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CHARACTERISTICS OF *PSEUDOMONAS* SPP. ISOLATES FROM FOOD OF ANIMAL ORIGIN

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INTRODUCTION

Pseudomonas spp. as ubiquitous microorganism is often found in environmental raw materials as a contaminant.*P.aeruginosa* and *P.fluorescens* but also *P.putida*, *P.fragi*and *P.cochorii* may be isolated from milk and meet. From the view point of food hygiene synthesis of termostable lipolytic and proteolytic enzymes in the cold chain of food production, can cause the spoilageof final product. As a causative agent of nosocomial infections, *Pseudomonas* spp. are often resistant to a large number of antimicrobial substances. Due to their ubiquity and ability to acquire resistance represents a potential risk to human health.

MATERIAL AND METHODS

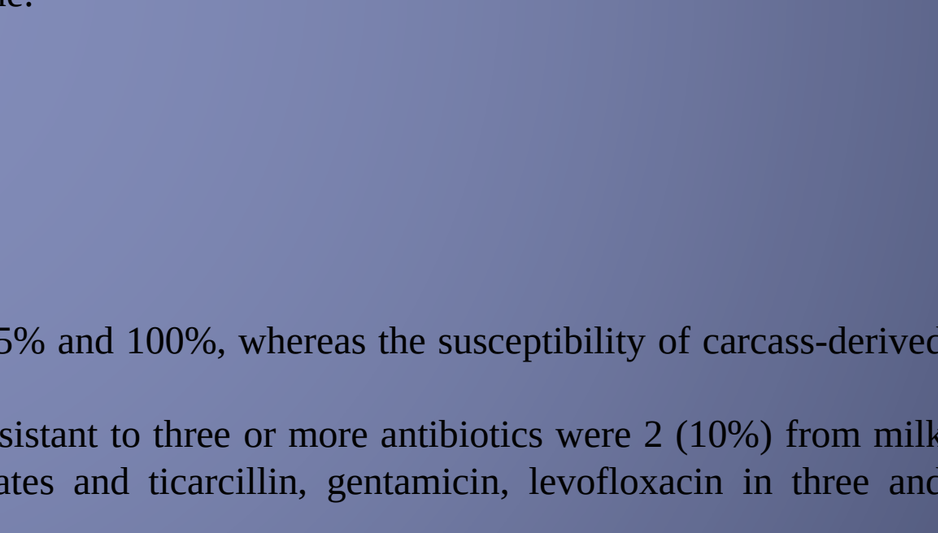
A total of 40 isolates (20 from raw milk; 20 from carcasses of slaughtered pigs) were examined. All of the isolates were oxidase and, catalase positive, produced a pigment on Tryptone Soy Agar and had a characteristic odor. They also showed hemolysis on Blood agar, lipolysis on Tributyrin and proteolysis on Casein agar. Antimicrobial susceptibility testing was performed by disk diffusion test on piperacillin/ tazobactam, ticarcillin, imipenem, meropenem, aztreonam, amikacin, gentamicin, levofloxacin and ceftazidime.

RESULTS

- The sensitivity of milk isolates was 100%; 65%; 100%; 100%; 25%; 75%; 30%; 65% and 100%, whereas the susceptibility of carcass-derived isolates was 95%; 55%; 95%; 95%, 0%; 95%, 10%, 25% and 100%.
- There was no resistance to ceftazidime indicating no ESBL strains. MDR strains resistant to three or more antibiotics were 2 (10%) from milk and 4 (20%) from meat, namely ticarcillin, gentamicin, levofloxacin in milk isolates and ticarcillin, gentamicin, levofloxacin in three and piperacillin / tazobactam, ticarcillin, gentamicin, levofloxacin of one carcase isolate.
- In the present study, four MDR isolates were detected, 2 (10%) being isolated from milk and 4 (20%) from meat. Their resistance patterns were as follows: resistance to ticarcillin, gentamicin, levofloxacin (milk: n=2); resistance to ticarcillin, gentamicin, levofloxacin (carcase: n=3), resistance to piperacillin/tazobactam, ticarcillin, gentamicin, levofloxacin (carcase:n=1).

THE PERCENTAGE OF SUSCEPTIBLE ISOLATES FORM MILK AND CARCASSES TO ANITIOBICS

	Milk	Carcass
PIPERACILLIN/TAZOBACTAM	100	95
TICARCILLIN	65	55
IMIPENEM	100	95
MEROPENEM	100	95
AZTREONAM	25	0
AMIKACIN	75	95
GENTAMICIN	30	10
LEVOFLOXACIN	65	25
CEFTAZIDIME	100	100



CONCLUSION

Psesudomonads might contaminate raw food of animal origin consequently leading to spoilage and considered as a reservoir of *Pseudomonas* spp.resistome.

Key words: *Pseudomonas* spp., *food, milk,meat, antibiotic,susceptibility*