Evaluation of chromogenic media and seminested PCR in the identification of Candida species

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Abstract:

Identification of Candida cultured from various clinical specimens to the species level is increasingly necessary for clinical laboratories. Although sn PCR identifies the species within hours but its cost-effectiveness is to be considered. So there is always a need for media which help in the isolation and identification at the species level. The study aimed to evaluate the performance of different chromogenic media and to compare the effectiveness of the traditional phenotypic methods vs. seminested polymerase chain reaction (sn PCR) for identification of Candida species. One hundred and twenty seven Candida strains isolated from various clinical specimens were identified by conventional methods, four different chromogenic media and sn PCR. HiCrome Candida Differential and CHROMagar Candida media showed comparably high sensitivities and specificities in the identification of C. albicans, C. tropicalis, C. glabrata and C. krusei. CHROMagar Candida had an extra advantage of identifying all C. parapsilosis isolates. CHROMagar-Pal□s medium identified C. albicans, C. tropicalis and C. krusei with high sensitivities and specificities, but couldn□t identify C. glabrata or C. parapsilosis. It was the only medium that identified C. dubliniensis with a sensitivity and specificity of 100%. Biggy agar showed the least sensitivities and specificities. The overall concordance of the snPCR compared to the conventional tests including CHROMAgar Candida in the identification of Candida species was 97.5%. The use of CHROMAgar Candida medium is an easy and accurate method for presumptive identification of the most commonly encountered Candida spp.

Keywords:

chromogenic media, sn PCR, Candida.

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