

Correlation Of Clinically Suspected Community Acquired Pneumonia (CAP) With Reference To Chest Radiograph and Laboratory Parameters in Rural Setup

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Background

Pneumonia is a major cause of morbidity and mortality worldwide, particularly among children in developing countries, where half of the pneumonia related deaths occur less than one year of age. Use of the World Health Organization guidelines is associated with a sensitivity of about 70% to 74% and a specificity of 40% to 70% in correctly identifying pneumonia confirmed on the chest x-ray. Thus to improve sensitivity and specificity, other diagnostic tests (chest Xray, laboratory test) have been employed with variable rates of accuracy. The ideal surrogate marker for pneumonia should be accurate, minimally invasive, and readily available.

Aim is to identify association of X-ray chest and Laboratory Parameters i.e. Total Leucocyte Count Blood culture, Erythrocyte Sedimentation Rate and C - reactive protein amongst patients with WHO defined clinical Community Acquired Pneumonia.

Methods

It was a prospective study carried out over a period of 2 months in department of paediatrics S.B.K.S MIRC. All the clinically suspected patients of Pneumonia investigated for X-ray chest, Complete Blood Count Blood Culture, ESR and C-Reactive SProtein. Investigations final report was analysed with standard age defined parameters.

Results

Total 66 participants were enrolled in the study with 12.1% of participants belonged to age group of below two months (grp.-1), 39.4% were between two to twelve months of age (grp.-2), 27.3% were between twelve to sixty months (grp.-3) and 21.2% of were above sixty months (grp.-4). Over all positivity of chest X-ray, CRP, ESR TLC and blood culture was 93.9%, 90.9%, 72.7%, 48.5% & 6.1% respectively. X ray was positive in all patients of grp. 3 and grp.4 while it was 92.3% and 75% for grp.2 and grp.1 respectively. CRP positivity was more in grp.1 and grp.4 100% and 92.3, 77.8 in grp.2 and grp.3 respectively. *****Conclusion: Positive chest X-ray and C-reactive protein are having strong association with clinical pneumonia, ESR has fair association but blood culture and TLC has very low degree of association.