

by the firm compression of the mucous membrane, by means of strong muscular contractions. The primary exudation either coagulates at the spot where it is poured out, or flows down and coagulates below, constituting croup; but the subsequent exudation, in consequence of the muscles having to a considerable extent lost their contractility, is retained in the areolar tissue: that is diphtheria. The croupal exudation, therefore, always precedes the diphtheritic. Sometimes in consequence of the inflammation being from the outset very acute, the muscular action is greatly interfered with, or even entirely suspended. We have then neither croup nor diphtheria, but angina, with or without abscess. It follows that in order to the establishment of the croupous process the inflammation must not be of a severe grade. He concludes, finally, that croup and diphtheria are not to be distinguished from each other, but are to be regarded as only different stages or grades of one and the same morbid process, no anatomical differentiation being possible.

Dr. Welsch, a physician practising in Kissingen, publishes several cases of croup and diphtheria occurring simultaneously in the same family; which, he considers, *establish the identity of the croupous and diphtheritic processes*, and refers to others which he met in the same neighborhood shortly after, as equally significant.

From the year 1868 to 1872, the north of Italy was the scene of a wide-spread and devastating epidemic of diphtheria, which reached its acme in 1871. So great were the alarm created and the interest excited by it that a committee of the most learned French and Italian physicians of the region was appointed to consider and investigate the subject in all its relations. This committee was unanimously of the opinion that the distinction between croup and diphtheria was one which could no longer be maintained, either from a pathologico-histological or a therapeutic stand-point.

In conclusion, I cannot summon to the support of my position a more powerful ally than Dr. Morell McKenzie, one of the highest British authorities on the larynx, whose opportunities of observation have not been greater than his powers of analysis. This writer, in his Jacksonian Prize Essay on Diseases of the Larynx, quoted by himself in the *British Medical Journal* of March 5, 1870, vigorously combats the doctrine of the distinct nature of these affections, on the following grounds: That neither is always, and both are sometimes, epidemic and contagious; that the exudation is essentially the same, being modified by its site, but presenting histologically no marked difference,—that of diphtheria having been noticed to become organized as well as that of croup; and that the sequelæ of diphtheria—albuminuria and impaired innervation—have also been observed to follow croup.

The opinions and facts just rehearsed, whether they carry conviction to the mind or not as to the point at issue, must be allowed to establish the fact beyond a peradventure that there is in Europe a large, respectable, and growing class of physicians

who, however they may differ in their views of the mode of production of these two morbid results, and the accompanying pathologico-anatomical and histological changes and conditions, agree in holding that if not essentially they are at least practically clinically, and therapeutically to be held as one and the same disease. And whether they are identical or not, this much must be allowed, that at the commencement of the attack so similar are the modes of invasion that no man can tell whether the case will prove to be one of uncomplicated or of diphtheritic croup. This was the fact in the case with the recital of which this paper opens. Fragments of false membrane were coughed up before any diphtheritic patches were seen upon the tonsils. In this view of the subject, then, remembering the deadly nature of the diphtheritic poison, does not prudence dictate that we should at once administer those remedies which experience shows to be antidotal to it and which can be of no injury should it not be present, at the same time withholding such methods of treatment as would be contra-indicated by its existence? It will not do to wait until "the little one has become a thousand" and every arteriole and capillary is clogged with the sluggish, poisoned tide. We must destroy the germs before they have a chance to multiply.

I feel the less hesitation in urging a new departure in the management of this disease, so fearful alike in its course and in its termination, from the conviction that no plan can be suggested which will give more lamentable results than those which are universally acknowledged to follow that recommended by the systematic text-books.—*Philadelphia Medical Times.*

A GUIDE TO THE EXAMINATION OF URINE

Continued from our last.

BILE IN THE URINE.—The presence of bile in the urine can seldom be overlooked, since it gives a dark greenish brown color to the secretion. Two substances must be tested for, the bile pigments, and the bile acids, each of which must be looked for separately.

The bile pigments. *Gmelin's Test.* Ordinary nitric acid, which nearly always contains some nitrous acid, is poured into a test tube to the depth of half an inch. A portion of the urine to be examined is then gently poured down the side of the tube, held almost horizontally, on to the surface of the acid, so that the two fluids may touch but not mix; this operation is most conveniently performed by means of a pipette. At the line of contact, a zone of red appears in every urine; but if pigment be present, a zone above becomes first green, then violet, blue, and red, representing the various stages of oxidation of the coloring matters; the most characteristic are green and violet. This reaction may also be performed by allowing a drop of nitric acid, and of the urine to be examined, to run together on a porcelain dish, when the play of colors mentioned above will be observed at their line of contact.