Microbiological and epidemiological analysis of waterborne pathogens in Faisalabad city and categorization using antibiotic resistance patterns

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eight hundred and eighty four water samples were collected from girls’ and boys’ hostels of University of Agriculture and eight towns of Faisalabad district. These water samples were analyzed on the basis of cultural, morphological and biochemical characteristics to isolate and characterized waterborne bacteria. The outcomes of this project revealed that Escheria coli was (27.85%) found more as compared to Staph aureus (17.5%), Salmonella typhi (12.32%), Shigella dysenteriae (10.5%) and Ent. faecalis (6.7%) in city Faisalabad. These bacterial isolates were highly resistant against penicillin, tetracycline, streptomycin and amoxicillin whereas susceptible for ciprofloxacin, ofloxacin and chloramphenicol. Highest prevalence of risk factors associated with gastroenteritis was found in contaminated drinking water (35%) as followed by age < 5 years (20%), age > 45 years (15%), irrational use of antibiotics (13%), immune status (7%), smoking (5%), and psychological factors (5%). These findings revealed bacterial contamination in drinking water supplies, which were pathogenic and produced serious gastrointestinal infection.

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