Framycetin Sulphate in Small Animal Practice

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Abstract—Investigations into the value of the antibiotic framycetin are in progress. The author quotes his results and discusses the possible place of framycetin in small animal practice.

INTRODUCTION

THE antibiotic framycetin (Decaris, 1953) has been used in veterinary medicine in France for some years. Recently the author briefly reviewed the medical and veterinary literature relating to framycetin and made some observations on its use in animal medicine (Stratton, 1960).

Framycetin is a broad spectrum antibiotic, being active against many Gram-positive and Gram-negative bacteria. The antibacterial activity may be bacteriostatic or bacteriocidal depending upon the conditions.

Framycetin itself is a basic substance and is usually employed in the form of the sulphate.

Framycetin sulphate is a white, odourless, tasteless, heat-stable powder. It is very soluble in water and solutions are stable at room temperature for 2 years.

When administered by mouth framycetin is not absorbed, although it is active against bacteria in the alimentary tract. If administered parenterally framycetin can be toxic; for this reason its use is usually restricted to oral administration and topical application.

Lecomte (1957) has used framycetin for the treatment of a variety of conditions in the dog with successful results. He records the use of an eye ointment for conjunctivitis and keratitis, an ointment for interdigital sepsis, and of solutions for irrigation and local injection of abscesses. He also treated one case of gastro-enteritis.

Tysset and Vacher (1957) reported the successful treatment of one case of chronic otitis externa in the dog.

METHODS

Laboratory investigation

Swabs were taken from a variety of cases in dogs and cats. The significant bacteria were isolated and their sensitivity to framycetin was determined.

TABLE 1. SENSITIVITY OF ORGANISMS ISOLATED FROM THE DOG

Origin	Organism	Number of strains examined	Number of strains sensitive to framycetin
Dermatitis	Streptococci	6	0
	Staphylococci	7	4
Otitis externa	Streptococci	5	1
	Staphylococci	3	2
	Pseudomonas pyocyanea	1	0
Abscess	Streptococci	3	0
	Staphylococci	2	0
	Coliform	1	1
	Proteus vulgaris	1	1
Tonsil	Streptococci	6	1
	Coliform	1	0
Furunculosis	Streptococci	1	0
	Staphylococci	2	1
	Proteus vulgaris	1	1
Post-operative sepsis	Streptococci	2	1
	Staphylococci	1	1
Nasal discharge	Streptococci	1	0
	Staphylococci	1	0
Cystitis	*E. coli*	1	1
Enteritis	*E. coli* (x 96)	1	1
Vagina	Streptococcus	1	0

TABLE 2. SENSITIVITY OF ORGANISMS ISOLATED FROM THE CAT

Origin	Organism	Number of strains examined	Number of strains sensitive to framycetin
Abscess	Streptococci	2	1
	Staphylococci	2	1
Otitis externa	Staphylococci	2	1
Otitis media	*Proteus mirabilis*	1	1
Nasal discharge	Streptococcus	1	0
Sinus	Streptococcus	1	1

Clinical Investigation

Two proprietary products were available; a cream* containing 0·5% framycetin sulphate in a water miscible base, and a lotion† containing 0·5% framycetin sulphate and 0·5% hydrocortisone acetate in an aqueous vehicle. These two preparations were used in suitable cases in the dog and cat.

RESULTS

Laboratory investigation

The results of the examination of 48 strains of organisms isolated from a variety of cases in the dog are shown in Table 1, and of 9 strains of organisms isolated from a variety of cases in the cat in Table 2.

Clinical investigation

Cases of otitis externa and sepsis in the dog and cat have been treated successfully.

DISCUSSION

The numbers of strains of organisms so far examined are too small to draw firm conclusions. The laboratory results suggest that framycetin will have a place in the treatment of superficial staphylococcal infections and of cases associated with infection with *Proteus* species. The activity of framycetin against coliform organisms should also be of value.

It has been impossible to arrange a controlled experiment to evaluate the two proprietary products but the results of their continued clinical use confirm the authors' original impression that the framycetin cream and the framycetin lotion with hydrocortisone are suitable for use in the cat and dog.

In addition to the two products used in this work there are now available in this country eye ointments of framycetin, with and without hydrocortisone, and a framycetin mixture with kaolin for internal administration. These products are designed for use in human medicine. Numerous veterinary preparations of framycetin are available in France.

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* "Framygen" Antibiotic Cream, Genatosan Limited.
† "Framycort" Lotion, Genatosan Limited.