

tion was resorted to is very small in comparison with that in which simultaneous ligation was employed. I think, therefore, that at the present time the weight of surgical opinion is in favor of the views of Mr. Barwell that, in innominate aneurism, the simultaneous double distal ligation of the right carotid and subclavian arteries is both a more efficient and safer procedure than the consecutive ligation of these vessels.

MOUTH BREATHING AND ITS TREATMENT.

BY N. R. GORDON, M.D.,
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The evil results of mouth breathing, are due to the inspiration of atmosphere at a low temperature, the presence of dust and foreign matter in the air, the desiccating effect on the mucous membrane over which the air passes, and the disuse of the nasal passages for the normal function of respiration.

The pathological results are: chronic inflammation of the pharynx, larynx, and bronchi, and the adjacent tissues, accompanied with cough, hoarseness, loss of resonance of voice, impairment of sense of smell, and hearing. The pernicious effect of oral respiration is not impressed upon the minds of medical men, nor is it scarcely recognized as being an evil practice by the public. The practice is a very common one, especially during the winter season; there are a great many habitual mouth breathers.

A condition which gives rise to partial or complete nasal stenosis, is adequate cause for mouth breathing. Chronic hypertrophic catarrh is the most frequent cause of partial stenosis; the frequent congestion of the cavernous tissue from repeated colds, causes hypertrophy of the turbinate bodies, which partly close the nasal lumen, requiring the subject to resort to oral respiration; the necessity for mouth breathing is in proportion to the nasal stenosis; the transition from nose breathing to mouth breathing is gradual, and the parts by degrees become accustomed to the transfer of function. Many persons have a partial obstruction of the nasal passages; they breathe with comparative ease while in a state of repose, but upon taking exercise such as walking, they resort to mouth breathing to supplement the deficiency in the nose; others resort to it only during sleep; many contract mouth breathing from a careless habit, or possibly from a succession of colds in which the subject is forced to breathe through the mouth; in such cases the obstruction in the nose is the result of thickened mucosa.

A deflection of the septum to one side or the other, will produce a partial obstruction of the nares; the septum may be contorted like the letter S, giving a stenotic effect in each nostril; often coupled with deflection there is hypertrophy of the opposite tissues, making the stenosis complete. Any of the tumors that occur in the nasal cavity, such as the gelatinous or mucous polypi, malignant growths, the adenoid growths of the post nasal passage, or exostosis of vomer may produce partial or complete stenosis of the nares; foreign bodies, such as seeds,

buttons, stones, may lodge in the meati, and occlude the passage; paralysis of the dilator alae nasi prevent free nasal respirations; enlarged tonsils, tumors of the palate or uvula may interfere with nose breathing. Adhesions of the soft palate to the posterior wall of pharynx, and bands uniting the two lateral walls of the nostrils, the result of cicatricial contraction from strumous or syphilitic ulceration, will prevent nasal breathing.

The function of the nose is of a three-fold character: 1. Respiration. 2. Special sense of smell. 3. Vocal resonance. The temperature of the air, in its passage through the nose, is increased, and foreign substances, such as dust, is lodged on the irregular mucus surface of the nasal passages. If the inspired air is dry, it also gathers moisture. The terminal filament of the olfactory nerve are very properly distributed to the superior portion of the nasal passages, where it readily comes in contact with the odor-bearing atmosphere. In order that the vocal resonance should be perfect, the nasal and post-nasal passages should be free and open; any increase in tissue or obstruction in these passages impair the resonance of the voice.

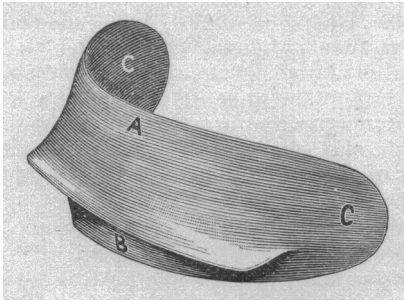
In oral respiration the air enters the larynx at a temperature somewhat lower than is given it by a passage through the nasal chambers; this cold air excites inflammatory action, producing soreness, cough, hoarseness and other symptoms of pharyngeal, laryngeal, and bronchial irritation. The dust and foreign matter floating in the air finds but little to impede its progress until coming in contact with the vocal bands, and the adjacent sensitive tissues, thus adding another factor, in the production of inflammation. Owing to the dryness of the atmosphere in our dwellings, the mucus membrane of the mouth and throat, in its efforts to furnish the required additional moisture, becomes very dry and parched. Infiltration with thickening of the mucus, submucus, and glandular tissue, of the entire nasal and post-nasal passages occur, as the result of deprivation of the normal stimulus, afforded by respiration; such thickening interferes with the resonance of the voice, hearing, and sense of smell. The results arising from the loss of nasal breathing, are as important as the direct evils from mouth breathing.

