

doctors is half as much again as among lawyers, and actually twice as great as among clergymen.

DIPHTHERIA IN ANIMALS.

Dr. Turner has presented an interesting report on this subject to the Local Government Board. After mentioning the spread of diphtheria by personal communication, and the increased severity of the disease where the surroundings are unhealthy, he refers to instances where neither of the above conditions apparently come into play. In the year 1882, a pigeon was brought to him for dissection, in which the whole of the windpipe was covered with a well marked, consistent membrane, which hung loosely in the tube like a wind sail just as in cases of croup. Pigeons were inoculated in the fauces with this membrane, and a disease of a similar character resulted. In 1883 an epidemic of diphtheria occurred in the village of Braughing. The first cases were connected with a farm, on which the fowls were dying of a disease seemingly identical to that above referred to as occurring in pigeons. Diphtheria subsequently made its appearance on other farms, where it was also preceded by a similar affection among the fowls. Dr. Turner has since noticed the same association in other instances. In 1886, a similar disease caused great havoc among chickens and pheasants in the neighborhood of Tongham. At Tongham a man bought a chicken from an infected farm at a low price, because it was likely to die of this disease; he took the bird home, and diphtheria broke out in his house shortly afterward; this was the first case in that village. Dr. Turner's attention was at first directed almost exclusively to this disease among fowls, but he had noticed a similar disease in swine and horses. During January, 1886, he was called

on to investigate an epidemic of diphtheria at Brent-Pelham, and found that, in a cottage in which the first cases occurred, a kitten had previously suffered from a throat affection, which was attended by swelling of the neck, foul discharge from the nostrils, and running from the eyes. He also mentions several instances in which cats had apparently become infected from man, and in the *Journal* of January 3rd, 1885, there is an account of some experiments by Dr. Renshaw, who appears to have been successful in inoculating cats with diphtheria from the human subject. Horses also suffer from sore throat, and Dr. Turner mentions a case at Moulton, where the first case of diphtheria at a farmhouse occurred shortly after a horse on the farm had died of strangles. At Yately diphtheria in the human subject was, in two instances coincident with strangles among the horses. Dr. Ogilvie mentions one instance in which diphtheria occurred in a shepherd's family shortly after a throat disease had prevailed among the sheep.

The unmistakable analogy between certain diseases in the lower animals and human diphtheria, both in regard to the organs infected and to the products of the disease, has been referred to by several writers, and some have described the disease in the lower animals under the name of croup or diphtheria. Fiedberger has paid special attention to this disease in pigeons and fowls, and has described appearances in these animals closely resembling those of human diphtheria. That the disease is contagious has been generally admitted, and several observers have been successful in infecting healthy animals. Loeffler, in his investigations on diphtheria, has studied this disease in fowls, from a bacteriological point of view, and has demonstrated that it is caused by a particular species of bacilli. He has