INTRANASAL PRESSURE A CAUSE OF HEADACHES, DIPLOPIA AND OTHER OCULAR DISTURBANCES.*

BY KATE WYLIE BALDWIN, M.D., PHILADELPHIA, PA.

Some years ago I was very forcibly impressed by the possible far-reaching reflexes from intranasal obstruction or pressure even, when nasal respiration remained free. The general development may be materially modified,—to such a degree as to cause serious anxiety. Frequently the nose is considered a possible cause, only after all other means of relief have been exhausted. Such desperate cases have formed a very large percentage of those coming under my observation. I long since decided that continuity of tissue; direct connection of nerve and blood supply was not an essential. Some quite insignificant injury to foot or hand may cause a severe headache, even though the nerve and blood supply is quite distinct. The perfect human being is more than an accurately adjusted machine in which the loss or loosing of a small screw may prevent the perfect running of the whole.

The fact that the removal of septal spurs or ridges, polypi, etc., has relieved severe headaches and pathological conditions in other parts of the body led me to investigate other causes of pressure in obstinate headache and eye troubles, cases in which neither spurs, ridges nor deflected septum could be blamed. In such cases my attention was first called to the fact that when the trouble is unilateral, or nearly so, the nasal tissues of the corresponding side are hypersensitive. The most careful introduction of the nasal speculum may be almost intolerable; while its use in the opposite side is not abnormally unpleasant. Thorough investigation usually shows a middle turbinate out of proportion to the space and consequently making pressure either on septum or outer wall. The touching of some especially close point will produce or increase the pain suffered.

When these conditions show at the first examination, I usually make several, having the patient report when free from the discomfort, also when it is severe. If a very careful contraction of all the soft tissues relieves the pain, while a touching of the special pressure points brings it on, I am assured of the connection between pain and pressure. Usually the patient is convinced, even if at first he has been skeptical. A rough examination is never admis-

* Read before the Tenth Annual Meeting of the American Academy of Ophthalmology and Oto-Laryngology, held at Buffalo, September 14, 15 and 16, 1905.

sible, neither is it necessary, and often would be the cause of failure to relieve, as the cases would not be well chosen, and nothing but disappointment follow. Keeping this constantly in mind, I have never failed to secure partial, if not complete relief, and the patients have been entirely willing to attribute the improved condition to the operation.

Some of our most careful observers say that an unpleasant dryness of throat and nose is prone to follow middle turbinectomy. My cases have not proved this statement true.

The following cases I have selected to report because they yielded to operation after much and long continued treatment had failed to give any relief:

Case No. 1. Katie J.—37 years old. Had never breathed through the nose. Always has had severe headaches, frontal and temporal, and a pain at the base of the nose, which seemed connected with that which was the hardest to endure, a "drawing", "clutching" pain in the occipital region, much increased by the recumbent position. Had glasses, but they did not relieve either the head or eyes. For three years had not been able to work, slept but little and ate less—often taking nothing but tea. For two years the pain had been constant, she being obliged to sit up night and day, either in a chair or with many pillows in bed. In fact she could seldom be induced to go to bed. In September, 1904, she was persuaded to consult Dr. Baldwin, of Newport, R. I., and I saw her the same day. She was ready to consent to anything. "Take my head off. Do any thing that will relieve this pain."

Examination showed a narrow nose. Pressure at the base increased the pain, especially that in the occipital region. Inferior turbinates in fairly good condition. Both middles tremendously large and very firm. With such a history there was no question as to the advisability of operating. The next day I did a double middle turbinectomy, being able to remove only about three-fourths of the left one. As I was about leaving Newport, it was impossible to do more until this summer.

She stood the operation remarkably well and in less than an hour exclaimed that all the pain in the back of the head was gone. I supposed the anesthetic was the cause but that pain never returned. The next night she was able to go to bed and lie with but two pillows. Now one year from the operation, her general condition is much improved. Still she is not a well woman, except by comparison. She and her family feel that there has been a very great change. In August, the patient suggested that she was able to return to work. In the past year she has really done many things.

