The growths which follow degeneration of the thyroid body are alone amenable to parenchymatous injection. Madelung advises that as a precautionary measure tracheotomy should be done before an injection is employed. Excepting posterior tumors, extirpation of accessory goitres does not in general offer great difficulty.

ANÆSTHESIA BY BROMIDE OF ETHYL.

The profession is already familiar with the details of the earlier experiments made with this drug, and recently their attention has been directed to it by the death attributed to its employment, by Dr. J. Marion Sims. His theory of the cause of death (from the poisonous action of the agent) is not accepted by Dr. Levis, who has used the anæsthetic between two and three hundred times, without bad symptoms, in operations not lasting over forty minutes. If Dr. Sims's evidence is not conclusive as to the cause of death, it must be conceded that he presents strong testimony for warning the profession of a drug that may prove, upon additional experimentation, to be more poisonous than chloroform or bichloride of methylene. It remains to be seen whether, from the comparative ease attending its administration, patients will be submitted to its influence while the death-rate is undetermined, or if experiments upon the lower animals are to demonstrate its toxic effects. It is fair to conclude that tests on the human subject, justifiable before the days of sulphuric ether, are no longer so, since the necessities, if not the luxuries, of anæsthesia are already provided for.

THE TREATMENT OF TRANSVERSE FRACTURES OF THE PATELLA.

At a recent meeting of the Medical Society of London, Mr. Rose presented two cases of transverse fracture of the patella by muscular action, with separation of the fragments, treated by him at the Royal Free Hospital. He cut into the joints antiseptically sixteen days after the injury and wired the fragments together, as first performed by Dr. Cameron, of Glasgow. Antiseptic dressings were afterwards applied. In the first case, the temperature never rose above 99° F. nor the pulse above 90. The dressings were changed eight times; horse-hair drainage was employed, and the last hair was removed on the twentieth day after the operation. The wires were cut down upon and taken out on the sixth week. The details of the second case were about the same as those of the first. In the latter, movement at the knee-joint was limited; in the former, the patient could bend his knee to a right angle, walk up stairs and had evidently free use of the rectus muscle. It was thought that bony union had taken place in both cases. In the discussion which followed, the propriety of performing the operation in recent fractures was questioned by Messrs. Bryant, Henry Smith, and Amphlett. Mr. Bryant considered that the result in the second case was very good, but in the first not equal to results in cases he had seen treated in the usual way. He would divide fractures of the patella into two classes, old and recent. In the former, where the limb is almost useless, it is justifiable to run some risk in order to cure the patient. In recent fractures, however, where the grave consequences of opening the knee-joint are dependent upon the protection afforded by a Lister dressing carefully applied, exceptions were taken. Mr. Lister and Mr. Rose advised the performance of the operation in recent cases rather than wait until the rec-

tus muscle has had time to become weaker and shorter, and the usefulness of the limb impaired. Mr. Lister strongly deprecated the adoption of this operation by any surgeon who did not fully understand the antiseptic treatment, and thought it wrong to do the operation in old cases as well as in the recent, unless the surgeon was morally certain that decomposition would not follow the operation. If that risk were abolished, it was the surgeon's duty to treat recent fractures in the same way as old ones, it being the only treatment holding out a certain prospect of a good result in all cases.

INGUINAL CASTRATION IN RETAINED TESTICLE.¹

Monod and Terrillon in their memoir on this subject conclude that it is not a dangerous operation. In fifty cases, peritonitis occurred three times, and only once resulted in death. The operation is easy, and is indicated when the testicle is painful, or the seat of grave inflammatory processes (false strangulation).

Hospital Practice and Clinical Memoranda.

A CASE OF TETANUS: RECOVERY AFTER SEVEN WEEKS.

BY C. C. FIELD, M. D., LEOMINSTER.

