Deteksi Methicillin Resistant Staphylococcus Aureus (MRSA) menggunakan Metode Polymerase Chain Reaction (PCR) Gen nuc dan mecA = Detection of Methicillin Resistant Staphylococcus Aureus by Polymerase Chain Reaction (PCR) Amplification of nuc and mecA Genes

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Abstrak

Methicillin resistant Staphylococcus aureus (MRSA) merupakan strain Staphylococcus aureus yang resistan antibiotik -laktam. Penelitian deteksi MRSA dilakukan menggunakan metode PCR dengan amplifikasi gen nuc dan mecA. Sampel diambil dari usapan nasofaring 161 orang dewasa 50 tahun. Uji sensitivitas antibiotik juga dilakukan untuk mengetahui resistansi pada isolat MRSA. Fragmen DNA untuk gen nuc dan mecA terdeteksi dengan ukuran 255 bp dan 527 bp. Sebanyak 12 sampel (7,5%) dideteksi sebagai MRSA dan diketahui resistan terhadap antibiotik oxacillin dan cefoxitin dari golongan -laktam. Variasi resistansi pada isolat MRSA terlihat pada antibiotik erythromycin, tetracycline, gentamicin, chloramphenicol dan trimethophim/sulfametoxazole. Hasil penelitian mengindikasikan kolonisasi MRSA dapat dideteksi dengan amplifikasi gen nuc dan mecA.

.....Methicillin resistant Staphylococcus aureus (MRSA) is a strain of Staphylococcus aureus that is resistant to lactame antibiotics. Detection of MRSA was conducted by amplification of nuc and mecA genes using PCR method. Samples were taken from nasopharyngeal swab from 161 adult 50 years old. Susceptibility test was also done by disc diffusion to determine resistance characteristic in MRSA isolates. DNA fragment for nuc and mecA genes was detected in 255 bp and 527 bp. About 12 MRSA isolates (7,5%) showed resistance toward oxacillin and cefoxitin which belong to lactame antibiotics. There were variety of resistance in MRSA isolates to other antibiotics, such as erythromycin, tetracycline, gentamicin, chloramphenicol, and trimethophim/sulfametoxazole. The results indicate that amplification of nuc and mecA genes by PCR can be used for MRSA detection from nasopharyngeal swab.