Correspondence.

"Audi alteram partem."

CROUP AND DIPHTHERIA.

To the Editor of THE LANCET.

SIR,—I agree with the writer of the able article in your last number that the use of the term "croup" has been a source of much confusion. I also think with him that it would be impossible to discard a term which has been so long in popular use, and therefore that the only way to avoid confusion is to revert to the original meaning and use of the word, and to employ it only to designate a group of diseases attended with the symptom of noisy breathing. I believe that the word "croup" comes to us from Scotland, where it was applied to the noise made by crows and frogs. Then it was used to designate a disease attended with a noise in the throat. In 1765 Dr. Home published his pamphlet "On the Nature, Cause, and Cure of Croup." In this treatise it is evident that two diseases of an entirely different nature are confounded under one name—(1) simple inflammatory croup, or catarrhal laryngitis, which was rarely fatal; (2) diphtheritic croup, usually fatal, with false membranes in the air-passages. After the publication of Dr. Home's pamphlet it was generally supposed that the formation of false membranes in the air-passages is an essential feature of croup. After many years Bretonneau described and named the disease which we now recognise as "diphtheria," and which, under the name "malignant angina," had been known for many centuries. Referring to Home's treatise, Bretonneau shows that under the one name croup diseases of an essentially different character were confounded.

It is, I think, to be regretted that Bretonneau and his countrymen, while retaining the word "croup," should, in disregard of its original meaning, have given it an anatomical definition. All the French pathologists agree in restricting the term "croup" to a disease characterised by an exudation of false membrane within the air-passages; and this false membrane is looked upon as the specific product of diphtheria. Croup, with the French pathologists, is "laryngeal diphtheria," and true croup is distinguished from simple inflammation of the larynx, which it resembles in some of its symptoms, by the absence of false membranes in the latter malady. Inflammatory croup is called false croup, simple or catarrhal laryngitis, or stridulous laryngitis; the last name having reference to the fact that in cases of inflammatory croup, the cough and the respiration are usually more stridulous than in cases of diphtheritic croup. I entirely agree with the pathological doctrines of Bretonneau and his colleagues, but I have no doubt that their anatomical definition of the term "croup" has been a stumbling-block to English practitioners, who, having been accustomed to think of croup as essentially an inflammatory disease, have in many instances confounded the history and symptoms of inflammatory croup with the morbid anatomy of diphtheria. I venture to suggest that, to avoid confusion, we should agree to use the word "croup" as a generic term to designate the various acute diseases which are attended with laryngeal stridor, and that each specific form of disease should be distinguished by a prefix. The following are the three chief varieties:—

1. Spasmodic Croup.—Syn.: Laryngismus stridulus, crowing inspiration, &c.

2. Inflammatory Croup.—Syn.: Simple or catarrhal laryngitis.

3. Membranous Croup.—Syn.: Diphtheritic croup, laryngeal diphtheric membranous laryngitis.

I am, Sir, yours faithfully,

Savile-row, January 30th, 1875.

GEORGE JOHNSON.

To the Editor of THE LANCET.

SIR,—One point material to the question of the identity of diphtheria and croup seems to have been overlooked alike by Sir William Jenner, Dr. Johnson, and yourself—viz., the family history or grouping of the two diseases. It may not be difficult nowadays to find among a score of

diphtheric cases one which resembles membranous croup; but what of the other nineteen, and where were they in the olden time? Individual similarity may be found, but the generic history is totally distinct. Read a good account of cynanche trachealis in one of our old authorities, and it differs *toto cælo* from a just description of an outbreak of diphtheria as now current. But for the fact that 5 or 10 per cent. of diphtheric cases are pretty purely laryngeal, we should probably never have had the question of their identity with croup mooted at all.

In the olden time did any one dream of confusing croup with scarlet fever?—whereas when diphtheria burst upon us I know, from having been a registrar, that many a fatal case was erroneously registered scarlatina maligna, and others cynanche maligna. Could this have happened in the case of croup? Practitioners of experience who avoided this mistake were nevertheless embarrassed by the strangeness of the new disease, proving its distinctness from any known forms of epidemic.

If new diphtheria is but old croup writ large, it seems certain that the disease has immensely altered its mode of self-presentation. Once it appeared as wholly suffocative in every case; now it is found to kill once by strangulation and ten times by blood-poisoning. Once the larynx was all in all; now it may be ignored in ninety cases out of a hundred.