FEBRUARY 20, 1880, C. K., aged thirty-eight years, of great muscular strength and in robust health, temperate, a manufacturer of combs, while sawing horns received a severe blow upon his right eye by a horn, thrown with great force in a slanting upward direction from a rapidly revolving circular saw, crushing the eyeball up against the upper floor of its socket. There was also a wound in the lower eyelid, an inch and a half long, parallel with its edge and penetrating the cavity containing the eye. Great swelling and ecchymosis soon followed, but not much pain nor febrile action at any time afterwards. A compress wet with cold water was applied to the injured part, and retained there. Four days afterwards (February 24th), Dr. B. Joy Jeffries, of Boston, saw the patient, and thought the eye injured beyond reparation, probably, though, on account of the great swelling, its exact condition could not be ascertained. He advised a continuance of the cold compress, the bowels to be kept open, and the removal of the eyeball if the uninjured eye become affected sympathetically. On the eighth day after the injury (Friday, February 27th), in the night, tetanic symptoms were first manifested by violent contraction of the diaphragm, supposed to be an attack of cramp in the stomach, tetanus not being suspected. This was relieved by the subcutaneous injection of one sixth of a grain of morphine. On Saturday and Sunday, the two following days, the patient complained of a feeling of "lameness" in the muscles of the jaw, and the next morning trismus was fully developed. The following day, Tuesday, March 2d, the injured eyeball was removed by Dr. Dennett, of Boston.

At the onset of the trismus the prescription was ten grains of chloral hydrate and ten grains of bromide of potassium alternately once in two hours, and the medicine was taken accordingly. Tonic spasms as they occurred were relieved by hypodermic injections of morphine and by friction with the hands. This treatment was continued through the first and second weeks of the disease.

¹ Arch. gén. de Méd., March, 1880.

During the first four weeks the muscles of the trunk — back, neck, and abdomen — were in a state of rigid clonic spasm, drawing the head backward and preventing the body from bending forward. For the same time and through a part of the fifth week violent and very painful tonic spasms affected different muscles of the body and limbs more or less frequently, sometimes slight and relieved by friction, at other times violent, requiring for relief the injection of one eighth to one sixth of a grain of morphine hypodermically. It is a noticeable fact that the tonic spasms occurred in the muscles of the upper part of the body — the arms (not the fore-arms) and neck — and the diaphragm during the first two weeks, and of the lower limbs and back the third and fourth weeks and a part of the fifth.

At the end of the first week (Friday, March 5th), Dr. C. D. Homans, and six days later (Thursday, March 11th) Dr. Calvin Ellis, both of Boston, saw the patient with me in consultation.

Until this time, near the end of the second week, the pulse had been about 84, and the temperature not sensibly elevated above the normal standard. The bromide and chloral had been given without intermission, as at the accession of trismus, and the injections of morphine and friction were resorted to when the tonic spasms required.

The day following the consultation with Dr. Ellis (Friday, March 12th) the patient, having taken ten grains of chloral once in four hours — sixty grains a day — for twelve days, began to show signs of increasing debility, requiring more help in being moved in the bed or from it; his pulse also became more frequent, rising to 96 at noon, 108 in the evening, and 120 at two o'clock in the night, with Cheyne-Stokes respiration.

The question was forced upon our minds whether the present state of the patient was caused by the protracted use of the chloral, or by approaching dissolution. To solve the doubt the use of the chloral was suspended at once, and the next morning the pulse had fallen to 108, at noon to 96, and at night to 84, as before, at which rate it continued until approaching convalescence. For the chloral omitted the subcutaneous injection of morphine — one eighth to one sixth of a grain — once in eight hours was substituted; and after two days, as the quieting effect of the morphine did not last to the end of that time, six or eight grains of chloral were given four or five hours after the morphine. This small quantity had the desired effect. The bromide, morphine, and chloral were continued in this way through the third week, with considerable abatement of the force and frequency of the tonic spasms, and we began to entertain hopes of the final recovery of the patient. But in a day or two afterwards, on Sunday, March 21st, at the beginning of the fourth week, the patient was seized with extremely violent and painful spasmodic contraction of the muscles of the whole body, — trunk and extremities, — with impending asphyxia, the face being livid, from the spasm of the respiratory muscles. A quarter of a grain of morphine was injected under the skin; brisk friction with the hands was kept up on his back and limbs, and mustard applied over the epigastric region. After thirty or forty minutes this spasmodic action ceased. Thirty-six hours afterwards (Monday night) there was a similar but not so severe attack.

