

Virulence genes expression among methicillin-resistant staphylococcus aureus isolated from cancer and non-cancer patients

ABSTRACT

Relative quantitative real-time reverse transcriptase polymerase chain reaction (qPCR) assay was designed and applied in order to study the expression levels of selected genes encoding the adherence and toxins virulent factors. Relative quantification qPCR showed a significant higher expression level of common genes tested among strains isolated from cancer patients not only within the clone but also among different lineages. This study demonstrated that although all MRSA strains studied from cancer and non-cancer patients possessed several virulence determinants the expression rather than presence of virulence determinants may mediate higher pathogenicity potential. These data will aid in developing more effective infection control strategy to improve the management of MRSA infection in cancer patients.

Keyword: MRSA, qPCR; Gene expression; Virulence factors