of structures which have hitherto been considered beyond the reach of the ordinary laryngoscope, decided practical methods are now at the disposal of the surgeon.

RETROSPECT OF RHINOLOGY—1902.

By William Milligan, M.D.

A general survey of rhinological literature during the past year, whilst indicating that no startling new discovery has been made, shows, nevertheless, that much good work has been accomplished, and that many methods of treatment have been put upon a more secure and permanent basis. This is especially true in regard to the surgery of the nasal accessory sinuses. To evolve the best, and at the same time the simplest and safest, form of treatment can only be the outcome of long and patient labour, and to this end many rhinologists are devoting their time and attention both in this and in other countries.

The ætiology, pathology, and treatment of atrophic rhinitis (ozæna) has been discussed by many competent authorities during the past year, but great doubt still remains as to its exact origin and as to the exact lines upon which treatment should be undertaken. Grünwald (Journ. of Laryn., Rhin., and Otol., October, 1902) insists that in all cases the *fons et origo* is to be found in a diseased state of one or other of the nasal accessory sinuses, and that this focal suppuration must be located and treated in order to arrest the secondary ozænic symptoms. Lambert Lack (Journ. of Laryn., Rhin., and Otol., November,1902), on the other hand, states that in at least 80 per cent. of the cases of atrophic rhinitis the discharge can be stopped by simple cleansing and subsequent packing of the nasal passages with antiseptic gauze.

That cases of atrophic rhinitis co-exist with focal suppuration is admitted, but which is the primary lesion and which the secondary consequence is a point by no means as yet settled. All rhinologists, however, are at one upon the necessity of thorough cleansing of the diseased mucous membrane. H. Hallopeau (*La Méd. Moderne*, No. 41, October, 1901) speaks favourably of irrigations of methylene blue (40 grs. to the litre of warm water), whilst Stuart-Low (*Lancet*, April 5, 1902) has had good results from irrigation or spraying with solutions of mucin (5 grs. to 1 oz.). Electrolysis is believed by many to render efficient service, probably by stimulating the vaso-motor nerves of the affected mucosa. Yonge (*Lancet*, November 9,

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1901) speaks favourably of the results obtained by him in a series of cases. R. Lake (JOURN. OF LARYN., RHIN., AND OTOL., May, 1902) and Brindel (*Rev. Hebd. de Laryngol.*, June 21, 1902) have employed submucous injections of paraffin into the inferior turbinated body with the idea of building up the atrophied parts. By so doing they claim that the mechanism of blowing the nose is rendered easier, and the expulsion of crusts more certain.

The importance of securing free nasal respiration becomes more and more apparent to the profession, whilst the necessity of attaining this end with as little sacrifice of tissue as is possible is insisted upon by the rhinologist. Hypertrophied states of the turbinal mucosa may be treated by caustics, cautery, or resection of a portion of the offending body. Viollet (*Gaz. des Hôpitaux*, No. 51, 1901) recommends the submucous injection of a 10 per cent. solution of chloride of zinc in preference to any of the above-mentioned methods, and claims that the subsequent cicatrization and contraction are quite as efficient. Melzi (JOURN. OF LARYN., RHIN., AND OTOL., August, 1902) regards the hypertrophied inferior turbinated body as one of the primary factors in the production of nasal stenosis. He recommends in such cases resection of the anterior two-thirds, by means of Heymann's scissors.

Rosenfeld (*Berlin. Klin. Woch.*, June 30, 1902) finds the local application of solutions of adrenalin chloride of great value as a means of distinguishing between infiltration and hyperæmia of the mucosa.

The many operations which have been recommended from time to time for the rectification of deflections of the nasal septum have been much discussed of late.

Many observers speak favourably of the value of Moure's method. Hemington Pegler, in discussing this operation, advocates the employment of rubber splints instead of the actual splint recommended by Moure, whilst Dundas Grant (JOURN. OF LARYN., RHIN., AND OTOL., September, 1902) suggests that the deflected septum be straightened by leverage with a stout needle passed through the septum before any incisions are made through the cartilage. Many excellent results have been obtained by means of Asch's operation.

The occasional difficulties experienced in controlling nasal hæmorrhage have led to the employment of many plans of treatment. With the aid of cocaine, adrenalin, etc., the bleeding-point can usually be found, and, when found, effectively controlled by cauterization. At times even this direct method of treatment fails; and in a case recorded by Hunter Mackenzie (*Lancet*, May 10,

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1902) recourse had to be had to stripping the whole of the mucosa from one side of the cartilaginous septum before bleeding was finally arrested.

