

Besides structural changes, it is evident that local hyperæmia, which is so frequently seen as a pathological nasal reflex, will be apt to produce the same pressure on the lymphatics. And in this respect some cases of paroxysmal vasomotor aprosexia are very interesting. In these cases the aprosexia was not constant, but was produced especially by causes which influence the vasomotor reflexes, as change of temperature, coming from the cold in a warmed room, and the paroxysms were accompanied by very marked redness of a spot on the forehead, corresponding to the frontal sinus. These paroxysms lasted from a quarter of an hour to an hour or more, and the patient was unable to understand and to recollect things which were told or explained to him during that time, which he could do quite well as soon as the paroxysm was over.

As to the way in which headache is produced in cases of disorders of the nose, especially by swelling of the mucous membrane, I have proposed the following explanation. The air contained in cavities communicating with the nose will be resorbed, and so its pressure diminished, as soon as the free communication with the nose is impaired by the swelling of the mucous membrane. So it is with the tympanic cavity, with the frontal and other sinuses. Such a cavity will then begin to act as a dry cap, and produce collateral hyperæmia *in vacuo*. We have, so to say, an *experimentum crucis* for this sort of headache in the experiment of Politzer. In this experiment air is not only drawn into the tympanic cavity, but at the same time into the sinus communicating with the nose; and, in fact, when such patients are treated by Politzer's insufflation at the time when headache is present, we see it almost constantly disappear for a shorter or longer period. We see the same happen very often in cases where an acute catarrh of the tympanum produces tenderness of the mastoid process, which tenderness, in its first stage at least, disappears after an insufflation by Politzer's bag.

A few words about the relation between aprosexia and neurasthenia. A friend of mine, who is a psychologist, had the kindness to give me, as his opinion on my first publication on the subject, that he quite agreed with me as to the description of aprosexia, and that he had found the symptoms in a number of patients, but that he was inclined to consider aprosexia as a symptom of neurasthenia. I would not like to go so far as that. It is true of aprosexia, as well as of other pathological nasal reflexes, that they mostly occur in neurasthenic patients. But when by a local treatment all the symptoms are cured and the patient restored to health, I think it is more natural to consider the local disorder as the cause of the symptoms than to look on that disorder as a symptom of general neurasthenia. A different question is this, If a neurasthenic disposition is a necessary soil for the production of nasal reflexes and of aprosexia? And this question, I think, we are not yet able to solve definitely for the present. I think we are not far from the truth if we admit, from an etiological view, three forms of aprosexia, that is, 1, physiological aprosexia as the result of cerebral over-exertion or fatigue; 2, neurasthenic aprosexia, where the cerebral exhaustion is produced by abnormal irritability and restlessness; and, 3, pure nasal aprosexia, where the exhaustion is produced by retention of the products of tissue change. Of course, the three forms will admit of various combinations and complications.

If you will allow me to add a few words on the treatment which I have found successful in most of my cases, it would be this. After a careful examination I generally treat at the first consultation the naso-pharyngeal cavity; after a week I treat one side of the nasal passages, and after another week the other side. If there are important anomalies in the septum narium, I remove them either with Dr. Bosworth's saw or with the chisel. The mucous membrane of the spongy bones, and especially that of the inferior one, I cauterise with solid nitrate of silver melted on the point of a silver probe, after having used cocaine previously. At the same time I make the patient syringe his nose two or three times daily with appropriate solutions of chloride of ammonium and salt ( $\frac{3}{4}$  per cent. of the first and 1 per cent. of the second), and I let him wear at night a contra-respirator to control his nasal respiration during sleep. Lastly, I have found it very useful in a number of cases to let the patient make a gaseous menthol insufflation after the syringing, and with the same instrument which the patient uses for that purpose, he can be taught to apply a Politzer's douche, which often is a great relief to him. When the secretion in the nose is very scanty, I found the internal administration of iodide of potassium in solution (1 to 2 grammes *de die*) very useful. Sometimes I prescribe

the liq. chlor. ferri, 5 to 10 drops, three times a day internally, and 2 to 10 drops in a tumblerful of 1 per cent. salt solution for syringing the nose. Of course, the individual predilection and habit of each medical man will make him take different ways to come to the same end, the cure of the patient. And this will be attained in a great number of cases. According to my experience, the prognosis is very good on one condition, and that is, that we have to do with real acquired aprosexia, and not with cases of congenital idiocy even of a slight degree. I say this because parents having heard of aprosexia, are very prone to consider their weak-minded children as suffering from that disease, and to make themselves illusions as to the result of the treatment. It is very important not to indulge in these illusions in any case where the inability to do mental work is congenital, even when we see such children having nasal obstruction and breathing through the mouth. But when it is ascertained that the patient has a good intellect, and that the development of his aprosexia has coincided with nasal obstruction and breathing through the mouth, then there is hope; and in such cases I would like to make a variation on the words made popular by Catlin, "Shut your mouth and save your life," and to say: "Shut your mouth and save your brain."

