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Haemobartonella tyzzeri in Colombia.

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This paper represents the results of our studies on splenectomized guinea pigs from Colombia, in relation to bartonella infection.

Weinman and Pinkerton¹ described a new species of bartonella from the guinea pig. It was called *Bartonella tyzzeri*. Later Tyzzer and Weinman,² on the basis of striking differences between the human and animal bartonellas, proposed a division of the genus *Bartonella* into *Bartonella sensu strictu* and *Hæmobartonella*, the latter to include all animal bartonellæ known at the time. The guinea pig parasite thus becomes *H. tyzzeri*. The organism was found in Peru in 4 of 23 splenectomized guinea pigs. Infected red cells appeared 5 to 9 days after operation and remained visible for a period varying between a few days and a month. *H. tyzzeri* appears as rods 1.4 to 4 μ long and 0.25 μ wide. The surface of the rods

sometimes shows granular swellings. The poles are frequently enlarged. Short rods, averaging 0.8 by 0.2 to 0.3 μ , may also occur. Round, coccus-like forms may be observed. Sometimes the parasite takes a bipolar stain.

Of 20 locally obtained Colombian guinea pigs which we had occasion to splenectomize, one was naturally infected with a bartonella morphologically identical with *H. tyzzeri*, Weinman and Pinkerton. In this infected animal, the parasites appeared on the 8th day after operation. They continued to appear until the 28th day when the guinea pig died accidentally.

The parasite could be transmitted to 2 out of 3 splenectomized, bartonella-free guinea pigs, after intraperitoneal injection of 0.5 cc of infected blood. In one of these 2 guinea pigs, bartonellas appeared in the peripheral blood 5 days after the injection and were visible during two days; in the other guinea pig the parasites appeared on the 19th day following the injection; 35 days later they were still present in the blood stream.

¹ Weinman, D., and Pinkerton, H., *Ann. Trop. Med. and Parasitol.*, 1938, **32**, 215.

² Tyzzer, E. E., and Weinman, D., *Am. J. Hygiene*, 1939, **30**, Sec. B, 141.

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In vitro Effect of Tyrothricin and Tyrocidine Hydrochloride on Polymorphonuclear Leucocytes.

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This paper reports the effect of tyrothricin and tyrocidine hydrochloride upon exudative rabbit polymorphonuclear leucocytes and upon their phagocytic action *in vitro*. In high concentrations these substances caused cytoplasmic and nuclear disintegration; in lower concentrations altered staining reactions were observed. When there was no apparent microscopic injury to the cells,

phagocytosis of pneumococci occurred as expected. It was also found that the presence of serum afforded some protection for the cells from the effects of these substances.

Dilutions of tyrothricin and tyrocidine hydrochloride were mixed with constant amounts of suspensions of a Type I mucoid strain of pneumococcus and of rabbit leucocytes, which were obtained according to the