ulcers. While a number in each class have been benefited, one case in each will be cited to show the efficacy of the treatment.

In March, 1885, I was called to attend a man whose hand had been caught in the machinery in a planing mill. The proximal end of the second phalanx of the middle finger of the right hand had been broken obliquely off, the joint torn open and dislocated, and the broken piece of bone adhering to the integument was lying on the side of the finger. With some difficulty the dislocation was reduced and the finger placed upon a splint to which it was bandaged, and then the whole hand placed on another splint. The wound had been washed with carbolic solution, which was also applied to the finger on cotton before bandaging. On the third day erysipelas supervened, making it necessary to remove the splint from the finger, and dislocation ensued despite my efforts to prevent it. On the subsidence of the erysipelas the wound in the finger was found to be filled with granulations, and a large quantity of pus escaped from the parts. Iodoform ointment was ordered, and the wound daily cleansed with carbolized water, but things went from bad to worse, and finally, I ordered the powder compounded according to the formula above given. Improvement commenced at once; suppuration diminished, the patient's appetite improved and his condition was encouraging in every way, when he left the city about three weeks after the injury was inflicted. Shortly afterwards I received a letter from his physician in Pennsylvania, asking for a copy of the prescription for the powder, which he stated had proven very useful in the case and he desired to continue it. I do not know what the result of the case was, although I believed that amputation of the finger would be necessary; still the comfort afforded the patient by the dressing mentioned, and the marked improvement in the appearance of the wound before the case passed from my charge, justifies me in saying that it was the proper treatment.

About four months ago I was asked to see a lady about 65 years of age, who had been a cripple for four years from ulcers affecting the lower part of the right leg and foot. The ulcers were deep and painful, and were probably of varicose nature. The back of the ankle, the side of the foot as far as the metatarsophalangeal joint and the plantar surface of the heel were the seat of about eight or ten ulcers, from all of which pus flowed in considerable quantity. The tendo-achillis was exposed in the bottom of one of these ulcers.

The patient had been, for years, using zinc ointment, and as she expressed it, "without doing any good." I directed her to cleanse the parts thoroughly, and then dry them with absorbent cotton, after which she was to fill each ulcer with the powder and heap the same on the surrounding surface. She was then to cover the parts with absorbent cotton so as to prevent the powder from falling away, and finally secure the whole with a bandage. The dressings were not to be removed for two days unless they became uncomfortable. Improvement began at once, and at this time all the ulcers have healed except one. The patient is able to bear her weight on her foot and

walk without pain, and is very grateful in her expressions for the relief which has been afforded.

Still another class of cases which I omitted to speak of before, may be mentioned now. I have reference to cases of sore nipples. In several cases recently under my care, the patients have been relieved by the dry applications after the usual ointments had failed to afford relief.

I am not aware of any systematic effort to introduce dry dressings in the treatment of cases, such as have been herein mentioned. Hewson's "dry earth" treatment was a move in the right direction and deserved more consideration than it received. In looking over the prescription files in drug-stores, I have been struck with the remarkable absence of prescriptions for dusting powders and the great numbers of orders for ointments. This has forced me to believe that the utility of dry dressings is not appreciated by the profession as it should be, and for that reason it is now introduced for discussion.

In conclusion I wish to present the following propositions, which it is believed are based on correct principles:—Dry dressings of the character above indicated in the treatment of cases such as those referred to are rational, comfortable, cleanly, easily applied, antiseptic and efficacious.

DISEASES OF THE ANTRUM HIGHMORIANUM; WITH REPORT OF TWO CASES.¹

BY G. W. HUDSON, M.D.,

OF CAMDEN, ARK.

It was not until the knowledge of anatomy had made considerable progress that the existence of this cavity was known. Highmore, in the early part of the seventeenth century, was the first anatomist to give a correct description of this cavity. I hope it will not be thought presumption in me to call attention briefly to the anatomical outlines of this cavity.

It should be remembered, in connection with diseases of the maxillary sinuses, that this cavity is of considerable size, with walls of different thickness. In youth the walls are thick and the cavity small. After attaining its maximum size in the adult it is again diminished in old age. It is larger in males than in females. But in adult life its size varies in different subjects, and the larger the cavity the thinner the walls. The roof is formed by the orbital plate, and the thickness of the floor by the alveolar process; the inner wall or base presents, in the disarticulated bone, a large irregular aperture, which communicates with the nasal fossa. The margins of this aperture are thin and ragged, and consequently easily broken down in cachectic subjects with disease of the nasal cavity of a chronic, mercurial, or venereal nature.

Owing to the close proximity of the floor of the sinus to the alveola, the roots of the molars, bicuspid and cuspid teeth frequently enter the cavity; and if all the circumstances connected with diseases of the antrum could be ascertained, the majority of them

¹Read before the State Medical Society of Arkansas, April 22, 1885.

doubtless have their exciting causes in a diseased condition of the teeth, gums, or alveolar process.

