

**ABSTRAK****Perbedaan Proporsi Gen Tsst-1 Antara Methicillin-Sensitive Dan -Resistant *Staphylococcus Aureus* Dari Isolat Klinis Di Rsud Dr. Soetomo Surabaya****Marinda Dwi Puspitarini**

Tujuan dari penelitian ini adalah menghitung dan menganalisis perbedaan proporsi gen TSST-1 pada methicillin-sensitive dan -resistant *S. aureus* dari isolat klinis di RSUD Dr. Soetomo Surabaya. Sampel yang digunakan dalam penelitian ini sejumlah 53 isolat MSSA dan 53 isolat MRSA yang diperoleh berdasarkan hasil uji identifikasi otomatis *BD Phoenix<sup>TM</sup> Automated Microbiology System* atau *Vitek2 system*. Isolat MSSA dan MRSA kemudian dilakukan pemeriksaan PCR untuk mengetahui adanya gen TSST-1. Dari 106 isolat didapatkan gen tsst-1 positif sebanyak 5 (4,7%) isolat yang terdiri dari 3 (5,7%) isolat MSSA dan 2 (3,8%) isolat MRSA. Tidak didapatkan perbedaan yang bermakna antara gen tsst-1 dengan bakteri MSSA dan MRSA ( $p=0,648$ ). Distribusi gen tsst-1 positif pada spesimen pus sebanyak 1 dari isolat MSSA dan spesimen darah 2 isolat akan tetapi tidak ditemukan pada spesimen sputum maupun urin sedangkan pada isolat MRSA hanya ditemukan pada spesimen darah sebanyak 2 isolat. Pada isolat MSSA didapatkan gen TSST-1 positif pada laki-laki sebanyak 1 isolat dan perempuan 2 isolat sedangkan MRSA jumlah sama masing-masing 1 pada laki-laki dan perempuan. Berdasarkan hasil phylogenetic tree didapatkan gen TSST-1 dari Surabaya dalam satu clade dengan negara Jepang, Iran, India, Irak, Inggris dan Mesir.

Kata Kunci: MSSA, MRSA, gen TSST-1, Indonesia, *phylogenetic tree*

**ABSTRACT**

**Differences Proportion Of Tsst-1 Gene Between Methicillin-Sensitive And -Resistant *Staphylococcus Aureus* From Clinical Isolate In Rsd Dr. Soetomo Surabaya**

**Marinda Dwi Puspitarini**

The purpose of this study was to calculate and analyze the difference proportion of TSST-1 gene in methicillin-sensitive and -resistant *Staphylococcus aureus* from clinical isolates in RSUD Dr. Soetomo Surabaya. The samples used in this study were 53 MSSA isolates and 53 MRSA isolates obtained based on the results of the automatic identification test of *BD Phoenix TM Automated Microbiology System or Vitek2 system*. Isolates MSSA and MRSA then examined by PCR to determine the presence of TSST-1 gene. From 106 isolates, 5 (4.7%) isolates tsst-1 positive consisted of 3 (5.7%) MSSA isolates and 2 (3.8%) MRSA isolates. No significant difference was found between the TSST-1 gene with bacteria MSSA and MRSA ( $p = 0.648$ ). The distribution of the TSST-1 gene positive from MSSA isolates in specimens wound was 1 isolates and specimens blood were 2 isolates but it was not found in specimens sputum or urine while in MRSA isolates it was only found in blood specimens as much as 2 isolates. In MSSA isolates, TSST-1 genes positive were found in 1 isolate from males and 2 isolates from females while MRSA was equal in number 1 in males and females respectively. Based on the phylogenetic tree results obtained gene TSST-1 from Surabaya in clade with Japan, Iran, India, Iraq, UK and Egypt.

Keywords: MSSA, MRSA, TSST-1 gene, Indonesia, phylogenetic analysis