after having passed through the system of the vena portæ. As yet no antidote has been discovered against nicotine; strychnia has long been considered as such, but it only adds its own action to that of the former drug, thus rather increasing the effects of the nicotine, or remains powerless if the nerves and muscles are already paralyzed by the poison.—London Med. Record, May 15, 1879.

MEDICINE.

Observations on the Subject of Croup and Diphtheria.

Dr. W. H. Dickinson, Chairman of the Committee which presented to the Royal Medical and Chirurgical Society the recent report on Croup and Diphtheria, terminated the debate which it elicited, as follows:—

I will recapitulate what it is that we suppose ourselves to have made out. First, I must join issue with my respected friend, Dr. Wilks. I never was more surprised in my life than to hear him say that he thought the term "croup" a sufficient and satisfactory definition of a disease. The fact is that croup only names a group of symptoms, it does not define a disease. It includes two most different conditions, which require different or even opposite treatment, and of which one is nearly always fatal, and the other nearly always not so. The most strongly marked distinction which came out in the course of our inquiry is that between membranous and non-membranous affections of the larynx—and both are called croup. Membranous affections of the larynx, be they of what sort they may, are fatal in a proportion of about 90 per cent. We have always known that these affections—whether we call them croup or diphtheria—are very fatal; but I was hardly prepared for the terrible mortality which our tabulations disclosed. Dr. Gee's table from the books of the Hospital for Sick Children, showed that of sixty-three children affected with membranous inflammation involving the larynx, only three recovered. Ten per cent. of recovery is about the average, and even of this small proportion there are few who survive save with the intervention of tracheotomy. It might be suggested that this exaggerates the danger of the disease, in consequence of the inclusion of post-mortem evidence. Membrane was found after death which would not otherwise have been seen, and thus the case was classed as membranous only because it was fatal. If the child had got well, the membrane might never have been found, and the case been placed in another category. But the fact is that we get to much the same result, even though post-mortem evidence be entirely excluded. If a child has laryngeal obstruction, and membrane is seen in its throat, the chances are that it will either die or be tracheotomized, and not improbably both. Putting aside all post-mortem evidence, one of our tables presented a series of thirty-two such cases, in which membrane was seen during life; among them were eight recoveries, but only two without the operation. Thus it is clear, however it is viewed, that membranous inflammation of the larynx—without as yet dealing with its possible separation into diphtheritic and non-diphtheritic—is a disorder of extreme deadliness.

We will now turn to another picture. There is a class of cases, not always so readily distinguished from those of membranous disease, in which dyspncea is often severe and protracted—often so much as to suggest operative relief, but in which no membrane ever comes to light—and which almost invariably end in recovery; not quite invariably, for in a very large recorded experience a case is now and then to be found in which non-membranous croup has ended
fatally. The Hospital for Sick Children provides one such case; Guy's Hospital has given us three; Dr. Johnson has mentioned two in the course of the debate; but these are all the instances which can be got together out of a great field of pathological experience in which croup—using the term in its general sense—has proved fatal without the formation of membrane. Thus non-membranous croup is as remarkable for its favourable issue as membranous croup is for the reverse. It might be suggested that non-membranous croup only differs from the membranous in being a smaller degree of the same sort of change, but there are several reasons which show that the difference is not in degree, but in kind. Many of the non-membranous cases are very severe—as I said, but narrowly escaping tracheotomy; some are long-continued, so that it is not the mildness or shortness of the attack that makes the difference. Then other distinctions show themselves: non-membranous croup attacks boys more than twice as often as girls; it is apt to recur in the same individual, which the membranous disorder is not; it is not attended with glandular swelling—though this distinction is not of great value, as glandular swelling is not necessarily present when the affection is membranous; and lastly, with non-membranous croup the urine is seldom albuminous, with the membranous affection it is albuminous more often than not. In eighteen non-membranous cases in which the urine was examined, it was found to be albuminous but twice; and even this statement exaggerates the frequency of albuminuria in the circumstances, for one of the two in which it was found was a case of somewhat incomplete and uncertain character. To say that albumen was found once in seventeen cases of non-membranous croup would probably be more accurate. But with the membranous affection albumen was found in more than two-thirds of the cases examined—in forty-nine out of sixty-six cases.

