Diagnosis and Treatment of Catheter-related Blood Stream Infection in Neonates and Children

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Abstract
This article provides an overview on the current management of catheter-related blood stream infection in neonates and children. New techniques, such as acridine orange stain and differential time to positivity, are useful in diagnosing catheter-related bacterial infections without catheter removal. Furthermore, they are feasible for those hospitals with limited manpower and budget in microbiology service. Management of catheter-related infections depends on bacterial, device (type of device, nature of the infusate) and host factors (age, birth weight, gestation and underlying diseases). Bacterial factor is probably the most important consideration for the decision of catheter removal, choice of antibiotics and duration of therapy. Catheter-salvaging strategies including antibiotic-lock therapy and urokinase had been suggested but only the former is still useful in patients with uncomplicated infections involving implantable devices or tunneled catheters. In addition, changing of a catheter over a guidewire because of concern about losing venous access is not recommended. (HK J Paediatr (new series) 2005;10:26-33)

Key words: Antibiotic-lock therapy; Catheter-related blood stream infection; Central venous catheters; Urokinase