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ON A CLASSIFICATION OF INTRA-NASAL AND NASO-PHARYNGEAL DISEASES.[1]

"Classification concentrates and indexes our knowledge. In every science, therefore, the classification of the facts of the science is of primary importance. In medicine, perhaps, more than in any other, a classification is needed, because of the vast number of facts, and of their multifarious relations to each other. Without it the study of medicine would be almost a chaos.

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"But the law of division of labour operates in the practice of medicine as in all other arts, so that there is a practice of medicine which is a special department of medicine in general, and which requires, like other specialities, its own appropriate nosology."—*Professor Laycock*, 1864.

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To quote from the preface to the recently published third edition of my book on "Diseases of the Throat and Nose," "opinion is each day becoming "more indisputable that in the condition of the nasal fossæ, which con- "stitute the first avenues of the natural breathway, is to be found the key "to a right understanding and successful treatment of the majority of "faucial, pharyngeal, and laryngeal diseases. The chief feature of this "edition is therefore fitly emphasized by the expansion of that portion of "the volume which treats of intra-nasal and naso-pharyngeal maladies;" and, it may be added, on the insistence of systematic examination of the intra-nasal region in every case of throat disease, whether faucial or laryngeal, that presents itself to the practitioner—a step which may appear of obvious necessity and routine to the younger school of specialists, but one which was neither practised nor enjoined in the earlier days of laryngology, and is but too often neglected even now.

In preparing the Nasal section of my work for publication I was struck by the great want of a scientific classification of nasal diseases in all

[1] Read before the British Laryngological and Rhinological Association, June 13, 1890.

the writings of my predecessors and contemporaries, and, on attempting to supply it, by the many difficulties which surround its achievement.

While, therefore, I may speak critically of the arrangements adopted by others, I do not presume to put forward my own as by any means perfect, nor, indeed, do I hope to effect more than by attracting attention to the subject, to stimulate to the attainment of a more general unanimity of nomenclature. I can hardly suppose that further justification for some such scheme is required, because in the preparation of any subject, whether poem, drama, or picture, a carefully considered plot, scenario or composition is essential, and unless the *leit motif* be carefully indicated and preserved, the work loses at once in harmony and comprehension.

The necessity for some such "plan of campaign" in the treatment of this special class of diseases is a direct outcome of the advance of our knowledge, for as Laycock, whose wise words I have chosen as the motto to this paper, has further well said, a "classification should be suggestive of "new ideas and new relations. To this end, in constructing a nosology, "regard should be had to our methods of research, so that each new fact "may not only have its proper place, but exercise its proper influence on "others. Besides, medicine is so imperfect and so rapidly progressive that "unless a classification provide for this we may continually destroy and "reconstruct our systems, and thus materially add to our labour."

It must, therefore, be clearly understood that the classification now offered is, in point of fact, nothing more than such a preliminary ground plan of the treatment in detail of the separate diseases tabulated—the arrangement, in fact, which I have adopted in my latest edition.

As an appendix, therefore, to this suggested scheme of Nasal diseases, I propose to indicate a few moot points, more or less arising out of it, which require to be settled before we can reach within measurable distance of the desirable goal of uniformity at which I am striving.

In the first proofs of the preface to which I have alluded, I had ventured to prophesy that so great was the importance of diseases of the nose in causative relation to those of the throat, that the title of the work of the near future would give priority to the former. Before these words could be published, the forecast had been verified by the appearance last winter of the first part of Bosworth's second edition of "Diseases of the Throat and Nose," published in 1881, and now entitled "Diseases of the Nose and Throat." This first part constitutes a splendid volume of 670 royal octavo pages, and is devoted entirely to a consideration of diseases of the nose and naso-pharynx, which, it is not too much to say, could hardly be excelled, whether viewed from the philosophical or the practical aspect. His second volume, not yet published, will embrace diseases of the throat proper, the larynx and trachea.

