

Great service has been rendered to the henwife by our learned brother M. Meguin, and by his specifics; but in many places, diphtheria still continues its ravages, unperceived, frequently, by the very owners of the poultry whose ranks are being decimated. The best remedy, then, is to define the disease, and to point out its characteristics, its causes, and the different forms under which it shows itself. When once it is well understood, it will become less formidable, and it will be less difficult to apply a prophylactic, or a curative, treatment.

In spite of the assertions of many naturalists, we persist in finding an analogy between diphtheria among human beings and diphtheria among fowls. We find the same causes, the same symptoms, the same effects. And we are inclined to believe that the malady is transferable from the one to the other. Not that we mean to say that diphtheric animals are dangerous as food; but we would not allow a child to remain long in a place where there are many birds suffering under the complaint.

To prove the truth of our opinion, we will cite some passages taken at hazard from a lecture by M. Floris Bouffé, M. D. of Paris, and no one who has seen and attended fowls attacked by the disease can read the extracts without seeing at once that the phenomena observed in both cases are identical.

Definition: "Diphtheria, incomprehensible in its species, as inappreciable as the miasmatic poison of the marshy districts, whence springs the deadly ague, follows the same law as all epidemics, and, carried along by the circumambient air which we breathe, diffuses itself therein, and attacks the individual without difficulty. Then, in proportion to the aptitude of the subject and his condition of receptivity, finding a fit place for the incubation of the disease, it seizes upon it, develops itself, and betrays its presence, externally, by the formation of a false membrane, which is its first sign; while, in other cases, those who live in a very hotbed of infection are unaffected by it. We therefore adhere firmly to the opinion that diphtheria is a miasmatic poison."

Have we not often proved these facts in our yards? Why are certain subjects (1), certain breeds even, attacked, when others go entirely free? Why, in the same enclosure, are Crève-cœurs, La Flèches, Hamburgs, decimated by the epidemic, when the Brahmas mixing with them are for a long time uninjured. Nothing but the extraordinary vitality of the breed can account for this immunity; but we continue our extracts:

"M. Bouchut thinks that diphtheria is originally a local malady, and that it only becomes general a little later, by infecting the system with a putrid absorption, or blood-poisoning; causing the death of the patient by subsequent endocarditis and fibrous fungoid growth disseminated through the lungs and other organs."

Does it not often happen that our fowls, which after a little attention seem to be cured of their throat disease, end by dying from weakness; or, as in the next quotation, become dull and sulky, and without showing any sign of the complaint, die at the end of a few days, when the disease declares itself all at once and, as if spontaneously, over the whole system.

"What shall we say of those cases of undeveloped diphtheria, when the complaint is hardly perceptible, or appears in some unusual part. It seems to cause a sort of general disturbance, and the patient cannot succeed in 'throwing out' the disease. The doctor is consulted, probably, for something quite different, and it is only when convalescence is looked for that diphtheria breaks out."

(1) The Scotch gardener will still tell you that he has planted 20 subjects. The long friendship between Scotland and France, while England was at war with both, has caused the retention in North Britain of numerous technical words never heard in the South: *conf. pinch*, a crowbar, fr. *pince*; *tass*, a glass of spirits, fr. *tasse*, a cup; etc.

Have we not often seen the complaint appear under the form of a swelling of the eyes, and sometimes of the feet? In this case, it is not the local affection that requires attention, but the whole body. The analogy of the disease in both man and fowl is still more clearly shown in the next quotation:

"Washall continue, with most authors, to regard diphtheria as a general disease. We stated that it was not virulent; but it is contagious; and its tendency to attack the mucous membrane, and to exhibit itself in damp, cold seasons, induced us to reckon it among catarrhal complaints. In truth, it is a disease of that nature and the worst of them all."

"The causes which appear to influence the attacks of what is called miasmatic infection," says M. Chas. Robin, "are albumenoid matters in an altered state, whether animal or vegetable in origin. When they penetrate into the system, they induce, by degrees, modifications of the coagulable substances of the blood with which they mix."

Diphtheria, then, is a specific, infectious, catarrhal affection, principally characterised by the secretion of a false membrane. It permeates the entire system, and leaves traces of its attack on almost every member of the internal organization.

"Diphtheria," says M. Laboulbène, "is so truly an affection of the whole system that it works a profound change in the humours, and leaves behind it paralysis, a diseased state of the blood, and a bad habit of body, to which patients frequently succumb."

May we not, without altering a word apply these definitions to the disease in our poultry-yards?

We will now examine the different forms of human diphtheria.

*Mild form.*—Is pretty rare, and shows itself in the sporadic state. The patient, after a change of weather, is seized by a chill, a general uneasiness, with headache, and a sense of profound lassitude accompanied by feverish symptoms. The throat feels sore, but the action of swallowing is little, if at all, painful. The sub-maxillary glands are not invariably swollen, but sometimes with people of lymphatic or strumous habit this occurs. Upon examination of the throat, one of the tonsils will show a small whitish spot, which generally remains for three or four days and then disappears of its own accord.

This sort usually attacks animals after a long and tiring journey.

*Middle form.*—The general symptoms at first are not very severe, and it is only on a local inspection that a general redness of the throat is observed; the uvula is long and pendent; the tonsils slightly inflamed. The false membrane extends, in this case, its boundaries, although it does not usually travel beyond one of the tonsils. Sometimes the uvula and the pillars (whatever they may be—probably the side of the larynx Trans.) are the seat of a slight exudation.

*Typhoid form.*—Rather rare, and is only met with during certain epidemics, following a sort of chronic march. It is insidious in the highest degree, and demands energetic attention. Relations and patients alike are deceived as to the character of this type of sorethroat, which, however, differs very little from the others. Thus, instead of spreading rapidly so as to cover, in a few days, the whole throat, the false membranes show themselves on certain places, and disappearing suddenly, break out quickly again on the parts as yet spared. If the patient be five or six years old, he may resist the attack for a short time; but weary and depressed, he is generally carried off after a lapse of time, which has only given false hopes of his recovery. In fact, he suffers a long-drawn agony for eight, ten, or even twelve days, and dies at last, not from the extension of the false membrane over the larynx, but from diphtheric poisoning.

These descriptions should leave us no longer in doubt as to