ung Kenyan children with acute lower respiratory infection.

Onyango, F.E,; Steinhoff, M.C; Wafula, E.M,; Wariua, S,; Musia, J; Kitonyi, J

Abstract:

To determine the prevalence, clinical correlates, and outcome of hypoxaemia in acutely ill children with respiratory symptoms. Prospective observational study. Paediatric casualty ward of a referral hospital at 1670 m altitude in Nairobi, Kenya. 256 Infants and children under 3 years of age with symptoms of respiratory infection. Prevalence of hypoxaemia, defined as arterial oxygen saturation < 90% determined by pulse oximetry, and condition of patient on the fifth day after admission. Over half (151) of the children were hypoxaemic, and short term mortality was 4.3 times greater in these children. In contrast, the relative risk of a fatal outcome in children with radiographic pneumonia was only 1.03 times that of children without radiographic pneumonia. A logistic regression model showed that in 3-11 month old infants a respiratory rate > or = 70/min, grunting, and retractions were the best independent clinical signs for the prediction of hypoxaemia. In the older children a respiratory rate of > or = 60/min was the single best clinical predictor of hypoxaemia. The presence of hypoxaemia predicted radiographic pneumonia with a sensitivity of 71% and specificity of 55%. Over half the children presenting to this referral hospital with respiratory symptoms were hypoxaemic. A group of specific clinical signs seem useful in predicting hypoxaemia. The clear association of hypoxaemia with mortality suggests that the detection and effective treatment of hypoxaemia are important aspects of the clinical management of acute infections of the lower respiratory tract in children in hospital in developing regions.