half the diameter of its body, both inferior articulating processes of this bone having leaped over the adjoining processes of the other without fracture of either. The anterior common ligament was entirely torn across, and the posterior common hung together by a few shreds only, and was peeled off from its attachment to the fifth body; of the ligamentum subflavum, only a narrow band remained on the left side. The intervertebral substance was torn chiefly from the fifth, but partly from the other, so as not to hold them together at all. The two capsular ligaments were ruptured in front

thicker than paper, were torn away with the soft tissues, and left this aspect of the bone a little rough, but did not affect its shape or the mechanism of the dislocation in the slightest degree.

The spinous process of the sixth bone was long, and seemed longer by the recession of the one above. It was, undoubtedly, the one considered to be the vertebra prominens in the examination before death, so that what was the real deformity of the accident was overlooked as the natural projection of that bone.

Stoughton St., Sept., 1872.

AGORAPHOBIA.

By EDWARD T. WILLIAMS, M.D.

IN the JOURNAL of the 31st ult. is published an account of a case of "Agoraphobia," a name invented by Westphal, of the Berlin Charité, to designate a peculiar disorder in which a dread of crossing streets and squares forms one of the prominent symptoms. Notwithstanding this distinguished authority, I take the freedom of dissenting from the implied position of the Journal writer in ranking agoraphobia as a distinct affection or even symptom, and to consider it simply as a form of vertigo combined with nervousness and apprehension, all of them symptoms of the commonest occurrence in a large proportion of cases of nervous disease.

Reviewing the symptoms of Dr. Webber's case, the tightness and heaviness of the head, the dizziness on stooping, the impairment of recollection, the apprehension and melancholy, the muscular weakness, prickling and formication in the left leg and side, the startings and pain in the left leg, the neuralgic pains in the left shoulder, face and head, with the history of convulsions, self-abuse, syphilis and hard drinking, we find every probable indication of some chronic lesion in the right half of the brain, either congestion, softening, sclerosis or syphilitic deposit. As to the agoraphobia, it should be noticed that the peculiar feeling of dread was not experienced solely in crossing the street, but in crossing a bridge or a plank placed over a brook, in looking out of a window, in watching persons at work on a steeple or building, and at the handling of rats and mice, a symptom suspiciously suggestive of delirium tremens.

The following is a brief summary of the three cases of Westphal, from his paper on *Agoraphobia* in the *Archiv für Psychiatrie*, iii. 1.

FIG. 2.—Section of the specimen; left half showing contraction of canal, rupture of ligaments, &c.

FIG. 3.—Outline showing the dislocation and locking of the articular processes and condition of the capsular ligament. There is no essential difference between the two sides.

and behind, but their lateral portions were more or less entire, and held the bones firmly in their new position. Both bones were whole and uninjured, except where the periosteum was peeled back from the anterior surface of the left inferior process of the fifth vertebra at the place of origin of the capsular ligament. Here, three or four gritty particles like fine sand, and not

The first was a man 32 years of age, a frequenter of brothels and cafés, and a frequent sufferer from gonorrhœa; he was well acquainted with the sensation of vertigo, and experienced it on ascending spires, &c.; had occasional attacks of hemiopia and temporary blindness, preceded by scintillations of light before the eyes; his hand trembled habitually when extended; he was accustomed to a sort of panic (angst), coming over him suddenly, sometimes when crossing the street, sometimes on the sidewalk, especially at night, sometimes at the theatre or in church; it was accompanied by a flushing of the face and a trembling all over. The case was evidently an incipient congestion of the brain.

The second case was a young man of 24, belonging to a family of marked talent and peculiar nervous susceptibility; the great-grandfather was a cataleptic; the grandfather, father, three members of the father's family, and the patient's own brothers and sisters were all subject to severe headaches, with flashes of light before the eyes, hemiopia, &c. The patient himself, when a child, had suffered in the same way, and since the age of 14, had been subject to occasional epileptic fits with headache, and tenderness on pressure over the left eyebrow at the point of exit of the supraorbital nerve; had frightened spells, like the last patient, ushered in by a sensation of warmth, beginning in the abdomen and rising into the head, accompanied by mental confusion, palpitation of the heart and general tremor. These attacks occur when crossing a street or square, in unfamiliar streets at a distance from home, on Sundays when the shops are shut, when riding in public carriages or omnibuses, and at theatres and concerts, in short, in all large halls where numbers of people are assembled together. These paroxysms are evidently epileptoid and caused by cerebral congestion. It will be seen that the paroxysms, as in the previous cases, take place under various circumstances besides when crossing the street.

The third patient was an engineer, 26 years of age; has a sister supposed to be epileptic; was subject when a child to occasional spasms affecting the right arm, and at a later period had two attacks of convulsions; is subject to vertigo and to sudden frights, commencing with a feeling of oppression about the heart, a heat and redness in the face, and an apparent sinking of the ground from under his feet, followed on the next day by a feeling of depression and fatigue. The spells occur on crossing a square, but are less severe if he has a

cane or umbrella to bear upon, or a lamp-post in the middle to rest by; he dreads passing an unbroken row of houses or walking where the streets are empty, as on Sundays. The first attack occurred suddenly, about the age of 16, after listening to a fatiguing scientific lecture; at 20, he suffered from peculiar sensations in the back of the head, preceded by a feeling of warmth mounting from the feet to the head. He had read many medical works on Insanity, and fancied he was becoming deranged. This case, like the last, seems to be epileptiform in character, and dependent on congestion of the brain, caused by over-study. The existence of a well-marked aura deserves to be noticed in both cases.