And here, as prefatory to consideration of the classification of diseases of the nasal fossæ and naso-pharynx, it would be well to agree that we ought, both on developmental and morphological grounds, to separate the nose entirely from the naso-pharynx, sharply defining the limits of the former by an imaginary plane through the posterior border of the vomer, and in description of disease we should further divide, as Bosworth proposes, the pharynx into at least two regions—the naso-

pharyngeal and the oro-pharyngeal—a division which, if not exactly scientific, is a decidedly convenient one from the clinical standpoint, since the first portion is occupied mainly with the functions of respiration, the second with that of deglutition. The circumstances in which the naso-pharynx takes part in the act of swallowing, or the oro-pharynx in that of respiration, are almost entirely adventitious. Their connection with phonation and articulation is more purely physiological, and is of almost mutual importance.

If any further argument were required in favour of such a separation of the nasal fossæ proper from the naso-pharynx, one only requires to be reminded that the accessory cavities of the nose, which represent *in toto* a far larger surface area than those of the nasal choanæ themselves, and the majority of the diseases of which can only be diagnosed and treated intra-nasally, have been almost entirely neglected by even eminent authors—Cohen, for example, limiting their consideration to affections of the frontal sinus, and Morell Mackenzie omitting them altogether. Almost all writers, however, with the exception of the Americans, devote considerable space to diseases of the naso-pharynx as supplementary to the nose, with which, as I have said, it has—morphologically speaking—far less concern than with the throat. To this charge I must, indeed, myself plead guilty in my later editions, though in the first I made the naso-pharynx directly follow consideration of the pharynx proper. My only excuse is that, for the sake of convenience, I have somewhat unthinkingly followed the herd.

The boundary line of division of the naso-pharyngeal regions might appropriately be fixed superiorly at the usual commencement of the pharynx, namely, at the basilar process of the occipital bone, and terminating at the lower limit of the insertion of the superior constrictor into the pharyngeal aponeurosis—that is, on a line level with the roof of the palate and the floor of the nose. The oro-pharynx should constitute that portion which we can control by visual inspection of the mouth—that is, from the upper level of the soft palate on full contraction, to that of the root of the tongue and the upper aperture of the laryngeal vestibule.

It would be a fruitless and withal an ungracious task to criticise at length the various arrangements of intra-nasal diseases of each separate author; some—for example, that of Cohen as far as it went, when he wrote in 1879, of Morell Mackenzie, and of Schech—show a gradual evolution in the right direction, though with each one could easily find defects which would probably be first acknowledged by the authors themselves. The necessity for the task which I have imposed on myself cannot, however, better be exemplified than by quotation of the arrangement adopted in 1875 by Spencer Watson, one of the earliest to attempt a systematic treatise, and a most successful attempt it was, and by Greville Macdonald, who is the latest, and whose work dated in March last has actually appeared only within the last week or two.

Watson's first section on disease, although nominally confined to "non-ulcerative affections of the mucous membrane of the nasal fossæ," included subjects so nearly allied to the ulcerative state as strumous and syphilitic coryza, so inappropriate, both on grounds of site and pathological

character as naso-palatine gland disease, and adenoid vegetations of the naso-pharyngeal cavity, and so various as epistaxis, cysts, rhinoliths, and gelatinous polypi. As a consequence we find several of these subjects treated of a second time under other sections in the same volume.

Macdonald does indeed adopt a classification of catarrhal rhinitis, to which I shall presently return, but as regards nasal diseases generally he so marshals his forces, that he is obliged to bring up the rear with a final chapter—which to use the exact sequence of his own derangement—includes diseases so widely separated from each other and so inconsequent as "epistaxis, post-nasal catarrh, anosmia, and parosmia, foreign "bodies in the nose, rhinoliths and nasal calculi, insects in the nose, "collapse of the alæ, and congenital malformations of the nasal fossæ."

CLASSIFICATION.

The **black type** is used simply to represent those diseases which are of more common occurrence and of greatest importance.

