Yeasts identification *Candida* manual and automated methods: A comparative analysis

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The *Candida* Yeasts are commonly found among members of the indigenous microbiota of humans and animals The precise identification of the pathogen is of fundamental importance for the choice of appropriate treatment. Conventional methods for the identification of *Candida* spp., consist in an analysis of their morphological, physiological and biochemical, however the tests can take days or weeks same. Given the above, the objective of this study was to evaluate comparative way the performance of conventional and automated methods to identify *Candida* yeasts isolated from clinical sources. Thus, a total of 20 yeast strains were isolated from patients in the Santa Casa de Misericordia de Sobral. The isolates were obtained from primary cultures, and yeast strains were presumptively identified according to the morphological characteristics of the colonies grown in medium CHROMagar *Candida*. The strains identified as Candida spp., as well as strains not identified, were subjected to automated VITEK. Both techniques identify clinical isolates for about 24-48 hours. However, the best result was shown by the automated identification, which have been completely identified all 20 strains isolated with 100% sensitivity profile (20/20). For CHROMagar Were Obtained 70% (14/20) and 6 strains Were not identified, presenting atypical aspect color of colony forming units used in cultures. According to Chen et al. (2000), automated systems, such as VITEK have difficulty in identifying some fungal species, often making it necessary the use of manual tests, such as CHROMagar micromorphology, and in order to make a definitive diagnosis. However the major limitation of manual methods for detection of fungi from clinical sample is mixed flora. Based on these results, the automated method demonstrated higher efficiency and low cost in identifying clinically isolated yeasts, compared to manual methods and can be a good alternative for quick identification in clinical studies.