Then another and very important difference is to be made out in the causation of each form of disease; non-membranous croup is often definitely traced to a distinct exposure to cold; membranous croup seldom so, if ever. It is often attributed to cold by mothers—they will attribute anything to cold—but the association is never conclusive. On the other hand, we have indubitable evidence that the membranous affection is often produced by infection by foul air or foul water, or some such cause. Allowing, then, that non-membranous croup and membranous croup are distinct diseases, I will come to membranous croup by itself, and thus approach the especial object for which the committee was formed.

The question is, Have we here one affection, always the result of a specific poison, to be called diphtheria, or must we divide the class mainly into two—one diphtheritic and specific; the other, due to common inflammation, to be called membranous croup? I am bound to say that the evidence before us gives us no means of making any such division in the cases which ordinarily come before us. We must fully admit, however, that membranous laryngitis may come on in connection with various other disorders—with scarlatina, measles, smallpox, and others—and that it comes on also as a result of various accidental laryngeal irritations—boiling-water or steam, a cut in the throat, a pea in the larynx, acids, eau de Cologne, and so on; but these cases, whether in connection with the exanthemata or accidental irritants, are few and exceptional. They may conceivably be explained, as Dr. Johnson has explained them, by the chance concurrence of the diphtheritic influence with the fever or accident. But it seems improbable that two separate causes of the same result should thus exactly concur. This is almost the only point in which I personally should not quite go with Dr. Johnson. Dr. Buchanan has calculated how often the various exanthemalous diseases should fall together with diphtheria, supposing their concurrence to be a mere matter of chance. He shows that for one quarter of a year, for which he made the calen-
lation, diphtheria fell with scarlatina about as often as chance would give independently of any pathological association. But the membranous affection fell with measles about twice too often to be thus explained. Dr. Buchanan probably would not attach any conclusive weight to figures thus derived from the bare nomination of the diseases in the Registrar-General's report, but so far as they go they are in favour of the view that certain conditions, apart from the special diphtheritic influence, may develop membrane in the air-passages. I think that the probability is that these febrile and accidental irritants are able themselves to produce the membrane in question. These instances are so few as to be numerically and practically unimportant; however, they are to be considered in forming a theory of membranous inflammation. But the existence of these cases prevents our dogmatizing too absolutely. If we had dogmatized more we should have been more distinct in our conclusions, and should have met more exactly the views of some members of the society. But we thought it better not to dogmatize beyond the dogmatism of nature. But, putting aside such cases as have been mentioned, we look in vain for any ground on which we can further divide the instances which daily occur of membranous inflammation of the air-passages. We cannot find any basis on which we can say that this case is of common inflammation, and that that is diphtheritic. We find no distinction in rough anatomy nor in microscopic. Dr. Barclay says he calls it croup, and regards it as simply inflammatory when the membrane is confined to the trachea. I have no doubt that he means when it is confined to the trachea and larynx [Dr. Barclay assented]. But our tables show instances in which the membrane has been so limited, and yet the disease has been clearly traced to infection, or poison conveyed by air or water. There was an escape of sewer-gas into one of the wards of the Hospital for Sick Children. This caused diarrhoea in some subjects, in one pharyngeal diphtheria, and in another laryngeal diphtheria, in which the membrane was limited, as far as could be ascertained, to below the epiglottis. The child recovered after tracheotomy, so that we had not the warrant of a post-mortem examination; but the evidence otherwise was very complete, and the tables give other examples of the same sort. And not only, as shown in such cases, may membranous inflammation of the larynx be produced by causes which set up pharyngeal diphtheria, but membranous inflammation, thus limited, may set up by infection, in another person, the pharyngeal disease—as in the instance Suckling, in one of our tables referred to by Sir W. Jenner. In the next place we have no warrant, as far as causation is concerned, to call some cases simply inflammatory, while others are diphtheritic. We find among these cases many which begin insidiously without ostensible cause; others in which drains, foul water, and insanitary surroundings are apparently responsible; but none in which cold can be, otherwise than somewhat vaguely, ascribed as the cause. Neither can we say that there is any distinction to be made out by the help of albuminuria or by any other test that we have been able to apply. The conclusion, then, is fairly this, that membranous inflammation of the larynx is in a vast majority of cases diphtheritic. The conclusion I believe to be fully warranted by the evidence before the committee; it does not represent the belief (if I may speak of myself personally) that I began with, but I could not resist the evidence which the collected cases presented. To this conclusion there is a corollary which may not be out of place in a society, before all things, of practical medicine. Seeing the difference of issue between non-membranous croup and laryngeal diphtheria, notwithstanding their frequent similarity in symptoms, it becomes of the highest importance, in every case of laryngeal inflammation, to ascertain as far as may be the presence or absence of membrane. I have already referred to the points of distinction, among which albuminuria holds an important place. If
membrane be present and in the larynx, there is little hope but in tracheotomy, which, therefore, there is no reason to delay. But if membrane be not present, the child will almost surely recover without operative intervention, notwithstanding that the symptoms be severe and even somewhat lasting. The operation in such a case can be but a needless and possibly a fatal complication. I should have wished to have said a word, did time permit, upon what was so ably advanced by Mr. Jonathan Hutchinson. No doubt diphtheria is less distinctly isolated than many other diseases, less so than scarlet-fever or typhoid—we have said as much in our report—but it is communicable, and I do not see why it should not be called specific. It has near relations, however, to other disorders, more particularly to one which Mr. Hutchinson especially referred to—follicular tonsillitis, or the spotted throat. This may arise, as we have evidence to show, from the contagion of diphtheria; besides which, it may accompany diphtheria in the same person, the tonsils being spotted, while perhaps there is continuous membrane elsewhere. Then again we have curious evidence that diphtheria may be only one of several disorders engendered by one and the same cause. Of a group of persons who drank of a specially poisonous well—drainage going into it—two had obstinate diarrhoea, one erysipelas, one purulent ophthalmia, one pharyngeal and one laryngeal diphtheria.—Med. Times and Gazette, May 17, 1879.

