by persistent sea-bathing. In one instance, at least, double exostoses appear to have originated in irritation due to the use of the binaural stethoscope. Case X. afforded an example of the risk of the formation of abscess attendant on delay in operation. Case XII. was an instance of the comparatively soft and bony exostoses met with chiefly in women. A main feature in all these cases was the good results accruing from the drilling of an opening of small calibre through the apices of the ivory exostoses.

MORBID CONDITIONS SIMULATING ADENOIDS.

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A large number of children come under our observation who, while exhibiting some or all of the classical symptoms of adenoids, are found on examination to be free from that trouble.

These cases increase in number as laymen become more familiar with the existence of this affection, and are consequently prompt to seek relief with a ready-made diagnosis.

It may happen even that the classical signs are present in so striking a degree that a detailed inspection by finger or mirror is considered superfluous by the practitioner himself, and he takes their existence for granted. For this there is much justification, since digital exploration is not always expedient without an anæsthetic in the case of a very sensitive child accompanied by a hypersensitive parent.

Posterior rhinoscopy is proverbially difficult in children, especially those who are the subjects of enlarged faucial tonsils; we have, therefore, practically to depend upon our sense of touch for a *positive* confirmation, and any other evidence, however conclusive it may appear, is at the best only presumptive.

Still, further complete removal of tonsils and adenoids is not infrequently followed by persistence of the symptoms, and we are often unjustly inclined to blame the parents for neglecting the necessary post-operative treatment. Estimation of such a case will probably reveal one or more of the conditions to be described.

Excluding those forms of nasal obstruction readily recognised by anterior rhinoscopy, the morbid conditions symptomatic of adenoids may be thus grouped: (1) Diminutive choanæ and nostrils. (2) Low vault of naso-pharynx. (3) Paresis of soft palate and pharynx. (4) Vomerine crest. (5) Distortion of vertebral column.

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(6) Retropharyngeal abscess. (7) Hypertrophy of palate tuberosities. (8) Webs and neoplasms.

1. Diminutive choanæ and nostrils occur very frequently. They are commonly associated with low vault of pharynx and imperfect development of the maxillæ, together with an immobile velum palati and a gothic arched palate. Choanal stenosis may be due to the mucous membrane being so thickened as to obstruct the breath-way, or the osseous walls themselves may be contracted. In either case the apertures are often reduced to the diameter of a cedar-pencil. When only the mucous membrane is at fault, the finger-tip will suffice to remove the obstruction, which feels like a web, and might easily be overlooked if the precaution of thoroughly exploring the choanæ with the finger-tip be neglected. The nostrils may be uniformly diminutive or may themselves be normal in size, while the turbinals are disproportionately large. The former condition seems to be closely associated with the development of the maxillæ, since it is not often found after the sixth year, when those bones with their sinuses undergo a marked enlargement as the eruption of the permanent teeth proceeds.

Turbinal disproportion, although it may be found at any age, is especially associated with puberty, and the balance may not be restored for several years. This must not be confused with that form of localized hypertrophy which involves the posterior end of the turbinal only and belongs chiefly to adult life (varix).

2. Low pharyngeal vault. This condition occurs in ill-nourished and rickety children, often accompanying small choanæ and imperfect development. It was particularly well illustrated in two recent cases (sisters, aged five and six), with non-development of the maxillary antra, the pharyngeal vault being only about $\frac{1}{2}$ inch above the level of the hard palate, and the nasal fossæ being also very small, nasal respiration was practically impossible.

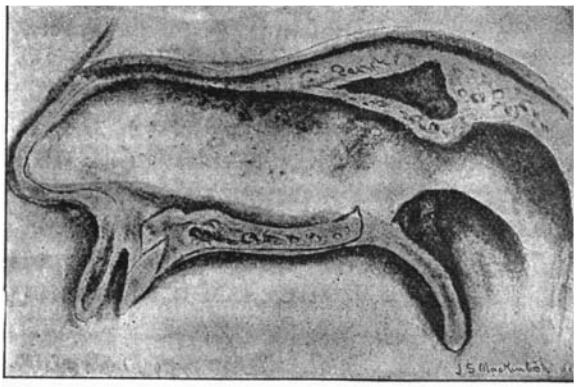
3. Paresis of soft palate and pharyngeal muscles. These may be the result of any form of nasal obstruction. They may be due to various forms of paralysis, central and peripheral, or they may be the legacy of tonsils and adenoids already removed, when correction of bad breathing-habits has been neglected.