Dr. Johnson's warning to guard against auto-infection on the part of the patient is useful, but he hardly, in applying it, looks sufficiently to the nasal cavities; in bad cases they are full of poisonous matter which no gargling or throat-painting will disarm. Tepid solutions of permanganate of potash may be syringed, douched, and sprayed into every recess—even into the windpipe—without irritation, and swallowed with advantage, while the continual impregnation of the air with sulphur fumes ought to protect alike the patient and his friends. This has come to be my own practice with large doses of tincture of perchloride of iron, chloride of potassium, and a liberal dietary by the mouth where possible, and by the rectum where necessary.

It may be said that many of the old cases present to my mind and described by old writers were not membranous at all, but rather endemic catarrhal laryngitis. This does not affect the question now before us as to whether the same excitator which now generates diphtheria formerly generated true membranous croup, nor would it affect my reply that if it did so the progeny, now multiform, was then uniform, and that so far at least change has come to pass.

I am, Sir, yours obediently,

Maidstone, February 1st, 1875.

STEPHEN MONCKTON.

HÆMATOZOA: FRESH DISCOVERIES BY DR. LEWIS.

To the Editor of THE LANCET.

SIR,—Permit me to call the attention of your readers, and especially that of foreigners, to some recent additions to our knowledge of the prevalence and probable source of various hæmatozoa infecting mankind and animals. Any attempt to study the parasites of man without taking into consideration the facts connected with the development of similar creatures infesting our domesticated animals can only lead to very partial results. Even John Hunter was aware of this, as the fine specimens in the Royal College of Surgeons' Museum amply testify; and since his time our discoveries in helminthology should suffice, one would think, to enforce this truth on the mind of every pathologist. That prejudices still abound, however, amongst us, was recently made very clear to me when I privately expressed to a medical friend my willingness to exhibit a number of rare and remarkable parasites from animals before the Pathological Society. It was distinctly suggested that the human entozoa only would be considered acceptable. This statement on the part of my friend was the more surprising to me since the Society not only took up the subject of grouse disease very warmly, but on one occasion most patiently listened to what I had to say on that subject.

It will be within the recollection of most persons that Sir William Jenner exhibited to the Pathological Society some of the hæmatozoa originally discovered by Dr. Lewis in

human blood. These parasites formed the subject of an elaborate brochure, eventually issued from the office of the *Indian Annals of Medical Science* last summer. In the pages of THE LANCET and elsewhere that memoir has had ample justice done to it. Dr. Lewis, however, has since followed up his researches with remarkable success, and the result is a second and yet more valuable contribution, entitled "The Pathological Significance of Nematode Hæmatozoa," forming (though separately printed for private distribution) an appendix to the Tenth Annual Report of the Sanitary Commissioner with the Government of India.

Through the kindness of Dr. Lewis, I have not only received a copy of this memoir, but also some of the new entozoa which he has discovered in the blood of pariah dogs. From careful comparisons instituted, Dr. Lewis makes it appear quite certain that no genetic relation subsists between the microscopic filariæ derived from the human and canine bearers respectively. He gives a series of beautiful illustrations showing that the nematode hæmatozoa of the dog form the progeny of the *Filaria sanguinolenta*, whilst the *Filaria sanguinis hominis* form the progeny of some other species of round worm. So prevalent is the canine hæmatozoon in India that Dr. Lewis found more than a third of all the dogs he had examined at Calcutta to be affected.

But the most interesting part of these researches in a pathological point of view is that which relates to the mode of encystation of these parasites in tumours formed in the walls of the aorta and œsophagus of pariah dogs. These formations are the strict counterpart of similar worm tumours formed by the *Spiroptera megastoma* in the horse (of which I have recently received some very choice examples from Mr. Spooner Hart, of Calcutta), whilst the phenomena of growth, moulting, and sexual maturation correspond with what has been only partially ascertained to occur in the still more closely allied *Sclerostoma armata* of the same host. Dr. Lewis adds very greatly to the clearness of his descriptions by giving (in plate 1) a sketch of the thoracic cavity of the dog, showing no less than seven of these tumours *in situ*, the blood of the particular animal whence the drawing was taken having contained "innumerable hæmatozoa." Other figures display the worm in its various stages of growth during its residence within the arterial walls, and in one case the mature worm is shown projecting into the cavity of the aorta.

In connexion with the hæmatozoon (*Filaria immitis*) which was so fully described by Assistant-Professor Welch in THE LANCET for March, 1873, Dr. Lewis calls attention to the circumstance that this parasite is always found occupying the right side of the heart, and he also refers (quoting my Manual) to the cognate fact that the canine nematode hæmatozoa discovered in dogs by Professor Leisegang were present in the venous blood. Confirmatory of this significant fact, I may mention that only last week I received another specimen of the cruel threadworm (*Filaria immitis*) from Mr. McInnes, of Charleston, South Carolina, U.S., who states that it was obtained from "the right ventricle of a bitch's heart." In like manner nearly all the hæmatozoa of the species described by me as *Filaria hebetata*, obtained by Professor Coughtrey from the heart of a seal, were situated in the right ventricle.