Chloral Hydrate in Diphtheria.

Professor von Rokitansky (Innsbruck) has seen excellent results from half-hourly local applications of hydrate of chloral in a 50 per cent. solution in three desperate cases of diphtheria. The pain was slight, and the effect very rapid. As soon as the formation of granulations was observed, weaker solutions of the remedy were gradually exhibited.—Med.-Chir. Rundschau, Heft 11, 1879.

Chorditis Vocalis Inferior Hypertrophica.

Professor Schroetter discusses (Monatschrift für Ohrenheilkunde, Nov. 12, 1878) this morbid process, which has first been described under this name by Gerhardt. It consists in a swelling originating from the free border of the true vocal cord and bulging into the interior of the larynx, obliterating in some cases considerably its lumen. Cases of this sort have been described by Czermak, Gibb, Türk, Scheff, Burow, Krishaber, Catti, but the views of these and other authors on the nature of the affection differ considerably from each other. Czermak considers the process as a "serofulous infiltration of the mucous membrane," Türk as "chronic tumefaction," Scheff as "hypertrophy," Burow as "chronic inflammatory hypertrophy of the lower part of the true vocal cord," von Ziems- sen calls it "a true induration of the mucous and submucous tissues, originating from hyperplasia of the connective tissue." Catti agrees with Gerhardt's views, Voltolini proposes the name of "inflammatio hypertrophica subvocalis," and Ganghofner consider the process as a part of the disease described by Stoerk, and called by him "chronic bleumorhoea of the mucous membranes of nose, larynx, and trachea." Schroetter does not share in any of these views. Although admitting that the morbid process consists in later stages in a tumefaction or induration of the submucous tissue, he considers that it does not deserve any special name, as the same process has been observed on other parts of the larynx, and, as it is not necessarily a primary one, but is sometimes occasioned, as seen by himself, by primary perichondrial disease. He thinks, however, that this question is at present not to be decided definitely, as no post-mortem examination has yet been made in such a case. With regard to treatment, he advises appli-