

P2120

Abstract (poster session)

Surveillance of bloodstream infections (BSI) and pneumonia in neutropenic patients: results of case study-based training sessions

D. Luft*, R. Babikir, H. Bertz, W.V. Kern, A.F. Widmer, M. Dettenkofer (Freiburg, DE; Basel, CH)

Objectives: Surveillance of nosocomial infections is one key element of infection control. Data feedback to healthcare providers and comparison of infection rates between different units or hospitals are main objectives of surveillance systems. However, comparison of data is only feasible if standardised case definitions are used by trained investigators. One option for training and validation of investigators is the use of case studies. We report the results of case study-based training sessions held in 2011 and 2012 at annual meetings of ONKO-KISS. ONKO-KISS is part of the German national nosocomial infection surveillance system focusing on bloodstream infections (BSIs) and pneumonia during neutropenia in adult patients undergoing haematopoietic cell transplantation (HCT) or chemotherapy for acute leukaemia. By January 2012 35 units in 22 hospitals participated in ONKO-KISS. Methods: Investigators received initial training on the application of surveillance definitions and continuous support thereafter. Cases of BSI are determined using Centers for Disease Control and Prevention (CDC) definitions for laboratory confirmed BSI. Cases of pneumonia are determined using modified CDC criteria adapted for neutropenic patients. For training and validation of investigators, case studies for individual evaluation were provided at annual workshops. Case studies were based on real cases and comprised both cases of daily practice and complex cases (previously requiring advice from the reference centre). Results were compared with the agreed assessment of nosocomial infections of two independent experts (members of the reference centre team) serving as the gold-standard and inconsistencies with their interpretation analysed. Starting 2011, case study results were analysed with regard to diagnostic accuracy. Results: 2011-2012 a total of 29 case studies with 26 nosocomial infections (11 cases of BSI, 15 cases of pneumonia) were evaluated by 38 investigators. Overall sensitivity of investigators for detection of both types of infection was 82.4%. Sensitivity for detection of BSI was 86.9% and sensitivity for detection of pneumonia was 79.4%. Specificity was 88.1% for BSI and 90.7% for pneumonia. Diagnostic accuracy improved between 2011 and 2012. Conclusion: Case studies are a practical and efficient way to assess diagnostic accuracy in a surveillance system. They should be implemented as a continuous instrument of quality assessment and education of investigators.