right every opportunity of arriving at a satisfactory conclusion should be given.

The very important subject of vaccine therapy has received very great attention during the past twelve months, and discussions have taken place in more than one centre upon its value in special affections of the upper respiratory tract. As might be expected, surgeons have expressed different views upon the benefits to be derived from this method of treatment. There is a growing conviction, however, that in certain catarrhal, suppurative, and pneumococcal conditions the results have not so far been as promising as could have been desired in acute cases. On the other hand, more favourable reports seem to be recorded of the benefits derived in the more or less chronic conditions.

Some observers, as a consequence of disappointment in the results obtained, are inclined to minimise the importance of the subject, and to rely more than ever upon ordinary treatment and operative procedures which will give free drainage to the parts affected. Of course, the latter remark applies more particularly to the cavities. On the other hand, some observers seem to be making the mistake of paying too little attention to the ordinary surgical procedures and have been relying too much upon the vaccine therapy itself. Judged from this standpoint, the surgeon ought not to rely upon the introduction of vaccine in the case of a patient suffering from pus in an accessory cavity of the nose or in the middle ear.

In the present state of our knowledge we cannot claim for this method of treatment a definite result in old-standing and recurrent affections of the upper respiratory tract. That seems to be the experience of those who have tried it in such conditions as bronchitis, although the patient may get a considerable amount of relief when recurrence takes place. There can be no doubt, however, that the whole question is engaging the attention of a large number of laryngologists, and many surgeons look most hopefully to the future of this method of treatment.

RETROSPECT OF RHINOLOGY.[1]

It cannot be said that during the past year any very startling advances have been made in Rhinology, unless, indeed, we except the extra-nasal expansion in the direction of the pituitary body.

[1] The numbers in brackets refer to pages in the volume for 1910.

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In fact, rhinologists in general may be considered to have been marking time, and have been striving, as we venture to think, towards a thoroughly rational and sane position in the happy mean between nihilism and excessive operative activity. There has been a decided tendency in the direction of the perfection of intra-nasal detail. Up to the present the accessory sinuses of the nose have been a never-failing hunting ground for the bold tyro, and the last word with regard to them has not yet been said, but a great deal has been said, and it remains in the future to judge as to the value of the work already done rather than add to it much that is new.

References to Nature rather than books or to the inner consciousness of the writer always call for our respect, and the investigations as to the relation between the sphenoidal sinuses and the sphenoido-ethmoidal cells by Syme (pp. 31, 78) go a long way in rectifying our views as to the anatomy of these parts. Side by side with this we may place Onodi's work on the oculo-orbital, intra-cranial, cerebral complications of diseases of the nasal accessory sinuses, which are studied and interpreted in the light of the examination of his enormous anatomical material (p. 332). We are indebted to him also for his tests as to the value of transillumination of the frontal sinuses as checked by radioscopy and the anatomical examination (p. 166), and it may be at once confessed—as long ago insisted upon by Logan Turner—that transillumination of the frontal sinus, pure and simple, is absolutely unreliable. The relations of the optic nerves and tracts to these sinuses have been frequently discussed by Onodi. He wisely points out that the existence of disturbance of vision and sinus disease may be simply co-incidental and arise from causes quite independent of each other, and, further, that the nasal disease which induces severe disturbance of vision may be extremely slight, while extensive nasal disease may cause no ocular disturbance whatever, much depending, of course, on the degree of thickness and porosity of the intervening parietes.

An interesting and often overlooked cause of rhinolalia aperta has been thoroughly worked up by Dr. Brown Kelly. We refer to insufficiency of the palate, and many will see cases of it now that their attention has been drawn to them by that author (pp. 281, 343). The influence of the nose on other organs has suffered from exaggeration by those who first studied it, but it is too important to be lost sight of; and Dr. Dan McKenzie adds another to the list of cases of asthma combated successfully

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by nasal treatment (p. 202). The discussion in the Section of Laryngology of the British Medical Association brought out many important points. Dr. Francis found a lowering of the blood-pressure to result from cauterisation of the septal nerve, and he attributed to this factor some of the success which he claims for that method of treatment in asthma. Mr. Ernest Waggett, in opening a discussion on vaso-motor rhinitis (or rhinorrhœa), suggested, among other interesting points, that the condition of the blood was an important element, and thought his experience had confirmed his belief that salts of lime and magnesia were beneficial (p. 529). Dr. Pegler discussed the nerve-anatomy of headache of nasal origin (p. 544).

"Ozæna," though vastly less frequent than it used to be, is still with us. Baumgarten asserts that true ozæna—and probably many cases formerly labelled as such were not "true ozæna"—never makes its appearance after the tenth year. The age at which it first evolves is, therefore, in any given case an element of importance in regard to prognosis and to treatment. Möller (p. 547) found atmocausis beneficial in a hundred cases of ozæna, but it was always preceded by thorough cleansing with peroxide of hydrogen. In all of them the Wassermann reaction was negative. Caboche (p. 433) describes two cases of pronounced atrophic rhinitis with lupus in the nose in one and tuberculosis of the larynx and lungs in the other. This association is not very rare, and should be specially remembered in cases simulating "ozæna," but without fœtor. Foy recommends "re-education" in breathing with compressed air and oxygen (p. 432). Truly there is no lack of "something to do" in ozæna and atrophic rhinitis.