### ON SOME CAUSES OF BACKWARDNESS AND STUPIDITY IN CHILDREN:

AND THE RELIEF OF THESE SYMPTOMS IN SOME INSTANCES  
BY NASO-PHARYNGEAL SCARIFICATIONS.

Read in the Section of Otolaryngology at the Annual Meeting of the  
British Medical Association, held in Leeds, August, 1889.

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It is not at all uncommon to find children who suffer from deafness, the result of enlargements of the lymphoid (tonsillar) tissues of the naso-pharynx and fauces, described by their parents and teachers as being backward and even stupid. This backwardness and stupidity is usually accounted for by the defect in hearing, and the characteristic foolish expression of such children has been explained on purely physical grounds, as due to the obstruction in the proper air-way resulting in the open mouth and pinched, fallen-in condition of the *alæ nasi*. The fact, however, that children, the victims of nasal and pharyngeal obstructions, often suffer from headaches, especially when engaged in study, and frequently evince marked inability to fix their attention on their lessons or work for any length of time, has in recent years led many to suspect that these symptoms were not altogether due to the deafness, and that the stupid adenoid physiognomy, though partly explicable on physical grounds, was in part a reflection of some evident hampering of the cerebral functions. It is true that mouth-breathing and faulty respiration, added to insanitary surroundings, are admittedly prejudicial to the general health of young persons; but there is good reason for believing that these factors, added to impairment of the sense of hearing, are insufficient to account for the mental deterioration so often met with. That inability to fix the attention, and other allied neuroses, popularly ascribed to "over-pressure," are frequently associated with obstructions in the nose and throat was first unequivocally insisted on by Professor Guye, of Amsterdam, two years ago. That *savant* coined the term "aprosexia" to designate this condition.

Recent observations of my own made during the last twelve months have tended to confirm Professor Guye's views. I have been much struck by the fact that operations on children, undertaken for the relief of deafness associated with adenoid growths, enlarged tonsils, and hypertrophic catarrhal conditions of the nose, have frequently resulted in such an immediate improvement in the mental acuteness of the patients as was altogether incommensurate with the often slight immediate improvement in the sense of hearing. It has appeared to me that naso-pharyngeal scarifications have resulted in such a speedy relief of the aprosexia and other cerebral symptoms as could not reasonably be accounted for on the ground of correction of faulty respiration and an improvement in the general health.

I have been led to conclude that operative procedures probably

act beneficially by relieving congestions of the intracranial lymphatic and venous systems, as suggested by Professor Guye. It is well known that the intracranial veins and sinuses communicate with the veins of the frontal, ethmoidal, and sphenoidal air sinuses, and through these with those of the nose and naso-pharynx, and with the pterygoid plexus; and Axel, Key, and Retzius have proved that the intracranial lymphatics pass out of the skull along the course of the nerve-sheaths; further, those lymphatics which pass out through the cribriform plate of the ethmoid along with the olfactory nerves are in direct connection with the nasal and naso-pharyngeal lymphatics, which converge to and eventually enter the follicular lymphoid glands of the nose, naso-pharynx, and fauces. I have elsewhere contended that the various tonsils and follicular glands are *par excellence* lymph-secreting organs, which pour leucocytes and serum into the alimentary and respiratory tracts; in hypertrophic conditions of the tonsils (induced by contact with irritating nasal and oral fluids in morbid conditions of the system, or as the result of the exanthemata and other fevers and insanitary surroundings), the mucous membranes of the pharyngeal and faucial tonsils become thickened and thus prevent lymph-leakage and diapedesis of leucocytes into the pharynx, it follows that there results tension in the converging lymphatic systems; and as these latter form part of an anterior cranio-nasal lymphatic system, it is easy to understand that hypertrophy and abeyance of function of the nasal and pharyngeal lymphoid glands will bring about an increase in intracranial tension through lymphatic stagnation and congestion. This tension is immediately relieved by naso-pharyngeal scarifications, and the free bleeding which invariably takes place at the same time reduces any venous congestion that may exist, and this not only in the cranium, but within the nasal mucous membrane also, for I have frequently observed well-marked enlargements of the inferior turbinated bodies due to venous engorgement of the erectile tissue and adenoid and polypoid hypertrophy of the middle turbinated body rapidly subside after the removal of enlarged tonsils and adenoid growths of the naso-pharynx.

Now Ferrier has pointed out that extirpation of the præfrontal lobes in monkeys is followed by a marked impairment of the faculty of attention and observation, and it is not unreasonable to suppose that aprosexia and other symptoms associated with lymphoid overgrowths and obstructions in the nose and pharynx are the outcome of lymphatic and venous stagnation and tension in the structures occupying the anterior region of the cranium. Through the courtesy of Dr. Robert Jones, the Medical Superintendent of the Earlswood Asylum, I have been permitted to examine some of the backward idiotic and imbecile children of that institution. As is well known, most of such cases, excepting the hydrocephalic, exhibit the low sloping forehead indicating especially the small size of the anterior lobes of the brain, but a strikingly large number are subjects of the strumous or of the syphilitic diathesis. They are nearly all mouth-breathers, night-snores, and the victims, *inter alia*, of some form of nasal or pharyngeal obstruction. Many are deaf, all aprosexic.

