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## **Antibiotic susceptibility profile of methicillin resistant *Staphylococci aureus* in poultry farm, in Zaria, Nigeria**

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Methicillin antibiotic is not commonly used in veterinary practice in the hospitals due to its toxicity, but the wide spread of its gene (MecA) calls for concern in livestock. The epidemiological and antibiotic susceptibility of *Staph. aureus* in Zaria, Nigeria was carried out in this study due to the increasing resistance associated with *Staph. aureus* in poultry birds. In this study, 250 samples of chicken droplets were collected from five different poultry farms (50 samples from each farm) within Zaria metropolis. Eighty eight (88) isolates of *Staph. aureus* were confirmed using standard microbiological methods. The antibiotic susceptibility pattern showed that the isolates were 90.8% susceptible to Ciprofloxacin, 76.2% to Vancomycin, 72.2% to Pefloxacin, 65.6% to Gentamicin, 58.8% to Methicillin, 57.6% to Oxacillin, 49.6% to Ampicillin and 25.3% to Tetracycline. Their percentage resistance varied from 9.2, 23.9, 27.8, 34.4 and 42.4 for Ciprofloxacin, Vancomycin, Pefloxacin, Gentamycin and Oxacillin, respectively. The isolates showed high resistance 74.7% and 50.4% to Tetracycline and Ampicillin respectively while 41.2% of the isolates were resistant to Methicillin and produces  $\beta$ -lactamase enzyme. Seventy five percents (75%) of the isolates had MIC value of  $\geq 64 \mu\text{g/ml}$  while 25% had MIC  $\leq 2 \mu\text{g/ml}$ . The MARI result showed that 40% of the isolates had MAR index of  $\leq 0.3$  while 60% had MARI of  $\geq 0.4$ ; indicating that the *Staph. aureus* tested were pre-exposed to the antibiotics used in this study. Further study on the 42.4% isolates that were resistant to Oxacillin showed that 60.5% and 64.8% were still resistant on mannitol salt agar impregnated with 4  $\mu\text{g/ml}$  of Vancomycin and 67.6% and 70% of the same isolates grew on brain heart infusion agar impregnated with 6  $\mu\text{g/ml}$  of Vancomycin after 24 and 48 hours incubation at 37°C respectively. This study showed high incidence of *Staph. aureus* and antibiotics resistance among poultry birds in Zaria, Nigeria and calls for antibiotic surveillance and education of the poultry farm workers to curb the wide spread of resistance gene which could be transferred in zoonotic diseases.

### **Biography**

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