4. Prominent crest of the vomer, or prolongation backwards into the pharynx of the nasal septum, is by no means a rare deformity; it occurs as a deep crescentic ridge extending sagittally across the vault of the naso-pharynx (from which it seems to hang) to the posterior wall, so dividing it into two pockets. It is generally very tough, since it consists in part of a bony extension of the posterior border and alæ of the vomer, continued to the vertebral

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aponeurosis by a tense band of fibrous tissue covered with mucous membrane. Probably it is due to a persistence and exaggeration of the ethmo-vomerine plate from which the nasal septum is developed. Although *per se* it can scarcely be the cause of much obstruction, it is, however, often associated with any of the other abnormalities included in this list, and the "pockets" may contain adenoids which are easily missed when operating.

The appended illustration was kindly drawn for me, from typical cases and an old museum model, by Dr. J. Stewart Mackintosh.



VOMERINE CREST OF NASO-PHARYNX.

5. Forward projection of the vertebral column. In this deformity the arch of the atlas is the chief offender, but the second and even third cervical centra with their discs may also be involved, encroaching upon the naso-pharynx to such an extent as to barely admit the finger-tip behind the nasal septum.

6. Retropharyngeal abscess. In addition to the classical varieties of this condition, which we meet with in our own practice, there is one deserving special attention—I refer to the retro-pharyngeal lymphatic gland, which lies in the cellular tissue, and is supposed to be only present in early life.

This gland may be the seat of acute or chronic inflammation, and so give rise to swellings which may seriously encroach upon the upper breath-way. Infection from adenoids or from operations is by no means improbable, and I have seen two cases in which a retropharyngeal abscess in this situation immediately followed the removal of the adenoids. Infection from middle-ear disease has also been suggested.

7. Undue prominence of the soft parts covering the internal pterygoid plate (its hamular process) and the tuberosity of the

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palate forms by no means a rare encroachment upon the post-nasal space. It may be alone, or it may accompany the other deformities, and is always associated with general thickening of the mucous membrane of the part, and it may also materially interfere with tonsillotomy unless a narrow guillotine be employed.

8. Finally the post-nasal space may be obstructed by webs and by neoplasms, whose description is beyond the limits of this short note, which includes the commonest only of those morbid conditions that simulate or are responsible for the existence and persistence of "adenoid" symptoms.

A purely functional illustration of the subject is ably discussed by Dr. Marcel Natier in the June number of *La Parole*, under the title "Faux Adénoidisme."

SOCIETIES' PROCEEDINGS.

SEVENTH ANNUAL MEETING OF THE AMERICAN LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL SOCIETY.

A Case of Corrected External and Internal Deformity of the Nose. Dr. T. Passmore Berens, of New York City, presented a patient, together with two photographs taken before the operation on the septum.

The young man had come to him with a history of an injury received to the nose in early childhood. The bridge of the nose was very large, much elevated, and deflected to the left, forming a large, disfiguring hump. The septum was deflected to the left, and adherent, causing almost complete occlusion of the nares. The nasal bones and part of the cartilages were laid bare, and the bony hump divided with a chisel. The parts were closed and the wound dressed. The operation was in part a cutting and in part a crushing operation, and had been done on March 5, 1901. Healing had been rapid.

Dr. Otto J. Stein, of Chicago, said he understood a forceps had been used to break loose the nasal bones from their attachment to the frontal and superior maxilla. He had himself done this operation several times, and on the last two occasions had experienced great difficulty in breaking the bones loose from the superior maxilla. The condition brought about by the blows had been so severe that it did not seem to him that its repetition was warranted.

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