all those who had ARDS in view of bleeding tendency. Mechanical ventilator support was provided for ARDS patients. Those with pleural effusion and pulmonary oedema were given NIV (non-invasive ventilation) support along with supportive care. However, steroids were given to patients with ARDS and 10 patients with signs of respiratory distress. 100% Mortality was seen in patients with ARDS. Conclusion: Dengue has to be checked for those presenting with fever and breathlessness. Supportive treatments remain the cornerstone of treatment. Platelet transfusion has to be given only by clinical judgment. Steroids have no role except in early ARDS, which is controversial. Early NIV support helps in speedy recovery of dengue patients with respiratory distress.

**Keywords :** adult respiratory distress syndrome, dengue fever, non-invasive ventilation, pulmonary complication

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