The occurrence of nasal hæmorrhage either as a precursor of, or as an accompaniment of, certain general diseases has long been recognised. Recently, however, Sidney Phillips has called attention to rheumatism as a cause of epistaxis in children. He has recorded cases where the epistaxis was coincident with an attack of acute rheumatism, other cases where it alternated with rheumatic attacks, and a third group of cases where it occurred in association with chorea, which, however, was probably of rheumatic origin.

In the treatment of nasal lupus the new forms of "light treatment" have found a place, and are apparently of value if the morbid process be fairly superficial.

Lichtwitz (*Archiv. Internat. de Laryngol.*, January, 1902) speaks favourably of the passage of hot air over patches of nasal lupus. The air is passed over a platinum wire heated by electricity. A temperature of 80° F. would appear to be sufficient, and in any case it is not necessary to go beyond a temperature of from 120° to 130° F. in order to produce necrosis of the lupoid tissue.

In the ætiology and treatment of nasal syphilis nothing new has been discovered. Considerable attention has been given during the past year to the employment of subcutaneous injections of paraffin in cases of nasal deformity.

In 1891 Corning of New York published a paper in the *Medical Record*, emphasizing the value of the subcutaneous injection of wax in certain cases of deformity. To Gersuny of Vienna, however, belongs the main credit of bringing the method of paraffin injections prominently under the notice of the profession. The method is of undoubted value, as by its means deformities of the nose and of other parts of the body, the result either of traumatic or of morbid causes, can be comparatively easily rectified, without the performance of any intricate surgical operation, and with good prospects of a successful issue.

The area to be operated upon must be thoroughly cleansed, just as in any other surgical procedure. Walker Downie (*Brit. Med. Journal*, November 8, 1902) paints a band of celloidin across the nose at the level of the eyes, and downwards along the line of junction of the nose with the cheek a quarter of an hour before the injection is made. The subsequent contraction of the celloidin is said to assist in preventing the paraffin from wandering into adjoining tissues.

Various syringes are used for the purpose of injection. Thus Walker Downie employs a syringe—an ordinary 10 c.c. glass serum

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syringe. The needle is, however, kept warm by an electric current controlled by means of a rheostat. Quinlan uses a syringe the barrel of which is cased with a water-jacket. A stream of warm water is kept circulating round the syringe during the time of the injection. Others use an ordinary antitoxin serum syringe with a short needle.

Paraffins with varying melting-points are employed. Some operators prefer paraffins with low melting-points (104° F. to 106° F.), others with melting-points of from 110° F. to 115° F., whilst some—*e.g.*, Eckstein—use a paraffin with a melting-point of 140° F. The main practical difficulties are (1) the keeping of the paraffin in a fluid state during the time the injection is being made, and (2) preventing the paraffin from wandering into the adjacent cellular tissues.

The risks that have to be considered are septic infection, necrosis of the skin, phlebitis of the facial vein, and pulmonary embolism.

Interest in the surgery of accessory sinus suppuration shows no signs of diminishing. In fact, the importance of the subject would seem to increase from year to year. Kirkland (Journ. of Laryn., Rhin., and Otol., November, 1902) considers that the pneumococcus and its associates are instrumental in producing accessory sinus suppuration. In 45 per cent. of cases of fatal pneumonia disease of one or other of the accessory sinuses of the nose was present. Whilst not agreeing with some observers that pneumococcic sinus disease is the primary lesion and pneumonia the secondary consequence, he is of opinion that energetic treatment should be adopted in order to eradicate the focus of infection and the possible septic lesions of the respiratory tract which may result, and which undoubtedly have resulted in certain well recorded cases.

In a recent discussion upon the ultimate results of surgical operations upon the frontal sinus and maxillary antrum (Journ. of Laryn., Rhin., and Otol., November, 1902), Lermoyez urged radical surgical treatment upon the following grounds:

1. Because such focal suppurations threaten the brain—frontal sinusitis especially—and induce meningitis and cerebral abscesses.

2. Because they threaten the orbital contents and the eye itself.

3. Because they endanger the respiratory passages and cause descending laryngitis and even pseudo-pulmonary tuberculosis.

4. Because they affect the general health.

Great stress is laid upon the value of a preliminary trial of intranasal treatment before resorting to any radical operation.

