

ON A PROTOZOAN PARASITE FOUND IN THE POLY-  
MORPHONUCLEAR LEUCOCYTES OF A DOG.

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A MALE Pariah-Irish terrier puppy, apparently about three months old, followed me home from the hospital in Krian. This was twelve months ago, so that the dog is now fifteen months old. Of his previous history I know nothing.

During the time he has been with me he has never been well, despite treatment for worms and occasional purgatives. Lately he has had an attack of red mange, and at present he is suffering from a purulent discharge from the sheath of the penis.

About three months ago I examined this dog's blood and noted a pronounced eosinophilia, but nothing else of an abnormal character. During the last five weeks I have made daily examinations at different hours of the day and night and on every occasion have found an encysted organism in a considerable proportion of the polymorphonuclear leucocytes. On rare occasions only have I found a very few of the cyst-like bodies free in the plasm. I have failed to detect them in the discharge from the sheath of the penis.

Two differential leucocyte counts gave the following result:—

Polymorphonuclears	51·5 %	52·5 %
Lymphocytes	31·5 „	12·5 „
Transitionals	10 „	·5 „
Eosinophils	13 „	17·5 „
Large mononuclears	4 „	17 „

The parasites apparently are unaffected by the host's exercise, food or sleep, and they do not tend to become more numerous in the dog's blood.

The dog is evidently in poor health; he is lazy, sleepy, emaciated, and suffers from general lack of tone and also from an irregular type of fever. As to whether these symptoms are the result of the leucocytozoal infection I do not pretend to affirm or deny.

The parasites are oblong bodies with a smooth regular outline; they are colourless, motionless and contain no pigment. When stained with Leishman a nucleus, protoplasm, and a capsule can be readily made out. The nucleus in some instances is horse-shoe shaped, in others irregularly spherical. The measurements of the body are very uniform,  $11\mu$  to  $12\mu$  by  $4.2\mu$  to  $5.2\mu$ .

It seems to me that this parasite is identical with Bentley's canine leucocytozoon, recently described by James, but as I do not possess the literature that would enable me to settle the point I have sent preparations to the London School of Tropical Medicine for this purpose and for detailed description<sup>1</sup>.

#### NOTE.

In a letter to Sir Patrick Manson dated 28. III. 1906, Dr Gerrard communicates the following interesting observation:

On January 14th two hairless pups were born at a friend's house. They were strong and healthy. Six days later they were placed together with Dr Gerrard's infected dog. The latter did not treat the pups in a friendly manner until about 14 days had elapsed. On March 28th one of the pups appeared to be slightly ailing and feverish, an oedematous swelling appearing under its jaw. Microscopic examination revealed the presence of Leucocytozoa in the pup's blood.

There were many ticks on the dog, and one tick was found on the infected pup about March 20th—an observation which suggests the possibility of ticks being the transmitters of the parasites. If, as appears probable, the pup became infected on the premises occupied by the infected dog, then the period preceding the onset of symptoms in the pup occupied about three weeks.

The mother of the pups shows no parasites in her blood. Parasites could be detected in the gut-contents of ticks (*Ixodes* ?) which had fed on the original dog. Further particulars will follow.

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<sup>1</sup> See Mr Wenyon's Report which follows this paper. Ed.