

walls of the intestines themselves; for the irritation of the intestines commences before the bringing forth of the young trichinæ. Copulation is immediately effected; and within a few hours, from sixty to eighty live embryos leave the female, and begin their own career of destruction.

This consists, in the first instance, in an attempt to pierce the walls of the intestinal canal. Great inflammation of the entire surface ensues, ending not rarely in death of the villous or mucous membrane, or in the formation of masses of pus on its surface. Sometimes there are bloody stools. But these severe symptoms only ensue when much trichinous meat has been eaten. When less has been consumed, pain and uneasiness in the abdomen are produced, accompanied, however, in all instances, by wasting, fever, and prostration. The embryos actually pierce the intestines, and are found free in the effusion, sometimes serous, sometimes purulent, which is always poured out into the abdominal cavity. Thence they again proceed towards the periphery of the body, pierce the peritoneum, causing great irritation, and sometimes peritonitis, to the extent of gluing the intestines together into a coherent mass. They next proceed to the muscles nearest to the abdomen: arriving at the elementary muscular fibres, they pierce the membranes, enter the fibres, eat and destroy their striated contents, consume a great part of the granular detritus, and move up and down in the fibres until grown to the size necessary for passing into the quiescent state. They then roll up in spiral or other irregular windings, the bags of the muscular fibres collapse, and where the trichinæ lie a calcareous matter is deposited, perhaps by the trichinæ themselves, which hardens into perfect capsules around the parasites. A muscular fibre may harbor one or several parasites; but every fibre invaded by a single parasite loses its character entirely, and becomes a bag of detritus from one end to the other.

If it be remembered that one ounce of meat filled with trichinæ may form the stock from which, in a few days, three millions of worms may be bred; and that these worms will destroy in the course of a few weeks not less than two millions of striated muscular fibres—an idea of the extent of destruction produced by these parasites can be formed. We are not in a position to say to what proportion of the fifty or sixty pounds of muscle required for the performance of the human body these two millions of elementary fibres actually amount. In the muscles nearest to the abdomen, the destruction is sometimes so complete, that not a fibre free from parasites can be found. This amounts to complete paralysis. But death is not always produced by the paralysis; it is mostly the result of paralysis, peritonitis, and irritative fever combined. No case is known in which trichiniasis, after having declared itself, has become arrested. All persons affected have either died, or are in such a state of prostration that their death is very probable.

Most educated people in Germany have, in consequence of the Hettstädt tragedy, adopted the law of Moses, and avoid pork in any form. To some of the large pig-breeders in Westphalia, who keep as many as two thousand pigs, the sinking of the price of pork has been a serious loss. In the dining-rooms of the hotels in the neighborhood of Hettstädt, notices are hung up announcing that pork will not be served in any form in these establishments. To counteract this panic, the farmers' club of the Hettstädt district gave a dinner, at which no other meat

but pork was eaten, but it has had no appreciable effect: the raw ham and sausages of Germany are doomed to extinction. The smoked and fried sausages likewise must necessarily be avoided.

A merchant vessel shipped a pig at Valparaiso, which was killed a few days before its arrival at Hamburg. Most of the sailors ate of the pork in one form or other. Several were affected with trichinæ and died. Of those whose fate could be inquired into, one only seems to have escaped the parasites. Another outbreak in Saxony has carried away twelve persons. A fourth wholesale poisoning by trichinæ is just reported from Offenbach, the Birmingham of Hesse-Darmstadt. Of upwards of twenty persons infected, three had already died when our correspondent's letter left.

Numerous sporadic cases of fever, and epidemics of inscrutable peculiarity, but referred to an anomalous type of fever, are now claimed by medical authors, and with much show of reason, to have been outbreaks of trichiniasis, or flesh-worm disease.

Prof. Eckhardt at Glessen, we are told, has obtained permission to try the disease and supposed remedy upon a murderer under sentence of death. We have not been informed that his reward in case of success is to be a commutation of his capital sentence; but should hope it to be the case. The experiment, even should it not have the romantic character indicated, will probably teach some curious details of the life of these parasites.

A due regard to cleanliness would prevent trichinæ in the pig. In wild boars, of which many are eaten in the country around the Hartz mountains, trichinæ have never been found. Neither have they been met with in sheep, oxen, or horses. Beef is the safest of all descriptions of meat, as no parasite has ever been discovered in it. They have also never been found in the blood, brain, or heart, of those animals in whose striated muscles they love to reside.—*Ann. Jour. Med. Sciences.*

The author of the above article has exaggerated the fatality of trichiniasis, which is only the great when large numbers of the parasites are at work at the same time in the system.

Dr. Althaus, in an ably written article in the Medical Times, gives an excellent summary of all that is at present known on the subject; from it we abstract the following facts:

Trichinæ were first discovered in England, when in 1832 Mr. Hilton noticed in the human subject the minute cysts in which they are found enclosed, and which appear to the naked eye as small white corpuscles. In 1835 Professor Owen observed that these cysts contained worms, to which he gave the name of *trichinæ spiralis*, from their resemblance to a hair in size, and their being coiled up into spiral turns like a watch spring.

They are so minute that three of them stretched to their full length do not exceed a sixteenth of an inch; but when once in the stomach and freed from their cysts, the trichinæ awake, perhaps from the torpor of years, and beginning to move about, they lose their spiral figure and appear somewhat similar to ascarides. They here increase rapidly in growth, the female often acquiring the size of an eighth of an inch. Copulation commences a few days after the animal enters the intestinal canal, and in six weeks, having borne from 300 to 500 of their progeny, they cease to exist, for after this period no trace of either males or females is to be discovered. The embryo on commencing their individual exist-