Determınatıon of Antibiotic Resıstance Profıles of *Aeromonas Veronıı* Isolates from Cultured Fısh

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Abstract:

A total of 28 *Aeromonas* (A.) *veronii* isolates were isolated from 47 cultured fish [gilt-head bream (*Sparus aurata*), sea bass (*Dicentrarchus labrax*), and Turkish salmon (*Oncorhynchus mykiss*)] sold in the Samsun region using the classical culture technique (Violet Red Bile Glucose Agar) and identified with the MALDI-TOF MS system (MS-Matrix-assisted laser desorption/ionization (MALDI) and mass analyzer is time-of-flight (TOF) analyzer). The Kirby-Bauer Disk Diffusion method was used to determine the antibiotic resistance profiles, and evaluated according to the Clinical and Laboratory Standards Institute (CLSI, 2021) guidelines and EUCAST (2023). According to findings, 28 *A. veronii* isolates showed resistance to nine different antibiotic classes, with resistance rates ranging from 7.14% to 89.28%; 1) Betalactam group antibiotics: Penicillins: ampicillin (AMP; 10 µg) at 85.71%; amoxicillin/clavulanic acid (AMC; 20/10 µg) at 10.71%; ampicillin/sulbactam (SAM; 20 µg) at 89.28%; Cephalosporins: cefepime (FEP; 30 µg) at 7.14%; cefotaxime (CTX; 30 µg) at 7.14%; ceftriaxone (CRO; 30 µg) at 7.14%, ceftazidime (CAZ; 30 µg) at 7.14% and cefoxitin (CFX; 30 µg) at 14.28%; Carbapenems: imipenem (IMP; 10 µg) and meropenem (MEM; 10 µg) both at 10.71%; Monobactams: aztreonam (ATM; 30 µg) at 10.71%; 2) Aminoglycosides, gentamicin (CN; 10 µg) and tobramycin (TOB; 10 µg) both at 7.14%; 3) Tetracyclines: tetracycline (TE; 30 µg) at 17.85%; 4) Quinolones: nalidixic acid (NAL; 30 µg) at 35.71%; 5) Phosphomycin: fosfomycin (FF; 200 µg) at 7.14%; 6) Sulfonamide derivative antibiotics: trimethoprim/sulfamethoxazole (SXT; 1.25/23.75 µg) at 7.14%, while they were found to be sensitive to 7) Amphenicols: chloramphenicol (CHL; 30 µg)]; 8) Glycylcycline: tigecycline (TGC; 15 µg) and 9) Fluoroquinolones: ciprofloxacin (CIP; 5 µg) and levofloxacin (LEV; 5 µg). Addition, of the 28 isolates, 5 were found to be multidrug-resistant (MDR). The MDR findings, it was determined that 27.2% were of Turkish salmon origin and 22.2% of the isolates were of sea bass origin. No MDR isolates were in sea bream origin. In conclusion, *A. veronii* is one of the widespread pathogenic *Aeromonas* species in cultured fish and also poses a potential