Of these patients, the last of Westphal's is distinctly asserted to have been subject to vertigo; the first was well acquainted with the sensation and experienced it in ascending spires; Dr. Webber's patient had dizziness on stooping; while case second, of Westphal, though vaguely stated, is clearly said to have been acquainted with the sensation, a knowledge he could hardly have obtained except from personal experience. They all had a dread of crossing squares (agoraphobia), and a similar dread under certain other circumstances, to which, for consistency, appropriate classical terms ought equally to have been applied, as ecclesiaphobia, &c. However, confining himself to agoraphobia, Westphal, as if anticipating the self-evident objection to his views, goes into a labored argument to prove that it is something different from vertigo, because one is a mere dizziness (schwindgefühl), while the other is a feeling of fear (angstgefühl). Now fear is one of the commonest emotions of the human mind, even in health. It is habitual with certain temperaments. It is especially frequent in irritable states of the nervous system with an overloaded brain. Certain diseases, as epilepsy, delirium tremens, hydrophobia, &c., are particularly characterized by it, and out of the four cases described, the paroxysms in two were decidedly epileptiform, while another, who had previously had fits, was a confirmed drunkard, with a probable tendency to delirium tremens. Finally, fear often coexists with ordinary vertigo, and constitutes its chief symptom. Hence, its pathognomonic importance is slight.

The explanation of agoraphobia, as I view it, is extremely simple. A person attacked with vertigo naturally seizes hold of the nearest object for support; a person subject to such attacks loses confidence in

his power to walk alone, and feels unsafe without something at hand to cling to in case of emergency; he has the same feeling in crossing a square that other men do in standing on the edge of a precipice, there is danger of being run over; add to this a state of nervous irritability amounting almost to insanity, and the pathogenesis is clear.

I speak from some degree of personal experience, having been a subject to vertigo for nearly three years. I have often had feelings of uneasiness in crossing an open square, in passing a vacant lot, or in going over a bridge. The same is true in the dark. Finally, I have, within a few days, questioned a number of persons similarly affected, and find that almost all of them have noticed the same feelings.

I am forced to conclude, therefore, while expressing the highest appreciation of the careful study bestowed upon the subject, that agoraphobia is nothing more than vertigo, with an element of nervous apprehension superadded; that it is in no sense a disease by itself, or even a specially distinctive phenomenon, and that, viewed merely as a symptom, it is of far too little consequence, either practically or scientifically, to deserve the cumbrous and somewhat pedantic designation bestowed upon it by the learned professor.

No. 4, Centre Place, Roxbury.

APPLICATION OF ELECTRICITY.—An article of the *Wiener Med. Presse* quotes a communication made by Dr. Benedict to the Medical Society of Vienna on the application of electricity to medicine. He declares that great results can be obtained from Fromholt's zinc and lead pile. He himself constructed a pile of zinc and carbon, which could be put in action by a solution of one gramme of bichromate of potash in fifteen grammes of sulphuric acid. He has made use of electricity in tumors and inflammatory swellings of the joints, by applying the current, not to the tumor itself, but to the nerves which ramify in it, or to that part of the spinal cord from which the nerves emanate; also for tumors containing liquid, such as hydrocele; for aneurisms, by introducing needles communicating with the positive pole; for lymphatic tumors, by introducing needles connected with the negative pole, and taking care to conduct only a moderate current, so as to avoid suppuration and alterations; and also for indolent buboes, neoplasms and cancers.—*British Medical Journal*.

Progress in Medicine.

REPORT ON DISEASES OF THE THROAT.

By F. I. KNIGHT, M.D. Harv.

Laryngotomy for the Removal of Neoplasms (Krishaber, Planchon, Guyon, Custer, Schwebel, Luschka).—A distinguished German laryngoscopist who has had much experience in the removal of neoplasms from the larynx, recently remarked that he had never performed laryngotomy for this purpose, because he had never had a case in which it was necessary in order to remove the growth. Still, there are cases in which it undoubtedly may be necessary on account of the situation of the growth (e. g., in the ventricle of Morgagni), the age of the patient, or some other peculiarity of the case. His remark, however, shows the great improvements which have been made in the methods of operating *per vias naturales*.

We wish, however, in the present article, to lay before our readers some account of the *improved methods of laryngotomy*, when this operation is necessary. Until the appearance of Krishaber's article (*Dictionnaire Encyclopédique des Sciences Médicales*, 1868), no general laws in regard to the limitation of the operation had been laid down for the guidance of the surgeon. In this excellent article, M. Krishaber says:—

"We have just seen, in considering the two dominant symptoms, that the polyp of the larynx being diagnosticated, the surgeon, according to the nature of the symptoms which it establishes, should make, sometimes, direct laryngotomy, sometimes this operation preceded by tracheotomy; and ought sometimes, on the contrary, to operate *per vias naturales*." "When the polyp is voluminous and, situated in the cavity of the larynx, is liable to cause asphyxia, it is necessary to perform tracheotomy. If the polyp is multiple, if its extraction *per vias naturales* encounters difficulties pertaining to the age or particular condition of the patient, if the nature, even, of the polyp causes a fear that a partial removal may cause a rapid multiplication, in all these cases the polyp should be extracted *per vias artificiales*. When, on the contrary, the polyp is situated sufficiently high (at the tip of the epiglottis, for instance) to permit it to be seen directly, or when, with the laryngoscope, it is discovered in the cavity of the larynx, if its volume occasions slight dyspnoea, if it is