ABSTRACT

A case-control study on risk factors for bacteremia in children was carried out at Queen Sirikit National Institute of Child Health. We identified pediatric patients who were admitted to Queen Sirikit National Institute of Child Health during January 1997 to December 1999. One hundred and seventy- three pediatric patients aged between 2 months to 15 years old with positive haemoculture were identified as cases and 173 age-matched children with negative hemoculture were defined as controls. The medical records of these patients were reviewed. Clinical data and laboratory findings were collected according to the questionnaire form.

Among pediatric patients with positive hemoculture , 72.26% of cases were under 3 years of age . They were 88 male and 85 female patients. The common organisms in the patients less than 3 years of age were non-typhoidal salmonella species (*Salmonella* group B,C,D,E), *H. influenzae, E. coli , K.pneumoniae, S. aureus and S. pneumoniae.*

Hypotension , respiratory distress, unconsciousness on admission, between cases and controlled patients were not significantly associated with risk for bacteremia ($p>0.05$). Patients came with temperature $\geq 38.8^{\circ}C$ (OR=2.2, 95%CI=1.32-3.68) , total WBC counts > 15,000 /mm^3 (OR=1.61, 95%CI=1.02-2.54), ANC 12,000/mm^3 (OR=2.14, 95%CI=1.3-3.53), band form of polymorphonuclear cell in peripheral blood smear(OR=3.22, 95%CI=1.93-7.68) , platelet count <100,000 /mm^3

(OR=2.38, 95%CI=1.23-4.66) , were significantly associated with risk factors for bacteremia ($p<0.05$).

Immune status such as previous use of chemotherapeutic drugs and long term use of steroids were not associated with risk factors for bacteremia. However, children with 3rd degree malnutrition (OR=6.52, 95%CI=2.82-15.62) , HIV infected condition (OR=2, 95%CI= 1.02-3.96), endotracheal intubation before hemoculture taken (OR=3.66, 95%CI=1.35-10.49), underlying conditions such as diarrhoea , meningitis, leukemia were significantly associated with bacteremia in children ($p<0.05$).

These factors may play an important role related to risk factors for bacteremia in children . By knowing these factors that who is at risk to have positive hemoculture will help us to select the group of pediatric patients in whom hemoculture should be done as well as treat empirically with antibiotics , in order to reduce morbidity and mortality caused by bacteremia .

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