It is not my purpose to report any but middle turbinal cases in this paper, but the following is of interest in connection with *Case I*:

A young woman of nineteen was relieved completely of a severe ache in the back of the neck, extending to the lumbar region, by the removal of a large septal spur and pharyngeal tonsil. It is now five years since the operation and there has been no return of the discomfort.

Case No. II. Dr. B.—for years had the feeling that the left eye was a lame member, not to be used unless necessary. The recumbent position caused the eye to become congested and muddy looking. About ten years ago a very marked episcleritis developed. Atropine was used continuously for three months. Nasal mucous membrane was very sensitive to cold, which caused pain and increased secretion. Up to eighteen years of age had much dull headache.

Examination showed extreme sensitiveness. The most careful introduction of the speculum gave much discomfort. Several times the patient left the chair. Any nasal douche was required very warm; if a little cool it caused pain and I was requested to increase the temperature. The left middle turbinate was large, anterior end soft and boggy. Nine years ago this summer I removed about three-fourths of it. Local anesthesia made the operation possible but far from painless.

Since the operation the nose is not abnormally sensitive to examination, the left eye has given no trouble in doing its share of the work and is no longer muddy and congested.

Case No. III.—A sturdy-looking German woman of thirty-two. Had severe frontal and temporal headaches for two years, increasing in frequency and severity, also pain in eyes, and obstructed nasal respiration.

Examination showed, inferior turbinates in fairly good condition, middle turbinates large. The septum was slightly deflected to the right, making operation on the right middle difficult; but as the pain commenced and was more severe on that side, this was the turbinate to first remove.

It was one of the most difficult turbinectomies I have ever done, the bleeding being free even from the puncture of the needle in injecting the anesthetic. More than the usual amount of discomfort followed the operation; at least the patient made more than the usual complaint. For a week or ten days she did not admit that the head was any better. In less than three weeks she was free from headache and could use her eyes without discomfort. Six months later there had been no return of pain.

Case No. IV.—November, 1904. Dr. T.—From early childhood had severe periodic headaches, giving sensation as of a band around the base of the brain, pains shooting to the circumference as if head would fly in pieces. Extreme prostration, vomiting always severe, and sometimes diarrhoea. Fever always present, at times high, 102-103° F. Paroxysms varied greatly as to severity; at times lasting only a few hours, again three or four days. Delirium present, on more than one occasion lasting several days. Post-nasal discharge constant. A profuse serum discharge demanded much attention. Frequent micturition very persistent. No eye trouble. Eight months ago paroxysms began coming at every menstrual period with increasing severity. General health became greatly impaired. Digestion about as usual. Patient ready to cry on the slightest or even no provocation.

There was no sign of polypi by anterior examination, but post-rhinoscopy showed them in both choanae. The inferior turbinates were much congested; the middle turbinates very large and they could not be contracted sufficiently to bring the polypi into view. There was a history of one from each side having been removed within two months. The general condition, the extreme pain and profuse serum discharge made the patient anxious for relief. When I remarked that the removal of the middle turbinates was supposed to cause dryness of throat and nose. The answer was: "By all means, remove them then." As the left was causing more pressure we decided that it should be removed first—and the other if necessary. I repeatedly contracted the right middle turbinate and removed practically all of the left one, and later several good-size polypi. As some were removed, others came into view and were removed with no other anesthetic than adrenalin. The patient was so sensitive to cocaine I could not use it without unpleasant symptoms and with the use of adrenalin there was little pain. All conditions quickly improved and the doctor was able to do a hard winter's work, but had pneumonia in the spring. There has no unpleasant dryness resulted and Doctor T. is ready to have the right middle turbinate removed at any time I think best. I shall keep the case under observation and operate only if symptoms develop.

Report of September 2nd, 1905: "I am happy that I can speak of it as in the past. I hate to think of the 'circus' I was having this time last year. I have had no headache since the operation. Nasal discharge greatly lessened, micturition normal. General health immensely improved."

