

litmus milk it produces acid, giving the medium a beautiful pink colour, and furthermore, it raises the acidity of inulin bouillon 2 to 3 per cent.

The organism is devitalized at 55 degrees for one hour, but cultures kept in an ice chest only require transplantation every four or five weeks, and on one occasion transplants made on blood agar from a bouillon flask standing six weeks in room temperature gave a profuse growth.

Exactly similar animal inoculations were carried out in the first four cases. Three days after the organisms were isolated, a rabbit and a guinea pig were inoculated intra-peritoneally with 2 c.c. of a turbid broth culture of 24 hours incubation. This produced no abnormal symptoms. 4 c.c. of a similar culture were then injected directly into the ear vein of a rabbit. This animal ate well, was active, and showed no evidence of articular or cardiac disturbances. The washings from six blood agar tubes were then injected into the ear vein of a fresh rabbit. In each case this animal showed a marked indisposition for two or three days and remained quiet except when forced to move in the open. The condition then began to improve, and in from eight to ten days it was almost well. Each animal was then killed, and autopsies revealed no cardiac or articular disturbances. Blood smears, however, showed a marked leucocytosis, and in three cases the organism was recovered in cultures made from the heart's blood.

Rabbits inoculated intravenously with 10 cc. from a devitalized broth culture reveal no toxic symptoms.

Three days after the organism was isolated in case 5, a rabbit was inoculated intravenously with the washings from three blood serum tubes, but this animal did not show the slightest indisposition during the following five weeks, at the end of which time it passed from under observation. A white mouse inoculated at the same time with the washings from one blood serum tube died in 24 hours, and smears from its blood showed innumerable Gram-positive encapsulated diplococci. Four other white mice inoculated with equal amounts of transplants from cultures of the first four cases did not die, but when killed, after 36 hours, the organism were recovered from the heart's blood of the animals inoculated with the cultures isolated in cases 1 and 4.

The fact that the old cultures were less pathogenic to the white mice can probably be explained by their being grown for a longer period of time on artificial culture media.

No attempt was made to raise the virulence of the organism in any case.

On reviewing the literature of acute rheumatism and chorea, there would seem to be very little doubt that the condition is bacterial in origin,