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Investigation of Various Antibiotics Against *E. Coli*, Klebsiella and *Salmonella* Species Isolated from Cow Milk, Liver and Intestine

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Abstract

Samples were collected from milk, liver and intestine and also from reference cultures which were supplied by the department of microbiology, faculty of veterinary medicine, university of Khartoum, Sudan. Identification was done by using identification kits namely Quick GN "Nissui" and also by using biochemical tests as confirmatory tests. The bacterial species were found to be:Klebsiella pneumonaie, Escherichia coli and *Salmonella* species.

Different groups of antibiotics (quinolones, macrolides, penicillin and cephalosporins) were chosen and used in this study. These antibiotics included ciprofloxacin, erythromycin, amoxycillin, cephalexin and cephradine respectively.

Sensitivity tests were performed for all these organisms against various antibiotics with different concentrations using standard disk diffusion method.

Ciprofloxacin was found to be the most effective drug against all the organisms tested even at a very low concentration (0.781 μg /ml) , all the Gram-negative bacteria were found to be resistant to erythromycin.Quinolon group (Ciprofloxacin, ofloxacin and pefloxacin) was found to be the most effective group against *Salmonella* typhi

All the strains of E-coli were found to be highly sensitive to ciprofloxacin at different concentrations ranging between 0.781μg - 50μg. Three strains of *E. coli* (60 %) were found to be sensitive to amoxycillin at concentration ranging between 6.25 μg—50 μg, but two strains (40 %) remained resistant.

All the strains of Klebsiella were found to be highly sensitive to ciprofloxacin and resistant to erythromycin and amoxycillin at concentration ranging between 0.781μg —50 μg/ml.

We observed that most of the strains of Klebsiellae were inhibited by cephradine or cephalexin at concentration ranging between 6.25 μg/ml—50 μg/ml.

Keywords: *E. coli*, milk, Quinolon, Salmonella, Sudan

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