THE

LARYNGOSCOPE.

VOL. III. ST. LOUIS, MO., SEPTEMBER, 1897. No. 3.

ORIGINAL COMMUNICATIONS.

DEVIATED SEPTA IN EAR DISEASES, WITH A NEW OPERATION FOR THEIR CORRECTION.*

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In the Spring of 1876, Cornelius R. Agnew, whose memory I revere and whose precepts I find influencing me more than any other medical associate, gave me the care of his ear patients at Manhattan Eye and Ear Hospital, with strict instructions that I should pay close attention to, and treat, the nasal and naso-pharyngeal difficulties which I should find complicating the ear affections. These instructions and the subsequent advice and suggestions in individual cases began my study of the relations of the diseases of the nasal and tympanic cavities.

I early recognized the importance of deviated septa in causing hyperæmias, congestions and acute processes, and later, hyperplastic and thickened conditions of the mucous membrane of the drum-head and tympanic cavity, simply by their mechanical impediment to nasal breathing and nasal clearings; and I have upon my books the names of patients as far back as 1877, the convexity of whose deviated septa I attempted to, and in some cases did, remove by means of a bistoury, much to their relief and improvement.

*Read before the American Otological Congress, Washington, D. C.

In talking these cases over with my good friend, Dr. Bucklin, of New York, he suggested sawing these convexities off, and for several years we did this operation, by using an ordinary jeweler's saw, with a hand-vise fastened to its proximal end to answer as a handle. From this crude instrument grew the Bucklin saw, than which there is to-day none better.

As I said above, deviated septa affect the ears solely in a mechanical manner, in fact, all nasal troubles affect the ears in the same way. The upper part of the nasal cavity may have polypi, hypertrophies, etc., but if the lower portion, or *drain portion*, of the nose is clear and unobstructed, the ears are not affected by these conditions.

The rhinologists have placed considerable importance upon pressure between the superior turbinated and septum, but after twenty years' observation of these cases I cannot see that it affects the ears in the slightest by its absence or presence, although it may be a factor in the causation of ethmoidal or frontal disease.

We, as otologists, have simply to look for perfect nasal drainage, ethmoidal and sphenoidal disease; posterior hypertrophies, naso-pharyngeal and pharyngeal troubles.

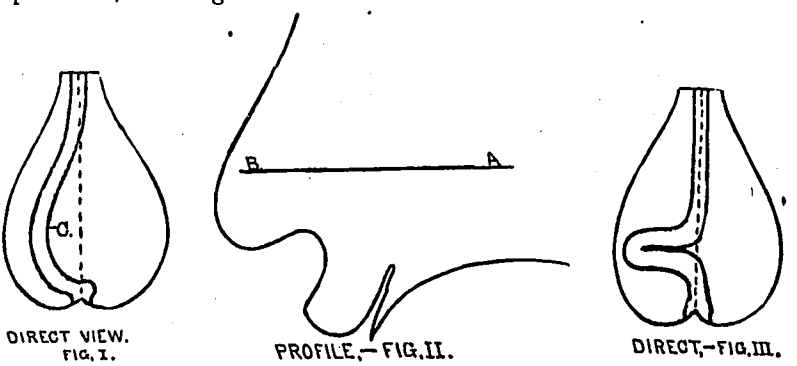
Deviated septa are among the most troublesome difficulties that we have to meet, and are found of varying degrees and importance. Some are so slight that a few horizontal cuts with a saw, antero-posteriorally, is all that is necessary to produce the required contraction of the convex surface; others have to be sliced off with the saw and by hand, in a more or less radical manner, always cutting from below upwards.

One little detail which is not always thought of by operators in these cases, is to avoid union between the cut surfaces and the opposite turbinate surfaces; something must be used to separate the two surfaces, else bridges will be formed which have to be removed later, and which also prevent the contracture which we desire to obtain, to draw the septum back into the perpendicular plane.