Another interesting discovery made by Dr. Lewis refers to the presence of nematodes of a totally distinct kind in the walls of the stomach of pariah dogs. He describes them as *Echinorhynchi*, but I am sure he will pardon me for correcting him in one particular, and the more readily so since their marked departure from the nematode type of head and general resemblance to *Echinorhynchi* would very naturally lead to the conclusion he has formed. They are in truth characteristic specimens of *Cheiracanthus robustus*. As this worm, though present in various species of the genus *Felis*, has never yet, so far as I am aware, been observed in dogs, Dr. Lewis thus incidentally contributes another highly interesting datum, which has a special and independent value of its own.

It is only fair to mention that Dr. Prospero Sonsino, of Cairo ("Ricerche intorno alla Bilharzia in relazione colla ematuria dell' Egitto," &c.) has also found nematodes in the human blood, and since they were associated (as in my own case) with the presence of the *Bilharzia hæmatobia*, there can be little doubt but that they refer to the same parasite as that discovered by Lewis. In short, the human nematode worms from the blood and urine found by Salisbury, Sonsino,

and myself are without doubt all referable to the so-called *Filaria sanguinis hominis*.

In conclusion I will only add the expression of my belief that the time cannot now be far distant when these helminthological discoveries will receive that attention from the profession as well as from sanitarians which their importance in relation to the welfare of mankind and animals justly entitles them to.—I am, Sir, your obedient servant,

T. SPENCER COBBOLD, M.D., F.R.S.,

Lecturer on Parasitic Diseases, Middlesex Hospital.

Harley-street, Jan. 25th.

TYPHOID FEVER IN THE UPPER CLASSES.

To the Editor of THE LANCET.

SIR,—In your article last week upon this subject you attribute the prevalence of enteric fever among the "titled and more opulent classes" to the fact that their dwellings, like those of the more humble, are generally old, and often ill-constructed. This is, no doubt, the secret of much misery in all classes; but I would, with your permission, point out a circumstance affecting the safety of a prince that need not be considered by the majority of the middle and lower classes.

The air we breathe indoors is generally protected from the poisoning influence of drains by what plumbers call "D traps." These, being kept full by frequent discharges of fresh refuse, prevent the return of gas formed by the decay of matter passed through them less recently. In the *less pretentious house* the contents of the traps are partially changed many times every day of the year, and so long as they are in good order, no nuisance is suffered; but in the *palace* a set of apartments is often unoccupied for months or years; the "D traps" in them stand charged with the same putrefying mass during the whole of that time, and the volatile results of the decomposition are very possibly discharged into the prince's bedroom on the day of his return home.

The same thing may occur in any house that is occupied during a part of the year only. I would, therefore, without saying a word against structural improvement, suggest to the many about to return to empty London houses that it would be a wise precaution, while their houses are still empty and every window may be opened, to have every sink and other outlet for refuse thoroughly flushed with as much clean water as can readily be obtained.

I am, Sir, your obedient servant,

Westminster Chambers, S.W.,

Jan. 25th, 1875.

R. W. PEREGRINE BIRCH.

SANITARY REFORM.

To the Editor of THE LANCET.

SIR,—It is stated, as I believe on good authority, that the Home Secretary will this year introduce measures for reforming and consolidating the Sanitary Laws. May I make a suggestion to him through your columns?

I would recommend him to introduce a clause into his Bill providing that the architect's plans of all buildings intended for habitation be submitted to the sanitary officer as well as the surveyor, in order that he may approve of the system of drainage, and the arrangements made for ventilation and the supply of water. Also that the sanitary officer be required to inspect every new building, and certify to the sufficiency of the sanitary arrangements before it can be used as a habitation.

I would subject to such survey all buildings, both public and private, that are intended for human occupation—places of worship, factories, workshops, and the like.

The ignorance of all sanitary laws displayed in the construction of so many of our dwellings is simply deplorable. The main drainage of London is a very useful excretory system as such; but when, through the ignorance or cupidity of our builders, the secreted noxious gases of a whole neighbourhood can be laid on to our rooms by the elevation of a plug, its benefits become more than doubtful.

The plan I have proposed could, I think, be easily worked, and would not be expensive. It would at all events ensure some guarantee that we should not have typhoid fever laid on by contract in our new houses.—Yours truly,

Westbourne-place, Harrow-road, Feb., 1875. E. HIBBERD, M.D.