I have had several cases of disease of the antrum under my observation within the last two years, and with two or three exceptions, the exciting or premonitory cause was found in decayed teeth, or periodontal abscesses. The most simple way to find out whether the teeth are the offending cause is to tap each tooth sharply with an instrument, when, if there is one that is diseased at the root or enters a diseased antrum, the patient will cry out with pain. There are other lesions of this cavity, caused by carelessness in extracting teeth, and by direct blows upon the face; or the patient may contract a violent cold, the excitement expends itself about the nerves, the Schneiderian membrane becomes inflamed, and by simple continuity of structure the lining membrane of the sinus becomes vascularly excited or congested to such an extent as to close the opening into the nerves. The mucus thus confined will, if not removed, sooner or later become purulent, and make its exit through the most dependent points of the cavity; which generally proves to be either through the nasal septum or the alveolar cavities, burrowing along the fangs, escaping around the necks of the teeth, and occasionally through the cheek. Cases are reported in which the orbital plate gave way and the pus found its exit somewhere along the lower eyelid. The cavity is also subject to some of the most formidable and dangerous growths, both malignant and non-malignant, that the physician or surgeon is ever called upon to treat.

The symptoms of a diseased maxillary sinus are varied. I have generally found the patient complaining of a heavy, dull sensation in the cheek; and at times of an acute lancinating pain, usually attended by some constitutional disturbance, high temperature and rigors. I wish to insist upon the importance of an early diagnosis, as it may be safely assumed that in a large majority of the cases of disease of the antrum, the danger to be apprehended arises more from neglect than from any necessarily fatal character of the malady. My experience warrants me in saying that the majority of the cases that have come under my care have been sadly neglected; and treated for everything but the real disease. The rule (unless the case is well marked) is to give the patient some simple remedy for nasal catarrh—or his case is pronounced one of facial neuralgia, and some favorite panacea prescribed.

The treatment of incipient disease of the antrum is generally very simple. Success depends in these cases (as in all others) upon an early and proper diagnosis. Remove the cause of offense, when possible, either by surgical procedure or judicious medication. The following case will illustrate what I have been trying to explain;

Mr. W., aged 58, merchant, had suffered a great deal from pains in his face and head. He had been under treatment almost constantly for five years for facial neuralgia. His teeth had been defective for ten years; frequently has abscesses around the superior molars of the left side. Gums swollen, a heavy, dull pain in the cheek under the eye, attended at

times with fever and rigors. Nasal cavity dry and hot. Suspecting disease of the antrum, I advised the extraction of the decayed teeth, to which he reluctantly consented. After extracting the teeth, upon examination, I found the alveolar processes spongy and bathed in pus, which went to confirm my diagnosis,—then, with a triangular pointed instrument, the floor of the antrum was perforated through the alveolar cavity of the first molar; the withdrawal of the instrument was followed by about half a teaspoonful of muco-purulent fluid, showing conclusively that this cavity had been diseased for some time.

The treatment consisted in syringing out the cavity twice a day with warm water and a wash composed of compound tincture of iodine and Listerine—each time closing the opening with a pledget of absorbent cotton. This treatment was kept up about six weeks. At the expiration of this time he reported himself perfectly well, and twelve months have now elapsed and he has had no return of his former trouble.

Case 2.—Mr. K., aged 48, teacher, has suffered more or less with pains in the face and head for ten years. All of his teeth were extracted two years ago. The pain was of a heavy, dull character, extending from below the left eye to the eye, temple and ear, simulating neuralgia to a marked extent. For twelve months before he came under my charge, he had violent clonic contractions of the facial muscles of the left side, particularly of the masseter muscle, coming on every fifteen or twenty minutes and lasting eight or ten seconds—when the spasm came on he had to stop talking or eating, and catch his jaw and hold it until the paroxysm passed off. He also complained of a tickling sensation in the throat, as though something was dripping from the soft palate. There was no tumefaction of the gums or soft parts. The palatal and maxillary bones were to all appearance in a healthy condition. The muscles of the face were soft and somewhat relaxed when the paroxysms passed off. No appearance of paralysis. The lower eyelid a little everted; sight very good; hearing dull; tympanic membrane normal, though pale. The speech was more thick than usual. The mucous membrane of the pharynx and posterior nares was thickened and indurated.

With this array of symptoms, I did not venture upon a diagnosis, and my prognosis was not favorable to a rapid recovery. Suspecting, however, that a diseased condition of the antrum might be the exciting cause of some of the prominent symptoms, I advised trephining the sinus, to which he consented. The operation was commenced by making a crucial incision through the gums over the alveolar process near the origin of the second molar, and after desecting back the flaps, the floor of the antrum was perforated with a triangular pointed instrument, and a quantity of muco-purulent fluid escaped. The subsequent treatment of the cavity consisted in using astringent and detergent washes.

The muscular contraction was slow to yield. Electricity, both galvanic and Faradaic, was used, but only aggravated the paroxysms. A prescription of phosphide of zinc and strychnine seemed well suited to the case, and he improved rapidly on it. At the expiration

of about eight weeks he reported himself cured, and has no symptoms of his former trouble.