(a) **NASAL CAVITIES.**

- I. Morbid conditions of the **mucous membrane.**
  - **Acute Rhinitis.**
    - *a.* **Simple**, or non-specific.
    - *b.* Specific—usually purulent—(in fevers, diphtheria, syphilis, gonorrhœa, glanders, etc.)
    - *c.* **Neurotic** — "hay-fever," or ***periodic hyperæsthetic rhinitis***, and pseudo hay-fever.
  - **Chronic Rhinitis.**
    - *a.* Simple.
    - *b.* **Hypertrophic**
      - **Simple.**
      - Specific (? Rhinoscleroma).
    - *c.* **Atrophic**
      - **Simple.**
      - Specific (**struma**, syphilis, tubercle, lupus lepra).
    - *d.* Rhinitis Caseosa.
- II. Morbid conditions of the osteo-cartilaginous framework and **Septum.**
  - Hæmatoma.
  - Abscess.
  - Perforations.
    - Non-specific.
    - Specific
      - Fevers.
      - Syphilis.
      - Lupus.
      - Lepra.
  - Narrowing.
  - **Deviations** and **Deformities.**
    - *a.* Developmental, etc.
    - *b.* Traumatic.
  - **Hypertrophies** or **Spurs.**
    - *a.* Cartilaginous.
    - *b.* Osteo-cartilaginous.
  - Necrosis and Caries.
  - Synostosis.
- III. **New growths** (whether of mucous membrane, bone, or cartilage).
  - Non-malignant (**Polypi**)
    - **Mucous**, myxoma.
    - Myxo-fibroma.
    - Fibroma.
    - Cystoma.
    - Papilloma.
    - Enchondroma.
    - Osteoma.
    - Exostosis.
  - **Malignant**
    - Sarcoma.
    - Carcinoma.
- IV. **Epistaxis.**
- V. **Neuroses**
  - Of Olfactory Nerve
    - Anosmia.
    - Parosmia, etc.
  - Of Fifth Nerve
    - Anæsthesia.
    - Hyperæsthesia.
  - Of Facial Nerve
    - Paresis of Alæ.
- VI. **Foreign Bodies.**
  - Physical :—Rhinoliths, etc.
  - Biological :—Larvæ, etc.

(b) **ACCESSORY CAVITIES**, including

- **Antrum.**
- Frontal Sinuses,
- Ethmoidal Sinuses.
- Sphenoidal Sinuses.

  Catarrh. **Empyema.** New Growths, etc.

(c) **NASO-PHARYNGEAL CAVITY.**

- **Post Nasal Catarrh.**—Bursitis.
- **Hypertrophy of Pharyngeal Tonsil.—Adenoids.**
- **New Growths.**—Fibromata, etc.

Bosworth's arrangements of the various diseases is by far the most consequent of any writer, much more so, indeed, than is promised by his opening chapters, for, commencing with a description of the methods of examining the upper air-passages, his second chapter is occupied by consideration of methods of treating diseases in that region by means of instruments ; and then follow five others, viz. : Chapter III., on the anatomy and physiology of mucous membrane generally ; Chapter IV., on taking cold ; Chapter V., on the anatomy of the nose ; Chapter VI., on its physiology ; and VII., on general considerations concerning catarrhal diseases. It seems almost superfluous to point out that, as a matter of sequence, Chapter IV. should have been incorporated with Chapter VII., and methods of examination and instrumental treatment should have followed anatomical and general considerations of etiology.

It is quite impossible, in our present knowledge, or at least within reasonable bounds, to propound any scheme of nasal diseases on either purely anatomical or purely pathological grounds, and I have therefore endeavoured to combine the two with a view of making one that is practical and clinical.

Referring now to the accompanying table, I first adopt, as three main divisions, the nasal cavities proper, the accessory cavities, and the naso-pharyngeal cavity. To this I apprehend that there will be no opposition. Nor do I expect other than general agreement with the subdivisions of morbid conditions of the mucous membrane, of the frame-work, of new growths, of epistaxis, of neuroses, and of foreign bodies, but I confess to some misgivings as to complete acceptance of the order I have adopted. As an actual scientific arrangement, morbid conditions of the frame-work might be held to precede those of the mucous membrane, but against this it may be pleaded that, while Bosworth claims that deviations and spurs of the septum are always in causative relationship to hypertrophic inflammations of the mucous membrane, others—Schech for example—are of opinion that septal overgrowth may be seen to actually arise and develop during the course of a chronic inflammation of the mucous membrane of the nasal fossæ.

Again, I had some doubt as to including rhinoscleroma under the heading of hypertrophic rhinitis, and I might, on the authority of Hebra and Kaposi, have treated it as a neoplasm ; Billroth and others, however, have considered it as an inflammatory process. Furthermore, though I have no doubt as to its being hypertrophic in its origin, the shrivelling and shrinking process that characterises the later stages appeared to suggest that the atrophic changes of this specific overgrowth might justify my belief in a similar metamorphosis of the non-specific and more ordinary hypertrophic rhinitis.

