two occasions, where the headache and the pain over the pubes were very severe, so severe as to make men complain loudly, we injected hypodermically 1-100th of a grain of atropia, and in a few minutes the pain ceased, showing that probably the antagonism of jaborandi to atropia applies to the effects of these remedies on the head and bladder. To nine persons we gave a dose each night, varying from four to fourteen times successively, and found that the effects of the drug were undiminished by repetition. In all the foregoing experiments, we employed a tincture of jaborandi, a drachm of which corresponds to thirty grains of the drug; we gave two drachms of this tincture, and, on a few occasions, to persons who were dressed, three drachms.

We have carefully watched the effects of jaborandi on the circulation, and always find that it increases the frequency of the pulse, and, except when the pulse is frequent from fever, we have never seen this drug lessen the frequency of the beats. Mr. Langley finds that jaborandi reduces the frequency of the heart's action in animals; hence we must conclude that, in this respect, it affects man differently from animals. Mr. Langley expresses a caution against its use, owing to its depressing effect on the heart; but though, in our numerous experiments, the patient has sometimes become rather depressed, yet we have never witnessed, even after large doses, any very marked amount of weakness.

HISTORY AND MEANING OF THE TERMS DIPHTHERIA AND CROUP.

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AT page 507 of the JOURNAL for April 17th, Dr. William Cumming of Edinburgh begins a note on "Croup and Diphtheria" by thus expressing himself. "The question as to the identity of membranous croup and diphtheria is worthy of the attention it has recently received; but I confess I have some difficulty in understanding how the two diseases can be ranged under the same category." This sentence shows that the same words are at present being employed with different meanings in the discussion to which Dr. Cumming refers. I have read that discussion up to date, and it has appeared to me to derive much of its confusion from the controversialists not attaching the same meaning to the terms croup and diphtheria.

With Dr. Cumming, I hold that membranous croup and diphtheria are not identical; and yet I am not sure, from the drift of his letter, whether he accepts in their integrity the views now almost universally adopted by French physicians, clearly laid before the Pathological Society of London in 1865 by Dr. R. H. Semple, and which I have for many years considered true beyond even the possibility of doubt. My present object, however, is not to enter the lists as a controversialist, but simply to try to clear the field of debate by making a plain statement as to the history and signification of two words.

Diphtheria (with Bretonneau, Trousseau, Semple, George Johnson, and others) I look upon as a malady *sui generis*—as a contagious specific general disease. The leading characteristic of diphtheria is a specific exudation upon mucous surfaces, wounds, and cutaneous abrasions. This specific exudation constitutes the false membranes which we may meet with on the mucous membrane of the pharynx, larynx, trachea, nares, and vagina, as well as around wounds and on cutaneous abrasions. We often see the membrane form on the edges of the tracheotomist's incision in diphtheritic croup. The diagnosis between diphtheritic croup and the various kinds of non-diphtheritic membranous sore-throat (non-diphtheritic membranous croup), can frequently be established by applying a small blister to a convenient part of the body, such as the forearm. If the membranous sore-throat be a local manifestation of the general specific disease, that is, of diphtheria, then, and then only, the blistered surface will become covered with false membrane. Confluent herpes of the throat is often mistaken for diphtheritic sore-throat; and the success in the treatment of diphtheria, of which some British practitioners have lately boasted, can only be explained by their having had to do with throat herpes (*herpès guttural* of Gubler), or common membranous sore-throat (*angine couenneuse commune* of Trousseau). Cases of common membranous sore-throat, recovery from which is spontaneous, are often proclaimed as cases of diphtheritic sore-throat. Their differential diagnosis is, nevertheless, easy; but there are cases of confluent herpes of the throat which it is difficult by mere examination to distinguish from cases of diphtheritic sore-throat.

The sum of the whole matter is this: diphtheria is a specific disease, *sui generis*: an usual local manifestation of it is the formation of false membrane on the mucous surface of the larynx and trachea, constituting diphtheritic croup. The use of the prefix "diphtheritic" is necessary,

so long as the word "croup" is retained, to prevent mistake as to the nature of the affection spoken of; without the explanatory prefix, the word croup is ambiguous, being often employed as a general designation of all membranous obstructions of the throat, and still farther extended by some to spasmodic laryngeal obstructions. The spasmodic croup of English authors is the *faux* croup of the French.