In making my report of this second case, I shall leave you to draw your own inferences, for I must say that some of the symptoms were very obscure, and I have been unable to account for them.

CHRONIC CONJUNCTIVITIS DEPENDENT UPON DISEASE OF THE INTRA-NASAL TISSUES.¹

BY N. R. GORDON, M.D.,

OF SPRINGFIELD, ILLS.

There is a form of conjunctival disease which is dependent upon chronic inflammation of the intra-nasal tissues. I am not aware that any author has made special mention of this subject, but some have given a passing notice without particular effort to portray the condition of the nasal and ocular mucous membrane. The intimate connection existing between the conjunctiva and the Schneiderian membrane through the medium of the vaso-motor and sympathetic nerves, does not here require elucidation.

Observation has taught that irritation affecting the ocular mucous membrane is reflected to the nasal mucous membrane, and *vice versa*; this action takes place through the intervention of the vaso-motor nervous system. This conjunctival disease is chronic inflammation of the conjunctiva and the connecting tissues, accompanied by increased thickness of the membrane, especially of the palpebral portion, which is very slightly roughened, giving it somewhat the appearance of trachoma in a mild form. The tarsal cartilages, tarsal glands and ciliary follicles are more or less involved, with marked lachrymation and photophobia; pain is sometimes intermittent, more severe in afternoon. These cases are very chronic in character, and possibly in the majority of instances have been cases of trachoma, which may be the legitimate offspring of conjunctival inflammation; the trachomatous growth has either been destroyed by treatment, or not appeared as a sequel or complication of the inflammatory action. Usually the former condition exists.

My experience does not enable me to give any reliable diagnostic symptom or condition, which would aid in the discrimination between the idiopathic and sympathetic form of chronic conjunctivitis, that is, from the examination of the eye alone; but the diagnosis may be determined by the coexistence of disease of the intra-nasal tissues. This disease of the intra-nasal tissue is usually a chronic rhinitis, of the hypertrophic character—mucous membrane exquisitely sensitive, with an abundant flow of thin, watery mucus.

The objective symptoms are those of acute rhinitis, with a chronic duration, or with the appearance as presented in so-called hay fever. A marked and important character of the conjunctivitis is its chronicity; it is not limited by weeks or months, but years; it yields slowly and only temporarily to the orthodox method of treatment of chronic conjunctivitis. The

patient contracts cold with great ease and frequency, followed by an increase in the already copious flow of mucus from the nasal passages, also an increase in the grade of inflammation of the conjunctiva; often muscular rheumatoid pains, especially in patients beyond middle life.

The successful management of this form of conjunctivitis depends upon the proper treatment directed to the nasal passages. Dr. Noyes says that nasal catarrh often is causative of conjunctivitis, and when such is the case requires treatment. Many cases of chronic conjunctivitis that visit the oculist for months to receive treatment for the eye alone, may be speedily cured by directing the treatment to the nasal and post-nasal surfaces, thus making the ophthalmic treatment secondary in importance, as will be developed in the report of cases. Vaseline, in which there is incorporated a small amount of encalyptol and pinus Canadensis, is sprayed in the nasal and post-nasal passages daily, until the parts give evidence of improvement, which is usually about two weeks; then less frequent until the patient recovers.

The ophthalmic treatment consists in the application of plain vaseline, or in combination with boric acid. This application, which is made by the patient, should be very free and frequent, three or four times per day, with considerable friction. Suitable systemic medication is prescribed according to the indications. Under this treatment I have seen rapid recovery take place of the most severe forms of chronic conjunctivitis, as is shown in the following cases:

Case 1.—Mrs. M., aged 53 years; eyes affected for seventeen years. During the last eighteen months of this time she states they were in the condition in which I found them at the time of her first visit to my office, Nov. 25th, 1884. The conjunctiva was intensely red and injected, and somewhat roughened from hypertrophy of papilla, and epithelium, tarsal cartilages and tarsal glands, and ciliary follicles were involved; great lachrymation and photophobia; the diffused light from the window caused an increase in pain. She was led by an assistant.

The intra-nasal tissue was found to present the condition characterized by chronic rhinitis with hypertrophy of the turbinated processes, copious flow of watery mucus from the nasal cavities, and increased amount of sticky, tenacious mucus from the post-nasal surface. The posterior wall of pharynx was ramified by enlarged tortuous blood-vessels, indicating the existence of chronic inflammation. She was treated daily for three weeks, at which time she was considered well enough to return home. About the middle of January, six weeks after the time she began treatment, she returned to my office, her eyes looking quite well, and but little indication of the former disease. Thus within the space of six weeks she was cured, and her eyes remain well to the present time.

Case 2.—Mrs. G. aged 50, eyes affected for twelve years. At the time of her first visit to my office, June 24, 1884, her vision was $\frac{3}{80}$, which condition she affirmed had existed for four or five years.

Examination revealed practically the same condi-

¹Read before the American Rhinological Association, Lexington, Ky., October, 1885.