

Abstract

The study intended to determine the synergistic effect of two β -Lactam antibiotics, Amoxicillin and Ampicillin, against Vancomycin-resistant *Staphylococcus aureus* (VRSA). The study utilized a Randomized Complete Block Design, with six treatments. T₀ is water, T₁ is (100%) 50 mg/mL Ampicillin, T₂ is (100%) 50 mg/mL Amoxicillin. Combination drugs contain (50%) 25 mg/mL of both drugs for T₃, (25%) 12.5 mg/mL Ampicillin and (75 %) 37.5 mg/mL Amoxicillin for T₄ and (25%) 12.5 mg/mL Amoxicillin and (75 %) 37.5 mg/mL Ampicillin for T₅. The experiment was conducted at the De La Salle University-Dasmariñas Biology Research Laboratory. Methods used were screening of VRSA and disk diffusion assay. Twenty patients were subjected to facial swabbing. The swabs were inoculated in a nutrient broth for enrichment and after 24 hours it was inoculated on Mannitol Salt agar. The obtained bacteria were subjected to different dilution of Vancomycin for the screening of VRSA. Results showed that on the fifth dilution of 31,250 units, 5 isolates survived, and on fourth dilution, with the concentration of 62,500 units, only 1 isolate survived. These isolates were the VRSA. The obtained VRSA was subjected to anti-VRSA sensitivity testing. This determined whether there was synergy of none and it was done by measuring the inhibition zones. The inhibition zones from T₁ to T₅ that were measured in centimeters (cm) were 2cm, 2cm, 1.75cm, 1.6cm and 1.7cm respectively. Results showed that VRSA was sensitive to the different treatments, however, no synergy was observed.