The bacteriology of suppuration in the accessory sinuses of the nose has been further studied by Logan Turner and Lewis in continuation of the previous investigations of Darling, but a very positive conclusion is arrived at, namely, that the *Streptococcus pyogenes* is particularly resistant to treatment by lavage, and that its presence is a strong indication for more radical proceedings (p. 434).

StClair Thomson reports a case of unilateral pan-sinusitis of four cavities being operated on at one sitting (p. 200). Guisez makes a statement that ethmoidal exenteration is the key to the effectual treatment of pan-sinusitis, this being carried out by means of opening the internal wall of the orbit and resecting the ascending process of the superior maxilla (p. 315). A case of fatal acute pneumococcic meningitis secondary to empyema of the

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frontal sinus, with important conclusions as to its extremely dangerous nature, is recorded by Campbell and Rowland (p. 437).

The relations of the sphenoidal sinuses to the various nerves have been stated by Ziem, who gives a very valuable bibliography (p. 242). Hajek's case of mucocele of the sphenoidal sinus causing optic neuritis, operation being followed by cure, will be read with great interest (p. 433). Numerous results from operation on the frontal sinus have been reported by, among others, Nourse (p. 197), Tilley (p. 191), and StClair Thomson (p. 308), but greater interest attaches to the possible risks as illustrated in two cases recorded by Hajek, in which the operation was followed by death from meningitis, neither of them presenting any special technical difficulties nor unusual gravity. He considers that if improvement, even without complete healing, is produced by endo-nasal treatment, as in the great majority of chronic cases, the radical operation is at the present time not indicated (p. 331). Inexperienced operators would do well to take note of these possibilities, but it is important that they should remember at the same time that intra-nasal manipulations in unaccustomed hands are also not devoid of danger. In children it is desirable to carry out treatment of suppuration in the antrum through the nose, as the alveolar operation is necessarily complicated and often excluded on account of the presence of the unerupted teeth. This has been dwelt upon by several British observers, but Wendling reports a case in which in a child of eight the empyema was caused by disease of the upper canine tooth, after the extraction of which the sinus could be washed out (p. 273).

With regard to operations on the nose and accessory sinuses, Denker's operation under local anæsthesia with novocain has greatly commended itself when radical treatment of the antrum is indicated (p. 420). The operation of submucous turbinectomy, which has been very strongly advocated here by Stuart-Low, receives great commendation from Zarniko (p. 425). There are cases in which the hypertrophy of the mucous membrane is inconsiderable, and the obstruction is chiefly due to excess of bone, and in these this operation is an ideal one. In nasal operations in general Polyak urges completion at one sitting (p. 418). There are numerous exceptions to this rule, the applicability of which depends on the features of the individual case.

Among the minor intra-nasal proceedings, which when purposively carried out have often the effect of turning the scales in the direction of recovery, we may note the resection of hyper-

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trophies of the anterior lip of the hiatus semilunaris (the unciform process). Dundas Grant showed a case in which a most obstinate rhinitis subsided immediately after the removal of such a hypertrophy (p. 255).

The advance of trans-nasal surgery is illustrated by Kanavel's paper on the removal of tumours of the pituitary body (p. 222). Tumours of the sinuses are illustrated by Voss's case of sarcoma of the sphenoidal sinus (p. 436) and Manasse's one of exostosis and mucocele of the frontal sinus (p. 424).

Malignant disease of the nose and naso-pharynx is so insidious and misleading in its onset that every case deserves consideration. Some instructive and illustrative cases have been shown or narrated in our past volume. Among these may be noted those of Salzburg (p. 547), Price-Brown (p. 264), Luc (p. 314), Madden (p. 436), Law (p. 141), Dupond (p. 222), and Grant (p. 90).

Among the more important works published during the year we must note Dr. Watson Williams' "Text-book of Rhinology" (p. 445).

RETROSPECT OF OTOLOGY.

Of the many papers, articles, and discussions which appeared in the Journal of Laryngology, Rhinology, and Otology during last year, there are several which merit special attention by reason of the novelty or originality which characterises them. Mr. Cheatle's work on the influence of the infantile type of mastoid process upon the course of events in aural suppuration, for example, naturally occurs to us as worthy of inclusion in this category. His views have, no doubt, been familiar to our readers for several years, but in the volume just completed there will be found a fresh series of references to the subject in the papers read by him before the International Congress at Budapest and before the Otological Section of the Royal Society of Medicine. The discussions arising out of these papers show that Mr. Cheatle's theories have obtained the support of many leading otologists (pp. 169, 205, 328). The second article to which we may allude as marking an advance in our knowledge, if its conclusions be confirmed, is that by Drs. Neumann and Ruttin (p. 612), in which, under the title of the "Ætiology of Acute Otitis," the *rôle* played by the *Streptococcus mucosus* in producing a special and dangerous type of middle-ear suppuration is for the first time fully recognised. Another novelty is furnished in Dr. Wyatt Wingrave's paper on the pathogenesis

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