Central line tip culture: Refrigerating intravascular lines and retrieving them for culture only if there was a bacteraemia | 1


Abstract:

BACKGROUND: Culture of intravascular line tips is useful for the diagnosis of intravascular line-related phlebitis and bacteraemia. However, the test lacks specificity, with a low predictive value for intravascular line bacteraemia. A recent randomised study showed that predictive value could be increased and costs reduced by refrigerating intravascular lines and retrieving them for culture only if there was a bacteraemia in the seven days before or after the intravascular line was received.

AIM: We studied whether a similar triage policy could be introduced into our 1400-bed National Health Service (NHS) teaching hospital in the UK. We assessed cost reduction in the laboratory and clinical acceptability.

METHODS: Data regarding the number of intravascular lines received, stored and cultured and blood cultures received was retrieved from the microbiology computer, for five-month periods before and after the introduction of the new triage policy.

FINDINGS: Of the 134 intravascular line tips received in the five months after the policy had been introduced, 101 (75%) were stored without retrieval and 33 were cultured. Of these, 7/134 (5%) were culture positive and three matched a concurrent blood culture. Audit showed that compliance with the policy was >98%. The estimated annual cost reduction following the introduction of the policy was £3,166.96. The policy was acceptable to clinicians.

CONCLUSIONS: The policy was both cost saving and clinically acceptable. If the policy were adopted throughout the NHS in the UK, the annual cost saving to the service might be in the order of £300,000.