

DEMONSTRATION OF THE SUCTION METHOD IN DIAGNOSING SINUS DISEASE.*

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Sondermann¹ and Spiess², within the year, have published reports of their treatment of dry catarrh of the upper air passages by means of negative pressure produced by some form of suction apparatus. The forms of nasal disease which they treated were laryngitis, pharyngitis, and rhinitis sicca and atrophic rhinitis with or without fetor. Sondermann uses chiefly a rubber bulb attached by rubber tubing to a small mask which fits over the end of the nose.

Spiess has had a small three-way air pump fitted to an electric motor and uses the mask of Sondermann for producing suction within the nose. In addition he has tubes with tips of various shapes for application directly to localized areas in the pharynx, etc.

Following out these ideas I have had a Victor four-way pump attached to a quarter horse-power electric motor. A rubber tube runs from the pump to a glass bottle to which it is attached by a short curved glass tube passing through a rubber stopper into the bottle. A second longer glass tube reaching nearly to the bottom of the bottle connects with a rubber tube running to the nose piece. This arrangement prevents any of the nasal secretion from reaching the pump. The nose piece is Y-shaped and made of glass and rubber tubing with glass nasal tips at the end of each arm of the Y.

The nose is prepared for examination by spraying it well with $\frac{1}{2}\%$ cocaine and 1-10,000 suprarenalin. After the turgescence has been relieved by these sprays the nose is thoroughly flushed and all remaining crusts, etc., removed with cotton-wrapped applicator. The nasal tips are now firmly held in the nostrils and the pump is started. The patient is instructed to say "hick" or the letter "K" making a prolonged effort to hold the soft palate and tongue in the position required to form the first half of the "K," omitting the explosive sound which completes the letter. The soft palate usually rises easily and is then held in position by the suction while the patient breathes slowly and easily through the mouth.

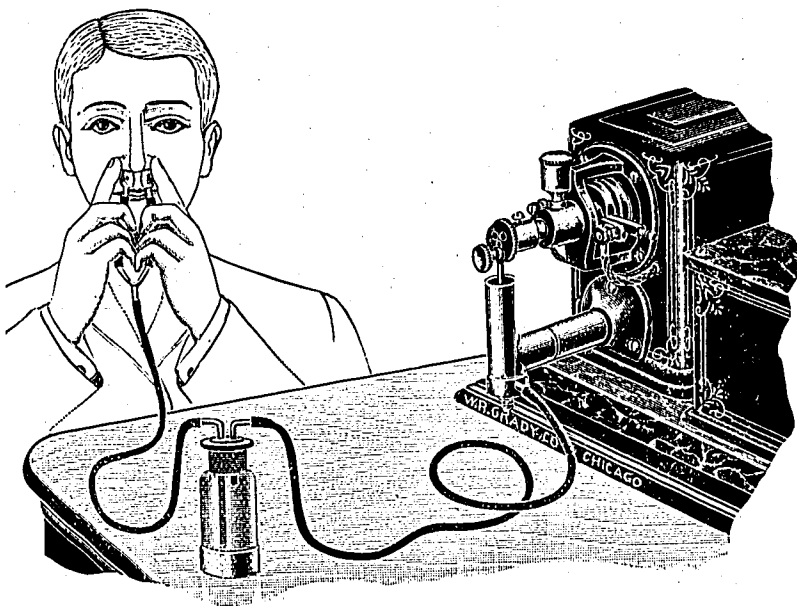
* Read before the Chicago Laryngological and Otological Society.

1 *Muenchen. med. Wchnschr.*, No. 1, 1905.

2 *Arch. f. Laryngol.*, Bd. 17, Heft 2.

In placing the nasal tips one should see that they are pushed well into the nostril as otherwise the lateral cartilages sink in with the suction and may close the opening into the nasal tip interfering with suction and often causing pain. When the suction first begins it feels too strong to the patient but the pressure sensation soon adjusts itself and is not uncomfortable.

