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Management of CVCs in Patients With Candidemia

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Controversy exists regarding the most appropriate acute management of central venous catheters (CVCs) in neonates with candidemia, with up to two thirds of neonatologists preferring to attempt antifungal therapy without removing CVCs. Karlowicz and coinvestigators from Eastern Virginia Medical School, Children's Hospital of The King's Daughters, Norfolk, Virginia, conducted a study to determine whether CVCs should be removed as soon as candidemia is detected in neonates. A cohort study of candidemia and CVCs was conducted in

infants in a neonatal ICU over a 5-year period (1994-1998).

Fifty infants had early removal (ER) of a CVC (within 3 days), and 54 infants had late removal (LR) of a CVC (>3 days after the first blood culture positive for *Candida* species). All infants were treated with amphotericin B. There was no significant difference between infants in the ER CVC and LR CVC groups in terms of gender, ethnicity, birth weight, gestational age, age at candidemia, severity-of-illness scores, distribution of types of CVC, or in the distribution of *Candida* species causing candidemia. The ER CVC group had significantly shorter duration of candidemia (median, 3 days; range, 1-14 days) compared with the LR CVC group (median, 6

days; range, 1-24 days). The case fatality rate of *Candida albicans* candidemia was significantly affected by the timing of CVC removal: 0 of 21 (95% confidence interval [CI₉₅], 0-14) infants died in the ER CVC group in contrast to 9 of 23 (39%; CI₉₅, 19-59) in the LR CVC group. The authors concluded that failure to remove a CVC as soon as candidemia was detected in neonates was associated with significantly increased mortality in *C. albicans* candidemia and prolonged duration of candidemia regardless of *Candida* species.

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