

COMMUNITY ACQUIRED PNEUMONIA AMONG ADULT BANGLADESHI PATIENTS HOSPITALIZED FOR DIARRHEA

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Abstract. Community acquired pneumonia (CAP) in adults is a major cause of death among patients admitted to Dhaka Hospital of the International Centre for Diarrheal Disease Research, Bangladesh (ICDDR,B). Since the majority of diarrheal patients treated at our hospital are not given antibiotics and since the majority of CAP patients treated at our hospital do require antibiotics, it is important to recognize the CAP patients among our diarrheal patients. We aimed to determine the risk factors, etiology and outcome of CAP among adults, hospitalized for diarrhea at our hospital but also have concomitant pneumonia on admission. We retrospectively reviewed the charts of diarrheal patients aged ≥ 16 years admitted from January 2010 to December 2013 at our hospital. Of the 5,980 diarrheal patients admitted during the study period, 372 (6%) had CAP. We reviewed the charts of these patients retrospectively and compared them to the charts of 372 randomly selected diarrheal patients without pneumonia. At admission, 372 diarrheal patients who had CAP were identified by using the following criteria: symptoms of cough, breathing difficulty, fever, pleuritic chest pain and signs of hypo or hyperthermia, abnormal breath sounds and/or increased/decreased vocal resonance on auscultation consistent with an acute lower respiratory tract infection and the findings of a new radiographic abnormality showing lobar consolidation, para-pneumonic infiltrate or pleural effusion. The mortality rate among study subjects with diarrheal disease and CAP (4%) was significantly greater ($p=0.006$) than among diarrheal study subjects without CAP (1%). On logistic regression analysis, after adjusting for potential confounders, we found chronic lung disease, hypoxemia and hypomagnesemia to be independently significantly associated with CAP ($p<0.05$ for all 3 factors). Therefore, recognition of CAP on admission in adults hospitalized for diarrhea is critically important to reduce pneumonia related deaths. Patients with history of chronic lung disease, hypoxemia and hypomagnesemia need to be monitored carefully for signs and symptoms of CAP and treated promptly.

Keywords: diarrhea, community acquired pneumonia, chronic lung disease, hypomagnesemia

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