If any particular sinus is suspected the head may be bent so that the ostium of that sinus becomes its lowest point, making it easier to withdraw the sinus contents. This is especially necessary with



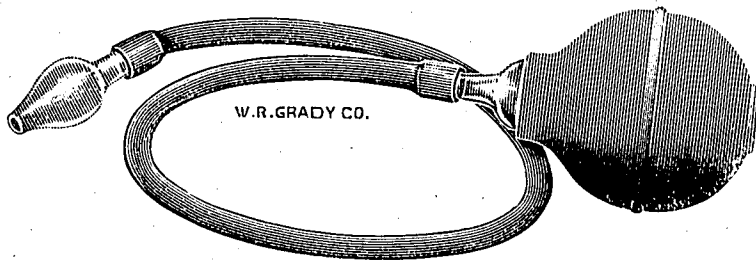
thick tenacious secretion. After a five-minute seance at the pump, the nose is again carefully examined and if secretion is found in any of the characteristic locations, the experiment may be repeated several times to clinch the diagnosis and then proper measures taken to remedy the condition.

In acute conditions, there is usually some pain connected with the procedure and this may last for several hours afterward. This treatment, however, is particularly applicable to chronic conditions of the nose and accessory sinuses and in the small number of cases which I have treated, the results have been very good.

There is a marked diminution of discharge, crusts and odor after the first few treatments; and, although it is too early to speak definitely as to the final results in my own cases, Sondermann and Spiess are very enthusiastic in their praise of the method.

When used as a method of treatment the suction is continued from ten minutes to one hour during which time the patient holds his head in the various positions most favorable to the outflow of secretion from the sinus involved. If the patient can tolerate the treatment, the nose should be completely exhausted of pus at each sitting, the suction being continued until clear mucus appears.

The mucous membrane of the nose and sinuses is thus freed from irritating secretions; filled with fresh blood and all of its functions thus stimulated without the use of irritants which destroy more or less tissue. The removal of decomposing secretions



is equivalent to surgical drainage and although I believe that the ethmoid cells or other sinuses should be thoroughly opened and curetted in polypoid degeneration of their lining membranes, still in selected cases this treatment will, I believe, be found very valuable as a conservative treatment and as an after-treatment where surgical interference is necessary. Its importance as a diagnostic agent cannot be over-estimated, and in case one does not possess a pump and motor, the bulb apparatus which I prescribe for home treatment may be used. This consists of the stiff rubber bulb of a breast pump attached to a rubber tube carrying a nasal tip at its opposite end. The tip is inserted into one nostril and the other closed by pressure with a finger. The patient raises his soft palate in the manner described above, the bulb is compressed and then allowed to fill with the air contents of nose and sinuses. Thus a very good suction is secured and if a greater vacuum is required

most of the air in the nose may first be removed by having the patient draw in his breath while the nasal tip is in place and both nostrils closed. The bulb now has less air to withdraw from the nose, and so gives a greater negative pressure.

Bier, I believe, first applied this principal of local hyperaemia in the treatment of acute infections, etc., by compressing the superficial veins of a limb with rubber bandages applied above the infected point. He considers this to be a valuable aid to the hyperaemia with which nature attempts to cure such conditions.

In presenting this preliminary report I am actuated by the desire to induce others to carry on these experiments which promise to be of value in a class of cases which is particularly difficult to deal with.

I am now applying this treatment experimentally to a series of cases with chronic otitis media suppurativa.

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The Treatment of Tuberculosis of the Larynx. H. KRAUSE.
Monatschr. f. Ohrenh., Berlin, Sept. 1904.

The author repeats his contention that a case of tubercular laryngitis should be radically treated, whenever the condition of the lungs and the general health permit. He states as a principle that all parts involved in the tubercular process should be removed down to healthy tissue. He does not claim that the cases are cured, in the scientific acceptance of that term, but says that the disease is brought to a standstill, cicatrization ensues and the symptoms disappear.

YANKAUER.