Noticing an article in the JOURNAL of April 17, 1879, in regard to the use of arsenic in the treatment of tet-

anus with apparent good results, by Dr. Hodgen and others, of St. Louis, Mo., the administration of five drops of Fowler's solution once in two hours was commenced, the bromide, chloral and morphine being continued as before. After a week (Sunday, March 28th), on account of an evident increase of the "puffy" or bloated appearance of the face, so common in tetanus, the Fowler's solution was omitted, and during the week (the fourth) there was marked diminution of the tonic spasms. Two days later (March 30th) there was an attack of severe cramp in the lower part of the back and legs, and Thursday (April 1st) another similar attack. The solution was again prescribed, and continued through the remainder of that week (the fifth), the sixth, and in diminished doses the seventh. There were no tonic spasms after the administration of the solution was resumed, and the rigidity of the muscles of the back began to relax, so that the patient could bend his head and shoulders forward. In the sixth week the clonic spasms of the masticatory muscles began to yield, so that at the end of that week he could put three fingers into his mouth and feed himself with a spoon. During the seventh week the arsenical solution, morphine, chloral, and bromide were continued, but in smaller doses and at longer intervals, and then omitted, except a small dose of morphine at night for a week or more. At the end of the seventh week he could masticate his food as usual, and was in every way convalescent; and on May 17th, after twelve weeks, his recovery was perfect.

During the first four weeks the tongue of the patient was bitten by the sudden snapping together of his jaws on suddenly awakening from sleep, particularly when under the influence of chloral; for in that state the muscles of the jaw would relax sufficiently to let the end of the tongue slip in between the teeth. This was in some degree avoided by gently rousing him when sleeping too heavily.

Particular pains were taken from the beginning to keep the patient well nourished. While the jaws were closed the nourishment was liquid, such as milk, good gruel, broths, and beef tea, and was taken through a "drinking cup," the small end of which was applied between the teeth, or rather against the narrow space between the teeth that existed, but not of sufficient width to admit it. At first the gruel and broth were strained, as the smallest particle of meal or meat between the teeth excited spasms; but later in the disease, when there was some relaxation of the muscles, or at least less tendency to spasmodic action, rice boiled very soft was added to the milk, and finally chopped meat to the broth. For the first four weeks nourishment was given in this way every second hour; afterwards, when the patient could take rice and meat, prepared as above stated, with the milk and broth, the interval between the meals was three hours. As convalescence advanced there was a return to the usual kinds of food and times of eating.

For the first three weeks the bowels were kept open by gentle laxatives, mostly by a compound infusion of senna, figs, and ginger every second day. In the third week, when a dejection took place, there was excited, strong spasmodic action of the abdominal muscles, with violent and painful "bearing-down effort," like the expulsive pains of parturition. Laxatives were abandoned, and a copious enema of warm water was given every morning thereafter till convalescence, with satisfactory results.

At the request of the patient, on Sunday P. M., March 21st, subsequent to the attack of spasms with asphyxia, before described, he was placed in a warm bath with gratifying effect. The next day he had the bath again, but it excited some spasmodic action, and was not repeated.

Besides the medication mentioned above, various applications were made externally, such as mustard plasters to the back and stomach, and fomentations of hops, lobelia, and tobacco upon different parts of the body, the good effect of which was questionable. During the tonic spasms brisk and thorough rubbing of the skin with the hands, conjoined with some oily substance for lubrication, thus preventing the skin from being partially denuded of its outer covering, seemed to be the most efficient external application. The patient, in extreme suffering from the tonic spasms, would call upon the attendants to "rub *hard*, rub *hard*;" and this thorough and long-continued friction threatened abrasion of the cuticle. Among the many domestic remedies — "sure cures" — recommended by friends, "turtle's oil" was one, and this was used most of the time for the inunction. By reflex action, the nerves of the skin being soothed in this way, the spasms seemed in some degree to be allayed.