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When a radical operation upon the frontal sinus is necessary, he urges the performance of the Kuhnt-Luc operation, remarking that from Kuhnt's method may be borrowed the knowledge that total excision of the anterior wall of the sinus permits of perfect curetting and obliteration of the diseased cavity, and from Luc's method surgical elegance, efficient fronto-nasal drainage, and immediate suture of the external wound. In the treatment of acute frontal sinusitis, Herbert Tilley (JOURN. OF LARYN., RHIN., AND OTOL., November, 1902) advocates the employment of inhalations of mentholized steam.

The etiology and diagnosis of ethmoidal and sphenoidal suppuration formed the subject of a discussion at the Manchester meeting of the British Medical Association. In opening the discussion, Grünwald remarked that chronic sphenoidal suppuration was frequently secondary to ethmoidal disease, and that he had no doubt but that adenoid growths could infect the ethmoidal and sphenoidal cells directly from their secretion. In continuing the discussion, Lambert Lack again advocated curettement of the ethmoidal cells in cases of suppurative ethmoiditis and recurrent polypi, whilst in the presence of urgent cerebral or orbital symptoms an external operation, he considered, was safest and best.

The value of solutions of adrenalin chloride in many intranasal operative procedures has been fully emphasized by the observations of many competent rhinologists. In the treatment of hay-fever, Sawyer (*Charlotte Med. Journal*, December, 1901) advises the removal of all intranasal abnormalities and cauterization of any unduly sensitive spots upon the nasal mucosa. During the attacks he applies a 3 to 10 per cent. solution of suprarenal extract to the mucosa, and gives internally 5 grains of the desiccated gland every two hours until its full physiological effect is produced or symptoms controlled.

In discussing the treatment of rhinitis vasomotoria, Lublinski (*Med. Record*, January 25, 1902) finds rhinitis vasomotoria most frequent in anæmic or chlorotic individuals. The affection is seldom bilateral, but alternates at varying intervals. He considers that constitutional treatment is demanded, and recommends iron and arsenic. Locally, he speaks highly of massage of the mucosa, with a sound moistened with menthol paraffin ($\frac{1}{4}$ to $\frac{1}{2}$ per cent.). He finds that the application of the galvano-cautery needle is a somewhat harsh treatment in such cases, but speaks highly of the value of submucous injections of a 10 per cent. solution of chloride of zinc.

For some considerable time past it has been customary in cases

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of asthma, where gross intranasal lesions were found, to start treatment by the surgical removal of any existing obstruction. At a meeting of the Clinical Society of London on October 10, 1902, Dr. Alexander Francis, of Brisbane, advocated the employment of the galvano-cautery in cases where no gross lesions were present, but where, apparently, the nasal mucosa was healthy. The method of treatment thus advocated, although purely empirical, appears to be justified by the results obtained. That the reflex which induces the attack of asthma does not by any means always start from one and the same spot is proved by the fact that in many cases cauterizing one spot has no effect, whereas cauterizing another has the desired result in curing the patient.

RETROSPECT OF OTOLOGY, 1902.

By Dundas Grant, M.D., and Chichele Nourse, F.R.C.S. Edin.

Among the more interesting otological events of the past year we may enumerate the discussion in the Section of Otology at the meeting of the British Medical Association at Manchester in August. Several subjects of great importance were discussed, including the *Value of Intranasal Operations in the Treatment of Chronic Non-suppurative Inflammation of the Middle Ear*. This discussion was reported in full in the issue of the Journal of Laryngology for December. Dr. McBride advanced the opinion that chronic catarrh of the middle ear was never benefited by the removal of a nasal obstruction. In this he was supported by Sir Felix Semon, Dr. Lambert Lack, and Dr. Tilley. Dr. Scanes Spicer, on the other hand, contended for the removal of such obstructions when present, and gave a résumé of original manometrical observations on intranasal air-pressure. Drs. Pritchard, Rohrer, and Dundas Grant, as well as Messrs. Cresswell Baber, Lake, and Hovell, agreed that in sclerotic middle-ear inflammation such procedures were useless, but in the non-sclerotic they were of undoubted value. In this they are in accord with most of the authorities on the subject. There was evidence in the course of the discussion that the ideas of some who did not make a primary study of otology were somewhat indistinct as to the meaning of the term "sclerosis of the middle ear," as understood by otologists. We understand that the Laryngological Society of London intends to approach the Otological Society of the United Kingdom for the appointment of a conjoint committee to further investigate the subject. The

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