Case No. V. August, 1903. Miss P.—Age, twenty-seven, seamstress. Had severe headaches and trouble with eyes for two years. Pain constant in the ball of left eye and at inner angle, extending down the nose, at times also in the right eye. Severe frontal headaches, extending to left temple and mastoid region, always worse at the menstrual period, increased by use of eyes. Much dizziness.

In 1901 the following glasses were prescribed for constant use:

O. D. + 1.25 = + 0.25 cy. ax. 180°

O. S. + 3.25.

In the two years they had made no change in the conditions, except in the dizziness which improved very much. General health always good until these head and eye symptoms appeared. When she came under my observation in 1903 she was much below par in every way, and this in spite of constant medical care. All symptoms were increasing and for a year she had not been able to use the eyes for anything without aggravating the pain in both head and eyes, especially on left side.

I had examined her nose in 1902 but did not feel that operation was justifiable. In August, 1903, her physician requested that I again see her. Examination showed extreme sensitiveness of nasal mucous membrane, especially in the left side. Middle turbinates very large; left causing much pressure. Examination increased the pain. Careful contraction of all the tissues gave some relief. Repeated examination gave the same result and operation was decided upon. The left middle turbinate was removed and further operation was not indicated as the headaches promptly disappeared and the eyes gradually improved as did the general health, the patient taking up her household duties, reading and sewing included.

In 1904 she reported as all right and doing just about as she pleased. In August, 1905, the young woman was able to tell me that since March she had been sewing in the shop, working as many hours as anyone. She was able to read and sew evenings if she wished, with no discomfort, except for an occasional very slight headache at the onset of her period. No unpleasant dryness of throat has developed.

Case No. VI.—In the fall of 1903, Dr. F.—came to the Polyclinic Hospital, Philadelphia, to do special work in eye, ear, nose and throat. After seeing several cases in which middle turbinectomy cured severe pain; one of his associates suggested that probably he had a large middle turbinate and that it was the cause of the pain he suffered. He was willing but not anxious to be used for clinic demonstration. Later he came to the office and I made an examina-

tion, which convinced him that in all reason the nasal condition had something to do with the pain and he decided to take the chances of an operation. The history was of a rather marked exophoria which caused severe pain in the eye but never real diplopia. When eighteen years old he began having every day (from about ten to eleven a. m.) severe pain in the left temple extending into the left eye and the two left upper bicuspid teeth. The teeth were both sound, but extracted with no effect on the pain. The pain was always attended by a feeling of fullness in the left side of nose with a constant desire to clear by blowing. In about an hour the pain would get better and the nose from being dry would become a little moist. The appearance of the moisture always meant an end of the neuralgia for the time. There was never any real pus in the discharge, which was a clear fluid very small in quantity. The fullness in the nose disappeared with the appearance of the discharge and soon the pain would leave. The coal-tar products relieved the pain, but it would usually get well of itself in from one to two hours. Quinine, tonics and arsenic did no good. He was unable to work while the pain lasted and at times it became so severe that chloroform was resorted to. Exposure to drafts brought it on at any time. Damp weather usually made it worse. In the dry fall, he was often free from pain for months. It was not a headache; it was a pain in the temple, cheek, eye and teeth. Occasionally it appeared on both sides, but usually on the left only.

December 29th, 1903, I did a left middle turbinectomy. Adrenalin did not blanch the tissues and cocaine had no more effect on the pain than so much water. After using all I considered safe we resorted to chloroform anesthesia. The bleeding was unusually free. The middle portion of the nose was very narrow so that work on the middle turbinate was difficult. This case with some others about the same time made me feel that I must find some instrument not then known to me and I had made a small saw which has served me well in many cases, when the space was too narrow for scissors or forceps. In fact I now seldom use the scissors unless in a very roomy nose.

The doctor was much relieved. The last of January, 1904, he went abroad for six months of study. He had no pain except while in England where it rained all the time. The report from him in August last is: "Your turbinectomy did me much good. I am now practically entirely free from the pain."