Confusion is apt to arise in the minds of uninitiated students of foreign medical literature when they begin to compare French and German authorities on diphtheria and croup. To avoid bewilderment, it is necessary to bear in mind that the physicians of France and Germany respectively attach absolutely different meanings to the words diphtheria and croup.

The great majority of French writers, considering the question from a purely clinical point of view, regard diphtheria as a disease which is general, specific, and contagious, specially characterised by the formation on the affected parts of false membranes, which, when removed, are reproduced, and which have a great tendency to extend to neighbouring parts, and to become more or less general. French writers designate all pseudo-membranous laryngeal affections by the name of croup; but some of them limit the use of the term croup to diphtheritic laryngeal membranous exudations.

German writers, on the other hand, adopt a purely anatomical division. Completely abandoning the original signification of the Scottish and Swedish word, by which was simply meant croupy or crowing respiration, they apply the term croupal to all affections which are characterised anatomically by the formation of a fibrinous exudation or superficial false membrane upon a subjacent mucous surface in a state of integrity; hence we find them speaking of croupal nephritis and croupal gastritis. They apply the term diphtheritic to deep or interstitial pseudo-membranous exudations, accompanied by infiltration and elimination of the parts subjacent to the false membrane. An example will make clear the essential difference between the German and French nomenclature. The term croupal pneumonia is generally employed in Germany to designate acute pneumonia with fibrinous exudation (*pneumonie aiguë, franche, avec exudation fibrineux*). Some German authors, looking to the pseudo-membranous and ulcerative character of dysentery, give it the name of intestinal diphtheria.

As to the unfortunate word croup, it would be well to expunge it from British scientific medicine, or be careful to employ it unambiguously, which can always be done by the use of a descriptive prefix such as diphtheritic, herpetic, spasmodic, etc.

The word croup was, I believe, first employed in scientific medical literature in 1765 by Dr. Francis Home of Edinburgh, in his *Inquiry into the Nature, Cause, and Cure of Croup*. Till then, it was only the popular term in Scotland and Sweden for stridulous breathing, for crowing or croupy respiration. An attentive perusal of the cases detailed by Dr. Home leads to the impression, that the epidemic described by him was an epidemic of diphtheria, and identical with that studied by Bretonneau at Tours in 1826, and described by him under the name which he created, diphtheria, from *διφθέρα*, a pellicle. It must always be remembered, however, that, although Bretonneau created the name and indicated the true pathology of the disease, his first work—*Recherches sur l'Inflammation spéciale du Tissu Muqueux, en particulier sur la Diphthérie*—published at Paris in 1826, was far from complete. It was, however, a grand unveiling of the truth, and the foundation of one of the most brilliant clinical inquiries which adorn the history of medicine.

The term croup was not vulgarised in France till the publication in 1809 of F. Ruette's translation of Home's *Inquiry*. In the same year, Ruette published at Paris a translation from the English of an account by Starr, in the *Philosophical Transactions* for 1750, of an epidemic *morbus strangulatorius* which he had observed in 1748 at Liskeard, in Cornwall. Ruette blames Home for intentionally omitting to mention the work of Starr. He says that perhaps there was nothing new but the name in Home's admirable description: "On pourra même reprocher à ce médecin (Home), d'ailleurs si recommandable, de n'avoir gardé silence sur Starr qu'afin de nous persuader que la maladie dont il (Home) nous a donné une si belle description était nouvelle, ainsi qu'il le prétend; mais un examen plus approfondi nous convaincra peut-être qu'elle n'a de nouveau que le nom qu'il lui a donné."

In concluding this notice of the history and meaning of the terms diphtheria and croup, I may add that, in the current medical literature of Italy and Spain, I find that croup and diphtheria are employed exactly as in France, with this occasional difference, that, in place of croup, the Italian writers often use the term laryngeal diphtheria.

The guardians of the poor of the city of Exeter have raised the salary of the workhouse surgeon (Mr. J. Woodman) from £80 to £100 per annum.