Evaluation of an immunomagnetic separation method to capture Candida yeasts cells in blood

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Résumé en anglais Background Candida species have become the fourth most-frequent cause of nosocomial bloodstream infections in immunocompromised patients. Therefore, rapid identification of pathogenic fungi to species level has been considered critical for treatment. Conventional diagnostic procedures such as blood culture or biochemical tests are lacking both sensitivity and species specificity, so development of rapid diagnostic is essential. Results An immunomagnetic method involving anti-Candida monoclonal antibodies was developed to capture and concentrate in human blood four different species of Candida cells responsible for invasive yeast infections. In comparison with an automated blood culture, processing time of immunomagnetic separation is shorter, saving at least 24 hours to obtain colonies before identification. Conclusion Thus, this easy to use method provides a promising basis for concentrating all Candida species in blood to improve sensitivity before identification.

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