

Comparative study using Maldi ToF MS and automated system in identification of coagulase negative Staphylococci isolated from blood culture

Mustafa Guney

Gulhane Military Medical Academy, Turkey

Accurate identification of coagulase-negative staphylococci (CoNS) is important especially when they are isolated from multiple blood cultures of a patient. Maldi-ToF MS is a new fast and accurate technique which allows examination of protein profiles of bacteria. This study aimed to compare two methods; Maldi-ToF MS (Bruker Daltonics) and BD Phoenix (Becton Dickinson) for identification of CoNS isolates from blood culture. Totally 102 CoNS bloodstream isolates representing 9 species were analyzed in this study. There was 73.5% correlation between two methods. The 10 *S.hominis* described by Maldi-ToF MS were identified as 3 *S.epidermidis*, 5 *S.saprophyticus*, 1 *S.capitis*, and 1 *S.haemolyticus*; 12 *S.epidermidis* identified as 3 *S.saprophyticus*, 2 *S.haemolyticus* 1 *S.capitis*, 1 *S.hominis*, 1 *S.chromotogenes*, 1 *S.warneri*, 1 *S.hyicus*, 1 *S.aureus*, and 1 *S.capitis*; 4 *S.haemolyticus* were identified as 2 *S.epidermidis*, and 2 *S.hominis*; 1 *S.warneri* was identified as *S.capitis* by BD Phoenix system. According to the previous studies Maldi-tof MS seemed to be a powerful method in ID of CoNS with up to 99.3% correct results. The next step of this study will be tuf sequencing to find the accuracy rates of these two methods.

mguney@gata.edu.tr