

SPREVALENCE AND ANTIMICROBIAL SUSCEPTIBILITY PATTERN OF METHICILLIN RESISTANT *STAPHYLOCOCCUS AUREUS* ISOLATED FROM CLINICAL SAMPLES AT YEKATIT 12 HOSPITAL MEDICAL COLLEGE, ADDIS ABABA, ETHIOPIA

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Background: *Staphylococcus aureus* is one of the major causes of community and hospital acquired bacterial infections. *In vitro* determination of drug resistance patterns of *S. aureus* is critical for the selection of effective drugs for the treatment of staphylococci infections.

Objective: The main aim was to determine the prevalence of methicillin resistant *S. Aureus* (MRSA) strains from different clinical specimens from patients referred for routine culture and sensitivity testing

Method: A cross sectional study was conducted among 1360 participants at Yekatit 12 hospital medical college in Ethiopia. Clinical samples from various anatomical sites of study participants were cultured on blood agar and mannitol salt agar and identified to be *S. aureus* by using catalase, coagulase and DNase tests. *S. aureus* isolates then were screened for MRSA using 30 g cefoxitin disc and other eleven antimicrobial drugs by disc diffusion procedure, and agar dilution and E test for vancomycin. Data were analyzed using SPSS version 20 software and logistic regressions were applied to assess any association between dependent and independent variables.

Results: Of 1360 clinical specimens analyzed *S. aureus* was recovered from 194 (14.3%). Rate of isolation of *S. aureus* with regard to clinical specimens was the highest in pus 118 (55.4 %). Out of 194 *S. aureus* isolates, 34 (17.5%) were found out to be MRSA and the remaining 160 (82.5%) were MSSA. 98 (50.5%) *S. aureus* were multi drug resistant (MDR) and the highest isolates were resistant to penicillin 187 (96.4%) and least resistant for clindamycin 23 (11.9%) and vancomycin 10 (5.1%). MRSA strains were 100% resistant to penicillin G, erythromycin, trimethoprim-sulfamethoxazole and least resistant to vancomycin 10 (29.4%). Out of 194 *S. aureus* isolates 153(79.0%) were beta-lactamase producers.

Conclusion: *Staphylococcus aureus* were MDR to several combinations of the tested antibiotics. The emergence of vancomycin resistant *S. aureus* highlights the value of prudent prescribing of antibiotics and avoiding their irrational use.

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