

ANTHRAX

INTRODUCTION.

Anthrax is a disease that has been known from time immemorial. It is recorded by Moses in Exodus IX:9. Ovid, Plutarch, Virgil, Pliny and many others have mentioned it in their writings. It exists in all latitudes and countries. Human beings were formerly affected in large numbers. Sixty thousand people near Naples are reported to have died from Anthrax in 1617. Fifteen thousand persons died from Anthrax in San Domingo within six weeks in 1770. The excessive death rate is attributed to the eating of carcasses that had died of this disease.

Anthrax occurs epizootically among sheep, horses, cattle and other herbivora or grain eating animals. No animal is capable of resisting anthrax infection providing suitable conditions obtain. In natural outbreaks the course followed by the disease is that of a septicemia ending fatally within a very short period. In such cases enormous numbers of the characteristic causative organisms are to be found in the blood.

In this age anthrax does not appear epidemically in man although he may be infected through the handling of infected animals or their hides, hair, and wool. Many cases have recently been reported where deaths have resulted from various causes such as the skinning of an infected animal; the infection from wool or "wool sorters' disease," which is usually seen in the form of a rapidly fatal infection of the lungs (pneumonia) from the inhalation of infected material; cases in man have also been reported where the infection was contracted from the use of shaving brushes the bristles of which came from the carcass of a hog dead of the disease. In man the disease is usually termed "malignant pustule," is localized at the outset, and unless the resistance of the individual is very high an extension of these pustules takes place with the result that death comes rapidly in the form of a septicemia.

More work of an investigational character has undoubtedly been conducted with anthrax than with any other disease. This resulted from the fact that its organisms are, compared with the infective agents of other diseases, comparatively large, thus enabling them to be observed much more readily and with low-powered microscopes than is the case with other infections. Through the study of the organism of this disease and the improvement of microscopes, it has been possible to develop the whole field related to the investigation of bacterial or germ diseases.

The anthrax organisms were first observed by Polender, who, in 1849, described their existence in the blood, but it was not until fourteen years later that Davaine announced these bodies to be bacteria and demonstrated that the disease could be transmitted from animal to animal only when these bodies were present. Although these views were not immediately accepted others took up the work and it was not until 1876 that Dr. Robert Koch in his first paper on bacteriology announced that Davaine was correct in his determination after which the matter was fully accepted.

Cause of Anthrax.—At the present time the causative organism of anthrax