

An introduction to current standards of CARE in invasive fungal disease

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Invasive fungal infections are life-threatening conditions that require rapid diagnosis and optimal management to alleviate their high morbidity and mortality. They are also associated with a high economic burden, owing to prolonged hospitalization, the need for intensive supportive care, and the consumption of costly new antifungal agents. Many standards of care and guidelines have been published by national and international medical societies and organizations over the past 20 years that have embraced new diagnostic technologies and strategies, and new antifungal drugs. Recognizing the ongoing need and debate on the topic of standards for optimal diagnostics and patient care, the Scientific Committee of the Continuing Antifungal Research and Education (CARE) programme devised the scientific agenda for the 10th CARE (CARE X) meeting to review current practice and recommendations. Specialists in haematology, infectious diseases, medical microbiology and medical mycology met in Barcelona in November 2017. The meeting was organized and funded by Gilead Sciences Europe Ltd.

What is a standard of care? An appropriate definition in the medical context is the watchfulness, attention, caution and prudence that a reasonable person, a team or organization, such as a national medical society, would exercise. In the clinical mycology context, a standard of care means the optimal degree of care and skill of the specialist healthcare provider who practises the specialty, taking into account the medical knowledge that is available to the clinician. In the context of guidelines, a further definition could be evidence-supported investigations and interventions delivered in a timely and logical fashion to reduce the risk of developing invasive fungal disease (IFD) or reducing the morbidity and mortality from IFD. That specialist knowledge can be provided through a number of educational channels, including the information and guidance provided in this Supplement to the *Journal of Antimicrobial Chemotherapy*. The reviews in this Supplement reflect a cross-section of best clinical laboratory practice from leading hospitals across Europe.

The articles presented here provide a series of key recommendations for the appropriate use of mycological, immunological and radiological diagnostic methods for the diagnosis of IFDs. The recommendations emphasize the role of immunoassays and biomarker quantification as exemplars of rapid diagnostic tests to guide treatment decisions. In this Supplement, we provide information to improve understanding of the importance of fungal diagnostics for invasive fungal infection, fungal infections that

occur in the ICU, in solid organ transplant recipients, and in haematology patients. What is the current treatment best practice for diseases such as aspergillosis and candidosis? The antifungal armamentarium is small but there are now at least seven new antifungal molecules in clinical trials and many more at various stages of development. The new antifungal landscape is reviewed here.

Transparency declarations

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