Some do not use anything, others use cotton or gauze, others rubber tubing or pieces of cork whittled into the desired form. Some think that pressure is necessary to get the septum back into its place; but the fact is that pressure cannot be borne and should not be used because of danger of affecting the nutrition of the parts, and causing necrosis and an opening into the fellow nostril. I have used for some time the Goodwillie nasal tubes and am perfectly satisfied with them, but never use them sufficiently large to cause pressure, and lately I am having them made with the upper edge prolonged by a fin of rubber to separate the higher portions where that is necessary.

There are other cases in which the septum is so far deviated to the one side that the cavity is nearly or entirely closed. These are the cases which have caused me the greatest annoyance, and I have done all the operations which I have seen or heard described. I have broken them up forcibly when the patient was under ether, and splinted the broken septum, boney and cartilaginous, in every way that has been suggested, with cork or rubber splints made purposely, rubber tubing and gauze packing, gold and silver pins, etc., too numerous to particularize or even name, because they have proven entirely unsatisfactory to me in every case. In fact, I at one time gave up operating upon these excessively deviated septa, and contented myself by getting a free or freer passage by removing the inferior tubinated bone in its entirety by sawing close to its attachment in the anterior three-fourths, and cold-snaring the remaining quarter.

About four years ago I perfected an operation which I have done several times in these cases of excessive deviation, and each time with satisfaction to the patient and to myself, and that is the operation suggested in the title of my paper. It is done at two sittings, about a week or ten days apart. I have always done it under cocaine, as I prefer this course in all nasal and naso-pharyngeal operations, as being more safe than anæsthesia.



DIRECT VIEW. FIG. I. PROFILE.—FIG. II. DIRECT.—FIG. III.

The operation is begun by making a horizontal cut with a Graefe knife through the mucous membrane and perichondrium on the *concave* side of the septum at *C* in Fig. *I*, and from *A* to *B* in Fig. *II*. It passes as far back as may be necessary and comes forward to the muco-dermal line. If the parts are well cocainized there will be but little hemorrhage after the cut is made; then the mucous membrane is carefully dissected upward and downward from the cartilage and vomer if necessary. This is done more easily than one would imagine, and I have always found that a strong and broad Graefe's knife which was dull was the best instrument to use.

When the dissection has been fully made, then the septum is forcibly pushed toward the concave side, the upper portion downwards, and toward the concavity, and the lower portion upwards and to the concavity, and after being manipulated and pressed as described, it is held in its new position by antiseptic cotton or gauze until the septum assumes the appearance or situation as seen in Fig. *III.* The two denuded surfaces of the septum are brought into close apposition as the drawing shows, and the mucous membrane hangs rather redundantly upon the previously concave side.

The manipulations of the septum are done with a strong probe or handle of a scalpel, or anything which is strong or smooth, for it is not our desire to break or injure the septum in any way, and for that reason a forceps must not be used.

To retain the septum in its new position until union takes place, I have found the best is cotton rolled upon a square aluminum probe and thoroughly soaked in Panas solution, and smeared and covered lavishly with antiseptic vaseline.

The dressings are not disturbed until union has taken place, which is usually in ten days or two weeks, and it has been my habit to spray the parts gently once daily, and a number of times during the day to have a mild antiseptic solution dropped into the nasal cavity and upon the dressing. Usually I have employed the Panas solution for the purpose. At the end of two weeks the dressings are taken out and the projecting spur is removed, and treated as is usual in the more simple cases.

In those cases which it has been my pleasure to operate in this way, the finality was that it would have been difficult to imagine that there had been much of any deviation ever existing in the case, so thorough and perfect was the result.

Goutiness in its Relations to Diseases of the Ear. Dr. A. H. Buck. (*Medical Record*, May, 1897.)

Cases are cited in which the diasthesis was observed manifesting itself in the ear. Calcareous deposits are frequently seen in such instances. Errors in diet bring about aural symptoms, which improve under dietetic management. Severe pain is at times complained of, without much local change (microscopically).

In these cases the author has found dilated and therefore paretic blood vessels, retarded circulation, escape of the watery elements of the blood, both upon the free surface and into the interstices of the tissues, proliferation of the cellular elements of the connective tissue stroma, and the swelling or increase in bulk of the tissues thus affected. M. D. L.