Case No. VII. Miss B——. Twenty-three years old was referred by Dr. Getty, with the history of severe left-temporal and

frontal head-aches with discomfort in left ear; accompanied by marked diplopia, the left eye only being involved. The statement was that Dr. Getty and the general practitioner had exhausted their resources with little if any improvement. The patient was obliged to give up her work as a stenographer and in a general way was fast losing ground in consequence of the pain and worry.

There existed hypersensitive nasal mucous membrane especially of left side, and a very large left middle turbinate, examination of which increased the pain and caused much suffering for the remainder of the day. Teeth and throat in fairly good condition except for a moderately large pharyngeal tonsil.

The date for operation was arranged when some near relative in the profession desired that she see Dr. Samuel D. Risley, who was a personal friend in whose professional judgment he had great faith. Dr. Risley saw Miss B—— and it was decided that the salicylates should be pressed for at least two weeks, using larger doses than had previously been given. Dr. R. said by all means have the operation if Dr. Baldwin thought it necessary, but that he did not see how it could possibly benefit the eye. For over two weeks twenty or more grains of salicylates were taken three times a day, without the slightest benefit. It was then decided to go on with the operation. A left middle turbinectomy was done February 21st, 1904. The patient was pretty well "knocked out" by the operation but was able to come to the office, a distance of several miles, on the third day. At the time of operation the exophoria was 24° at 16.4 feet; five days after operation only 12° .

On April 30th the pharyngeal tonsil was removed. There was a gradual improvement in the eye, until finally it overcame 10° at 16.4 feet with vision in either eye 16/131. There was very little headache from the time of the first operation. When I left the city the first of July she was so much improved that her friends considered it quite wonderful and thought the case should be reported so he that runs may read.

Miss B—— reported the 5th of October, having been quite well all summer. Had been back at her work and did well until one day she was asked to do some unusual work in a very short time. She accomplished the work but it proved a too great nervous strain and her general condition suffered much and the eye to some extent. I found a postoperative synechia and a tiny bit of organized granulation tissue, removal of which was beneficial, and on November 15th she was able to overcome 10° at 16.4 feet with vision in either eye, with glasses, 16/131.

The following report came from Miss B— August 21st, 1905:
 "I now see very clearly. Can read an hour at a time without any bad effects. My nose and throat give me no trouble and I can conscientiously say that I am a well girl."

The following is Dr. Getty's full report of the eye conditions:

August 29, 1903. Has had pain over left eye for past week. Sees double when looking to the left.

Wearing O. D.—0.25 = + 1. cy. ax. 75° = 16/131.2.

O. S.—0.50 = + 1.25 cy. ax. 100° = 16/131.2.

Orthophoria with correction.

Ophthalmic examination:

Media clear. Discs round. Fundus normal. Both eyes.

Cum Homatropine.

O. D. 16/393—0.25 = + 1.25 cy. ax. 85° = 16/131

O. S. 16/74 —0.25 = 1.50 cy. ax. 100° = 16/131

Rx + 0.25 off Orthophoria

December 26, '03. Exophoria 15° at 16.4 ft.

Images on a level.

January 27, '04. Not able to rotate left eye beyond median line. Other movements correspond to right eye. Exophoria 24° at 16.4 ft.

February 26, '04. Exophoria 12° at 16.4 ft.

April 20, '04. Orthophoria at 16.4 ft. Patient still sees moving objects double, as trolley cars or people at a distance.

September 3, '04. Patient complains of not seeing clearly and at 3 ft. sees double images on a level and both distinct.

With comidation,

O. S. Vision 16/131.

O. D. Vision 16/164. Exorophoria 3° at 16.4 ft.

September 2, '04. Exophoria 10° at 16.4 ft. with glasses. Has a swelling of upper lid of left eye, also pain in the eye. The ophthalmoscope showed no change in the eye ground.

November 15, '04. Overcame 10° at 16.4 feet.

Vision in either eye with glasses 16/131.

320 S. 11th St.