Treatment.—The method of treatment adapted for the cure of mouth breathing will depend upon the cause. If the obstruction is due to deflection of septum, I have found the rotating burr and dental engine, the most practical and satisfactory method of relieving the difficulty. Exostosis can be removed in the same way. Abnormal growths of whatsoever character, must be removed by such means as seem best adapted to the various conditions existing in each particular case. The adhesions of the soft palate with the posterior wall of pharynx, should be dealt with in the most approved method for relieving such conditions; adhesions of the nasal walls should be severed, and pledgets of cotton kept in situ until the part heal. If the nasal stenosis is due to indurated hypertrophy of the turbinate processes, these will require removal by the galvanic cautery or Jarvis' wire snare.

So far as the successful treatment of the habit of mouth breathing is concerned, I am unable to find anything in the literature upon the subject, better than the use of bandages, or similar appliances, around the head for holding the mouth closed, which are unsatisfactory and produce great discomfort to the patient. The frequency of mouth breathing and the evil consequences, are sufficient to enlist our attention in the prevention and cure of this practice. As we have said, the greater number of cases of mouth breathing are due to nasal catarrh; a succession of colds have produced a soft and œdematous condition of the nasal mucosa, and mouth breathing ensues as a necessity; upon recovery or partial subsidence of the cold, the subject continues to breathe through the mouth, and the conditions which characterize chronic hypertrophic catarrh are developed.

In all such cases, and indeed, in all others where the obstruction is not indurated, fixed, or complete, and in cases after an operation for the relief of stenosis, where it is desirable for the patient to overcome the habit of mouth breathing while asleep, I have found an instrument, the device of Mr. William Fisher, of this place, to be admirably adapted for their relief. It is made of celluloid, simple in construction, and fits nicely between the teeth and lips without the aid of bandages or other appliances, and is worn during sleep without any apparent discomfort. I wish to call especial attention to the value of this instrument in the treatment of mouth breathing, due to the above causes; it is also a useful adjunct in the treatment of nasal disease where mouth breathing is present. It acts by actual prevention of oral breathing, and the normal stimulus of respiration restores the intra-nasal tissues to a healthy condition. It also overcomes the habit of snoring, which is due to ora-nasal respiration.

The accompanying cut gives a very good idea of the instrument.



THE RESTORATIVE TREATMENT OF SLEEPLESSNESS FROM BRAIN EXHAUSTION.

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One of the lessons strongly impressed upon me by my experience in practice is that insomnia when due (as is most frequently the case) to brain exhaustion, is best cured by tonic or restorative treatment, rather than by narcotics. It has been a source of gratification,

therefore, to see the same lesson strongly inculcated by Dr. W. G. Eggleston in *THE JOURNAL* for February 19. I desire to confirm emphatically all that he said in his paper.

It has been alleged by somebody that man is the only animal that can be taught to sleep on an empty stomach. But when suffering from brain-fag this teaching may fail even in man. Unquestionably a lunch at bedtime is wholesome and conducive to sleep, especially in brain-workers who sup early and retire late. But the lunch should be simple. Indigestible food taken at bedtime may easily disturb the sleep.

The cold plunge or sponge-bath is another excellent hypnotic and a rational one, since it at the same time diverts blood from the brain to the capillaries of the surface and invigorates the nervous system.

At this health resort, where many of the broken down people of the United States sooner or later come as to a sort of Mecca for the afflicted. I see large numbers of persons whose chief complaint is that they cannot sleep. Most of them have taken bromides persistently and often without advantage except at first. When such patients come with definite instructions from their physicians to persevere with a course of some bromide mixture, I have always encouraged them to give the remedy a thorough trial, but when the cause of the insomnia has been, as it is in nine cases out of ten, some form of cerebriasthenia, the result has generally been disappointing, even in this air which is exceptionally bracing and predisposes most persons to sleep.

The cases of nervous break-down which are serious enough to have caused a compulsory vacation from business and a sojourn here at the seashore, frequently require medical treatment to reestablish the habit of sleeping, and thus enable the exhausted nerve centres to be rested and reinvigorated; and no sedative or narcotic drug yet tried by me, whether opium, chloral, the bromides, hyoscyamus, hyoscine or paraldehyde has proved satisfactory in such cases. The tonic effect of the sea air with good food, moderate exercise and cheerful company often prove sufficient. When it does not, a light lunch at bedtime with occasionally a few teaspoonsful of whisky in milk added and the sponging of the body with seawater followed by a thorough rubbing with a Turkish towel are highly useful measures. But sometimes these all fail, and when they do, my experience teaches that to begin administering any narcotic medicine is usually a mistake. My most frequent recourse now is to give some one of the nutrient nerve tonics, such as the compound syrup or glycerite of the hypophosphites—a teaspoonful two or three times a day—or in some cases the compound syrup of the phosphates, commonly known, in Philadelphia at least, as Parish's Chemical Food. When the patient has a weak heart and insomnia results from a passive congestion of the brain, a condition frequently met with among neurasthenics, a little digitalis may work wonders and may usually be advantageously combined with very small doses of strychnia and quinine as well as with moderate doses of iron when this is otherwise indicated.