I had some hesitation also in deciding where to place epistaxis, and in giving it a separate heading I was guided by the dictum of Sir Thomas Watson that nose bleeding "is sometimes a remedy, sometimes a warning, sometimes really a disease in itself."

To cite one more item in my table, it appeared better for clinical purposes to separate the neuroses of special sense from those of a reflex and symptomatic character, and to consider the connection of the latter

with rhinitis in that portion of the text which is devoted to inflammations of the mucous membrane. It has been objected that hay-fever is not an acute rhinitis, but purely a neurosis. Such an objection I cannot allow, for of the acuteness of the rhinitis there can be no doubt, while the underlying neurosis is but of the nature of a general constitutional dyscrasia. Anosmia, again, may present itself simply as a symptom of a mechanical obstruction to the olfactory region, but when occurring as an essential disease loss of smell is clearly a neurosis, and must be classed as such with parosmia, which is likewise a neurotic perversion of the same special sense. Neuroses, other than reflex, which depend on lesions of the fifth or of the facial nerves, are rare, but they require to be noted in a classification. The term ozæna does not appear in my classification, simply because it is but a symptom of various diseased states.

These, however, and other points can be well settled by a preliminary consideration of the special anatomy, physiology, etiology, pathology and symptomatology, a prefatory task, which is absolutely necessary in relation to diseases of the nose. It is in pursuance of such an object that good work still remains to be done, and one which, with an experience of twenty-five years, I may be permitted to commend to the attention of the younger Fellows of this Association. It is only by acknowledgment of the complex character of the physiology of the nose that we can obtain a grasp of the many-sided aspects in which departures from health may present themselves. But let me express the hope that we shall all strive to dispel some of the theories no longer tenable rather than create—as is the fashion—new fads in their place. I would especially caution against over classification, a fault sometimes induced by an excess of conscientiousness which prompts one to honestly consider an exception as the beginning of a new rule, in others by that eager seeking after pseudo fame by discovery of a new law, which may, however, instead of ensuring for its parent posthumous celebrity, only result in holding him up to contemporary ridicule. The best way to overcome such a tendency is to thoroughly study the literature of a subject not in one language but in all, and not only what is recent but what has been written before the present technical methods were in vogue.

Amongst the questions that present themselves for our consideration when endeavouring to classify intra-nasal maladies are the following :—

1. Is Hypertrophic Rhinitis, as asserted by Bosworth, always associated with septal spurs and deflections, and what is their etiological relation? On this head statistics have been taken for me during many months, and I have already obtained enough information to warrant me in saying that while the association is much more frequent than has been generally supposed hitherto, it is by no means constant, and does not exist in more than three-fourths of the cases which present themselves. In a still smaller proportion are these spurs, in my judgment and that of my colleagues, with whom it is at once my privilege and delight to work, of what one may call surgical importance, or at least of more importance than to call for a slight cauterisation, or resolvent inunction to effect their reduction to a harmless and negative position.

2. As an instance of over classification, exception might be taken to Macdonald's recent classification of catarrhal rhinitis into—

"(i.) That associated with vascular tumefaction of the erectile tissue, "sometimes erroneously styled hypertrophic;

"(ii.) That with vascular collapse of the erectile tissue, not infre- "quently mistaken for atrophic rhinitis; and

"(iii.) That with true hypertrophy and œdema of the erectile tissue."

En passant one might ask is Macdonald justified in agreeing with John Nolan Mackenzie, and the still earlier writings of Morgagni, Kohlrausch, and Bigelow, that the inferior turbinated body contains true erectile tissue, a circumstance denied by Bosworth? I believe he is, and that the author last named is about the only dissentient from such a view. But to return to the question just mooted, I cannot altogether accept Macdonald's subdivisions of chronic catarrhal rhinitis, for we have his own admission on page 58 of his book that rhinitis associated with vascular tumefaction of the erectile tissue is but a preliminary towards true hypertrophy[1], and, therefore, I would contend but an earlier stage of one and the same affection. On the other hand, I ask you to consider whether rhinitis associated with vascular collapse is anything more than an early stage of an atrophic rhinitis.

