

THE ASSOCIATION OF HUMAN AND BOVINE TUBERCULOSIS

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The Association of Human and Bovine Tuberculosis by E. F. Brush

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E. F. BRUSH

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HUMAN AND BOVINE
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TUBERCULOSIS,

By E. F. BRUSH, M. D.,

OF
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PREFACE.

The following pages are devoted to the republication of some old papers presented to the medical profession during the past ten years. The reprint from the medical journals, from 5,000 to 7,000 of each, have been exhausted (as they were given away). Requests for some of the articles are still coming in; hence, the reproduction in book form. There is no claim that these magazine essays are of sufficient importance to be preserved in a bound volume; but as the subject-matter is one that is now attracting, as it deserves, an increased public attention, it may be that some of the arguments and alleged facts here presented may be deemed worthy of controversy, and thus lead to the truth, which has been one of the desires of the author.

Mount Vernon, N. Y., April, 1898.

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BOVINE TUBERCULOSIS.*

After passing through the various controversies regarding gray tubercle, yellow tubercle, giant cells, scrofulosis, etc., at the present time we find the question of tuberculosis narrowed down to bacillary infection, and we are confronted with the inquiry, "Is bacillary tuberculosis conveyed to the human race from animals affected with this disease?"

All civilized races on the face of the globe have surrounded themselves with domestic animals. We have the horse, the pig, the sheep, the goat, the dog, the cow, and others. Of these we find that the horse is entirely exempt from tuberculosis. The sheep, the goat and the dog are not found in nature affected with this disease, and they likewise resist artificial infection well; under certain condition the pig takes on tuberculosis; it is, in fact, from this animal that we get our word scrofulosis. But, as we find them at the present time, they are not tubercular, because in this animal in-and-in breeding, which favors the

*Read before the Medical Society of the State of New York, February 7, 1888. Reprinted from the New York "Medical Journal."

development of tuberculosis in all creatures prone to this affection, is not profitable to the breeder, as swine animals of close consanguinity fail to have young as a rule, and, if they do, the offspring dies soon after birth. Thus breeders are careful to put sows to boars not at all related, and we find the pig of the present day remarkably exempt from scrofulosis. The only reliable statistics to which I have access are some compiled in Bavaria in 1879. According to these, of 66,403 animals slaughtered for food, only two swine were found to be tubercular. When, however, we come to the bovine race, we find among these domesticated animals always a certain percentage of them affected with tuberculosis in its various forms. In fact, this race and the human are pre-eminently tubercular. In all the experiments of the present day, whether inoculation or cultivation, matter from either the human or the bovine race is used; and the question *pro* and *con* relating to the contagiousness of this disease lies between these two races. Of all the domesticated animals known, none is so intimately or closely related to the human race as the cow. We are veritable parasites on this animal. We milk her as long as she will give milk, and we drink it; then we kill her, eat her flesh, blood, and most of the viscera; we skin her, and clothe ourselves

with her skin; we comb our hair with her horns, and fertilize our fields with her dung, while her calf furnishes us with vaccine virus for the prevention of small-pox. Strange it would be, indeed, if, under all these circumstances, we did not acquire from her some malady; she has tuberculosis, and we have tuberculosis; certain it is she does not acquire it from us. Artificial inoculation of tubercular matter from the cow in very many cases tubercularizes other animals, and, by the success of many of these experiments, scientific men have, many of them, been excited into becoming alarmists, and have appeared before the world in print with sweeping and startling assertions, but have failed to attract the attention they deemed their alarms entitled to.

The question of the contagiousness of the disease under consideration is an old one. Morton, writing 200 years ago on consumption, says: "This disease is also propagated by infection, for this distemper, as I have observed it by frequent experience, like a contagious fever, doth infect those that lie with a sick person with a certain taint." Although this statement has been reiterated, and many of us have become convinced from our own experience, few believe that it is contagious among the human race. At a recent meeting in England, when the question

was under discussion, Dr. Henry Bennett exclaimed: "Such a theory is dangerous, because, if it were true, the disease would be worse than the plague, and each tubercular patient would have to be treated as were the lepers of old." This is a queer statement, and evinces in a certain degree human perversity. I do not know what there is about this disease which fails to alarm the human race; it is contagious, insidious, deceitful and destructive. Men afflicted unto death are seldom or never convinced that they are dying. As illustrating this strange human fallacy, we notice that at one time in Germany the name for tuberculosis in cattle was *Franzosenkrankheit*, the then popular name for syphilis, and hence for a long time the flesh of animals thus diseased was not eaten in that country; but when they found that the disease was simply tuberculosis—an affection that kills a far greater number than the other disease—they fell to eating the meat again, just as we do.

Virchow says: "Man is far more susceptible to the diseases of animals than the latter are to similar diseases from man." Now, if Virchow is right, and he generally is, the question arises, Why are not more of the human race tubercular, as we find a certain percentage of all cows that furnish milk and meat to the human race are

tubercular? Fleming reckons that 5 per cent. of all the bovines in England are infected. We have no complete statistics on this matter.

I have been told by inspectors of the Bureau of Animal Industry that a much larger percentage of our cows are affected. Indeed, among the thoroughbred Jerseys in the northern States 20 per cent. are affected, as I have been told by Professor R. A. McLean, the chief of this district from the bureau. Now, with this large percentage of tubercular cows, and assuming that it is a fact that tuberculosis is communicated from the bovine to the human race, and considering our close relationship to the animal, why are not more of the human race killed by this disease?

The total number of cows in the United States for the year 1887 was 14,522,083 — that is, one cow to every four and three-tenths (4.3) persons. There exists, according to Lynt, a true parallel between bovine and human phthisis; the curves of double mortality are the same for different districts in the Duchy of Baden. Now this must mean that a larger proportion of the bovine race dies from phthisis than of the human race, because of the difference in the length of life between the races. We have no statistics of this kind in the United States, but Professor R. A.