The patient had most excellent care and comfortable surroundings, intelligent and faithful attendants watching over him day and night; and to this, in no small degree, may be attributed the successful termination of the case.

LEOMINSTER, May 17, 1880.

Reports of Societies.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

T. M. ROTCH, M. D., SECRETARY.

MAY 24, 1880. DR. JAMES C. WHITE, permanent chairman, presided.

PREVENTION OF NEAR-SIGHT IN THE YOUNG.

DR. H. DERBY read a paper on near-sight, which will be found on page 533.

DR. WILLIAMS thought it important that attention should again and again be called to this subject; because the community is so slow to believe in the serious dangers which are now known to attend the excessive use of myopic eyes in study. The ophthalmoscope reveals great and progressive changes, previously unsuspected, in the most important structures of the eye, which are solely caused by continuous accommodation of the sight for small objects, and which, unless arrested, tend to deterioration and even loss of vision. Unfortunately, children who have become near-sighted generally find their chief pleasure in books, and are disinclined to the sports of other children, because they do not see objects around them so well as their fellows. The parents and teachers of such children, pleased with their precocious diligence, are but too ready to encourage excessive application to study and efforts to gain a high rank at school; especially, as for the time no complaint is made of the eyes. It is only when the myopia has reached a degree which will in the future render them incompetent for many pursuits, and especially for those requiring constant use of the eyes, to which they had hoped to devote themselves, and

when, perhaps, much use of the eyes already begins to cause pain, that it is discovered, too late, what a mistake has been made.

Prevention of further increase of myopia being the only resource against certain misfortune, it becomes of the utmost importance, as a matter of public hygiene, that children, and especially girls, who already have a considerable degree of myopia should not be allowed to attend school after having completed such studies as are necessary for some vocation which will not greatly tax the eyes. They should abandon all efforts to acquire what is termed a higher education, so far as this involves close application of the eyes, because, in attempting this, myopes not only imperil their sight and their future well-being, for the sake of obtaining knowledge which they cannot afterwards make available, but they also create for their children a hereditary tendency to the same disease.

DR. H. P. BOWDITCH remarked that Dr. Derby's paper opened a field for an instructor in hygiene in the schools, and it was a matter of reproach among the physicians who were on the school board that some movement had not already been made in this direction; he thought that the schools would be greatly benefited by such an instructor.

DR. WADSWORTH agreed with the previous speakers as to the importance of the subject. Not only among the poorer classes was progressive short sight too little heeded; it was by no means an uncommon occurrence for parents of means and education to bring their children to the oculist only when the myopia had already reached a very considerable degree.

He said that there was one direction in which it was at present in the power of the school committee of Boston to make a change which could not fail to be of advantage. He referred to the subject of maps. In the geographies now used in the schools many unnecessary names of towns, rivers, etc., are set down on the maps; then the line of the coast is "shaded" by a series of parallel lines, to make the maps look prettier. The result of all this is that the names of places must be printed in quite small type, must often be printed across or among the lines shading the coast, and, in consequence, a great strain of the eyes of the children is necessitated in the effort to find the places sought. The search for a single name on one of these maps is often an exceedingly trying task for a child's eyes. This was not simply a matter of theory, but he spoke from repeated personal observation in his own family. If the committee would demand simpler maps, with fewer names of places and no shading of coast lines, both time and effort would be saved to the children, and one of the evil influences of school life causing near-sight would be removed. As for the matter of expense, such maps as suggested would cost less rather than more than those now in use.

PSEUDO-MUSCULAR HYPERTROPHY.

DR. J. J. PUTNAM showed a typical case of pseudo-muscular hypertrophy in a boy of ten years, the disease being of several years' duration.

Not only were the muscles of the legs and thighs, back, scapula, and upper arm involved, but the tongue was unusually broad and thick, and the lines of the face were thickened and dense.

No cause could be discovered either in his own or his parents' antecedents.

In speaking of the pathology, Dr. Putnam said that