3. A question allied to the foregoing is whether atrophic rhinitis is ever a sequel—I grant it is much less frequently so than was formerly admitted—of hypertrophic rhinitis, or whether, as asserted by Bosworth, it is an entirely separate disease? For my own part I make no doubt that I have often seen concurrent atrophy and hypertrophy in the two nostrils. Quite recently, since my attention was re-awakened to the subject by the remarks of Bosworth, I have had a case at my hospital *clinique*, which I have demonstrated to my colleagues and pupils, in which atrophy with glazed membrane and incrustations was going on in the right nostril as the result of a traumatic septal displacement, while in the left there was very considerable compensatory hypertrophy. Is the absence of vibrissæ, as has been suggested, any stronger proof that the disease has not originated as a catarrhal inflammation, than that the absence of ciliæ in the bronchi of the subject of chronic bronchitis should be claimed to negative an original state of acute inflammation? Are there not indeed varieties of atrophic rhinitis? On this point let me remind you that atrophic rhinitis has not inaptly been likened to cirrhosis of the liver, and it appears to me that the analogy may be strengthened by application of the pathology of the hepatic prototype to atrophic rhinitis. Thus we *may* have vascular engorgement leading to atrophy; or engorgement leading to actual hypertrophy and ending in atrophy; or we may, without previous engorgement, have hypertrophy leading to atrophy; and, finally, we may have a primary sclerosis. None of these, however, require separate classification, being, as in the case of the liver, simply varieties of a well defined disease. In this connection, also, we may obtain further statistical information of the constitutional dyscrasiæ, predisposing to atrophic rhinitis, anæmia, struma, syphilis, etc. What is its relation to alcoholism for example? In what

[1] The effect of cocaine in reducing the tumefactions has been advanced as a diagnostic test; but its value is doubtful, for I have yet to see the case, however advanced, of hypertrophic rhinitis in which very evident temporary diminution of the swelling does not result from cocainization.

degree is it influenced by disorder of the portal circulation, and what is the importance as an etiological factor of sexual irritation, delayed menstruation, amenorrhœa, menorrhagia, and other uterine floodings? Is there any constancy or unity of bacterial association? Is it ever the direct sequence of an exanthem, or of insanitary surroundings? Further statistics and facts are also required on the peculiar physiognomy of the subjects of atrophic rhinitis. Is there always an upturned and abnormally patent nostril? Lastly, is it ever curable?

Answers to all these points and to many others in rhinal pathology are required before we can hope to have any uniformity of classification, and this circumstance is at once an excuse for the imperfections of the one I now offer tentatively for your criticism, as well as a justification for my proposing it at all as a subject for your deliberation.

A CASE OF FIBRO-MUCOUS POLYPUS OF THE NASO-PHARYNX.

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WILLIAM BURTON, about twelve, residing in Birmingham, of anæmic temperament and delicate constitution, came to me at the Birmingham Ear and Throat Hospital, about two years ago, suffering from mucous polypi in both nostrils, and a small growth lying at the back and immediately behind the uvula, hanging down from the roof of the soft palate, from its posterior and upper surface, which appeared of a much denser structure, tough, smooth, and of pyramidal shape. His mother informed me that his throat had been affected three years, following an attack of scarlet fever; after recovery from the fever, his mouth was superficially ulcerated; he talked thickly, complained of his throat, some dysphagia and was generally out of health; she took him to the Children's Hospital, and the doctor (a lady) told her that there was a growth in the throat, which was corroborated by others.

The mucous polypi were removed from the nostrils, and after a time I operated upon the fibrous growth by the electric-cautery, but the wire loop giving way, recourse was had to the curved blunt-pointed scissors, and there was very little hæmorrhage, the boy being convalescent in a few days, and no trace of the tumour could be seen. About a year ago, the mother perceived again the substance in the nostrils, and brought him to me. On examination I found mucous polypi in both nares, and a re-appearance of the fibrous growth behind the uvula in the post-nasal space; the fibroma increased in size, and after endeavouring to rid the nares of the mucous polypi from time to time, under the impression that the growths were not connected, but (at length) detecting a small mucous appendage growing from the apex of the fibrous cone, I came to the conclusion that the nasal polypi were united to the fibrous growth. The