

The average blood count is from 9,000 to 11,000; the average differential count showed 69.4 per cent. polymorphonuclears, and 30.6 lymphocytes. As for the Widal reaction, in not a single case was a positive reaction obtained, even though the test was done daily in most of the cases. Blood cultures were persistently negative, and attempts to isolate a specific micro-organism from feces and urine were also unsuccessful.

In a second report one autopsy is recorded. This showed absolutely none of the characteristic lesions of typhoid fever, and gave no specific picture. The lesions found were the congestion and parenchymatous changes of a severe toxemia.

The clinical similarities between Brill's disease and typhus fever are so striking that Brill says: "In the case of an epidemic of typhus fever, in my opinion, it would be simply impossible to say that these cases were not mild typhus fever. From the clinical aspects no lines of demarcation can be fixed." However, this disease was not virulent, was constantly present in New York, was not communicable; and, until typhus fever was shown to have been so changed by its environment as to have acquired these characteristics, Brill was decidedly of the opinion that his disease must be other than typhus.

About one year later Louria reported 18 cases of the disease from Brooklyn, and his conception of the disease is that it is merely attenuated typhus. Friedman, in the same year, in a critical clinical review of endemic and sporadic cases of typhus in Russia, concludes that these cases and Brill's are absolutely identical, and Cheinisse holds the same opinion regarding some cases he saw in France. Brill, however, in a subsequent note again states that he does not think his disease is typhus fever. The writer of this review has seen cases in Chicago, and is of the opinion that they are typhus fever.

Thus the matter rested on purely clinical grounds until Anderson and Goldberger applied experimental methods to the study. Struck by the clinical similarities between Mexican typhus, which they were investigating, and the disease described by Brill, they attempted monkey inoculations with blood of patients suffering from Brill's disease. Brill had already made unsuccessful efforts to transfer the disease to monkeys, but Anderson and Goldberger succeeded in their attempts. In monkeys successfully inoculated, after an incubation period of five to fourteen days, a rapid rise of temperature ensued, falling by rapid lysis or crisis after about nine days. An eruption was never seen. The disease thus produced in monkeys by inoculating the blood of a human could be transferred