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ANTIBIOTIC SENSITIVITY PATTERN OF MASTITIS PATHOGENS IN SRI LANKA

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Antibiotic sensitivity (ABS) pattern of about 20% of the mastitis pathogens isolated from milk samples during an Island wide survey of incidence and etiolgy of mastitis was studied. *Staphylococcus aureus* and streptococcal species were found to be responsible for over 90% of the mastitis cases. Micrococci (coagulase negative staphylococci) although were considered non pathogenic or mildly pathogenic, were isolated from a number of California mastitis test positive cases and some clinical cases. Therefore the ABS pattern of Micrococci too were studied.

The sensitivity of 140 isolates each of *Staphylococcus aureus* and Micrococci and 80 isolates of streptococcal species to 12 different antibiotics listed in the Table 1. was tested. The testing was done according to the modified test recommended by NCCLS' and interpretation of results were done according to the manufacturers instructions. With each batch of organisms an "Oxford" *Staphylococcus aureus* organism too was tested to ensure that the discs are potent.

The results show that generally a high percentage of the *Staphylococcus aureus* are resistant to commonly used antibiotics such as penicillin, streptomycin and tetracycline. Although a high percentage of streptococcal organisms are resistant to streptomycin a high percentage are sensitive to penicillin and tetracycline. A very high percentage of species and strains of bacteria tested were resistant to sulfadiazine. Micrococci are generally sensitive to almost all antibiotics except sulfadiazine. All species and strains of organisms tested showed a high percentage of sensitivity to chloromycetin and cloxacillin. The overall results suggest that whenever possible it is advisable to resort to ABS tests to determine the type of antibiotic infusion to be used.

The results of all ABS tests are summarised in the Table 1.

Table 1. The Sensitivity of S. aureus, Streptococcal spc. and Micrococci to Antibiotics

Antibiotic		Percentage of organisms sensitive		
		S. aureus	*Streptococcal spc.*	*Micrococci*
1. Penicillin	10IU	(140) 75	(83) 96	(140) 95
2. Streptomycin	5mcg	(130) 46	(83) 12	(126) 73
3. Tetracycline	30mcg	(141) 84	(90) 91	(138) 97
4. Chloramycetin	30mcg	(140) 98	(75) 87	(149) 98
5. Aureamycin	30mcg	(143) 80	(81) 85	(143) 97
6. Ampicillin	10mcg	(140) 76	(80) 87	(140) 92
7. Neamycin	30mcg	(130) 96	(81) 60	(127) 99
8. Bacitracin	10IU	(138) 96	(82) 97	(138) 92
9. Erythromycin	5mcg	(132) 96	(65) 80	(132) 93
10. Sulfadiazine	300mcg	(140) 20	(89) 26	(148) 46
11. Cloxacillin	25mcg	(65) 98	(36) 88	(62) 98
12. Sulfamethoxazole Trimethoprim	25mcg	(141) 96	(89) 65	(144) 97

Note (a) Antibiotic discs 1-10 were DIFCO preperations while 11, were MAST preperations and 12 were OXOID preperations.

(b) Figures within brackets indicate the total number of strains of each organism tested.

Reference

1. Performance standards for Antimicrobic Disc Susceptibility Tests, 2nd ed. NCCLS, October 1979.