Most writers have given struma and syphilis a very prominent place in the etiology of idiocy and imbecility, and adenoid growths of the naso-pharynx, hypertrophied tonsils, enlarged glands in the neck, and general overgrowth of the lymphoid tissues of the nose and throat are most frequently met with in individuals the subjects of the strumous and syphilitic diatheses. The question arises, whether want of cerebral development on the one hand and morbid conditions of the nose and pharynx on the other hand in strumous and syphilitic subjects have a casual or causal relationship. Does lymphatic stagnation within the cranium, as the result of hypertrophy and abeyance of the secretory functions of the tonsils and other lymphoid glands of the nose and throat interfere with cerebral development and function? In bringing this notion forward I am not for a moment suggesting that naso-pharyngeal scarifications are likely to improve the brains of idiots whose physical and psychical development was checked in the very early years of life or *in utero*; but if the fact be true that nasal and pharyngeal lymphoid obstructions interfere with the development of the cranial and intracranial structures, then it behoves us to pay more attention to such obstructions in very young individuals if we would lessen the number of stupid children.

It is a matter of everyday experience with aural surgeons to find that deafness and aprosexia in association with catarrh and hypertrophy of the lymphoid glands of the nose and pharynx date from an attack of one of the exanthematous fevers more especially

in strumous and syphilitic children; from my own, as yet limited, observations on backward school children I am led to believe that aprosexia and allied conditions often result from the above mentioned pathological causes when there is no deafness present to direct attention to the *fons et origo mali*. The relief afforded by naso-pharyngeal scarification is often remarkable. I need scarcely add that not every child with deafness of naso-pharyngeal origin is aprosexic, and not every sufferer from aprosexia is deaf; nor is it contended that all the supposed victims of over-pressure suffer from nasal and pharyngeal obstructions, but it is probable that a certain, as yet undetermined, proportion do so.

The stupid looking lazy child who frequently suffers from headache at school, breathes through his mouth instead of his nose, snores and is restless at night, and wakes up with a dry mouth in the morning, is well worthy of the solicitous attention of the school medical officer.

## NEW ANTISEPTIC ARTIFICIAL MEMBRANA TYMPANI,

WITH REMARKS ON THE TREATMENT OF PERFORATION AND OTHER DISORDERS OF THE MIDDLE EAR.

Read in the Section of Otology at the Annual Meeting of the British Medical Association, held at Leeds, August, 1889.

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SOME of the most striking results of simple surgical treatment follow the successful application of artificial drumheads in cases of chronic middle-ear disease. Individuals who are unable to distinguish clearly sonorous vibrations, or to follow ordinary conversation, find themselves, by the introduction of a little mechanical contrivance into the ear, suddenly placed in a new world of sound. Many of my patients have expressed their surprise at the simplicity of the treatment, and their satisfaction that they could so easily practise it themselves. If these statements are true, how is it that in every town and village of this country sufferers from permanent deafness and aural disease are to be found who have never given any kind of artificial membrane a trial? The fact, however, admits of a very easy explanation. Medical men engaged in the arduous duties of general practice really take very little interest in chronic middle-ear affections, and they regard their treatment as unsatisfactory and often practically hopeless. Many patients, partially deaf, are remarkably indifferent about their aural troubles, and parents often ignorantly neglect them in their children, and look upon "a running at the ear" as a constitutional error that ought not to be rashly checked. Every day a large number of chronic cases attended with serious deafness are seeking relief at the special institutions, and it is really astonishing to find how small a proportion of them have ever undergone any regular treatment.

*Aural Diseases in which Artificial Drumheads are Useful.*—The special forms of middle-ear disease in which the hearing power is improved by the insertion of an artificial drumhead are capable of well-marked definition. 1. It is especially useful in cases of perforation, but the probable increase in the hearing power cannot be estimated by any preliminary examination. The amount of benefit certainly does not depend upon the size or position of the injury, for in every case there are other abnormal conditions which exert a variable influence upon the result. It is almost impossible to have any loss of substance in the membrane without also some other structural changes in the tympanum. 2. The artificial drumhead is also beneficial in other alterations of the membrane involving abnormalities of tension in the conducting apparatus. It may be used with marked benefit in chronic middle-ear disease attended with ossicular changes and atrophy of the drum, or in cases of cicatricial collapse caused by inflammatory thickening of the membrane and lining of the tympanic cavity. In fact, in all cases of accommodative loss from alterations in the contents of the tympanum, the artificial membrane may be hopefully employed, provided the Eustachian tube is unobstructed and the naso-pharynx fairly healthy.

*Early Efforts to Compensate for the Loss of the Membrane.*—The great value of mechanical aids in diseases of the tympanum has long been recognised. Half a century ago methods were devised by surgeons for closing the opening of the drum in cases of