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CANADA
MEDICAL & SURGICAL JOURNAL.

ORIGINAL COMMUNICATIONS.

Case of Depressed Fracture of the Vault of the Skull in a Child of Five Years, Recovery. By GEORGE E. FENWICK, M.D., Professor of Clinical Surgery, McGill University.

On the evening of the 1st January, I was requested to visit a little child who had met with a severe accident resulting in a simple depressed fracture of the vault of the cranium. The history I learnt was as follows: while playing about in a large upper room in one of the wholesale warehouses in this city the little fellow wandered inside of a sky-light, broke through the glass and fell to the plank floor beneath, a distance of some sixteen feet. The accident was not observed, but his father, who was in the next room, hearing him cry, went to his assistance; when found, he was lying on his right side, was whining, seemed to be partially conscious, could give no account of himself, there was no external wound but the child appeared stunned and confused, the accident occurred shortly after mid-day, the child was taken home and as he appeared inclined to sleep he was put to bed and kept quiet. Before being put to bed he walked across the floor of the room complained that his head was sore, recognised those around him, seemed desirous of being left quiet, vomited twice, and subsequently fell asleep, it was a restless sleep as he would start and moan but did not awake, between three and four hours after the accident he was seized with a convulsion which continued

for some time. Before the family physician, who had been sent for, saw him he had had several convulsive attacks, when seen that gentlemen readily made out depressed fracture of the skull, and at the same time requested that I should be called in. I saw the child shortly before six o'clock the same evening and the following was the condition observed. There was marked facial paralysis of the right side the mouth being drawn over to the left, there was insensibility, the pupils of both eyes were dilated and insensible to light, the pulse was comparatively slow being 80 per minute, the right arm and leg were motionless, in flexing or extending either limb the muscles would be thrown into spasm and yield with a jerk. The left arm and leg were in constant motion, respiration was performed without difficulty but was accompanied by a sigh with each expiration. On examining the head he would raise his left hand up to the part as though semi-conscious. The scalp was puffy and tumid, there appeared to be a considerable quantity of blood effused beneath, from the position of the child, lying on his back, this blood had gravitated towards the occiput leaving the anterior part of the skull comparatively free, which enabled me to make out distinctly a depressed fracture situated on the right side a little below the mesian line and close to the anterior superior angle of the right parietal bone. The depressed fragment was below the surface fully the eighth of an inch, a sharp ridge could be felt indicating the point of fracture, which was in extent from an inch and a half to two inches. From the symptoms above described we feared some more serious lesion than the fracture. We determined to delay all operative interference and simply enjoin perfect quiet with the application of ice to the scalp.

Instructions were given to administer an enema of soap and water, or salt and water in the morning should the bowels not act. The family physician requested me to assume charge of the case to which I consented, and we agreed to meet on the following morning at 10½ o'clock. I saw the child again that night about 11, he was then perfectly quiet,

all moaning and movements of his limbs had ceased, he was sleeping calmly, the pupil of the eye was less dilated and acted slowly to the stimulus of light, the pulse was accelerated being about 110. Cold to the head was kept up all night, towards morning the bowels acted involuntarily twice and he passed water, he became more sensible and would move his head away from the ice bag. At the hour of visit he knew his parents and those about him, could move all his limbs, the distortion of the features had ceased, he was however very quiet, disinclined to move and I noticed a discoloured point in the under lid of the right eye. The cold to the head was maintained and gruel and milk was ordered as it was said he would take it without difficulty. He was to be kept in bed and absolute quiet enjoined. At the evening visit he knew me, put out his hand, smiled and appeared quite sensible. My attention was drawn to a subconjunctival ecchymosed spot which was attributed by the nurse to cold from the application of the ice to the scalp. It was not very extensive and was situated on the outside of the right eye.

On the second morning after the accident I learned at the hour of visit that he had passed a good night, had slept quietly, there was no return of the convulsions, the bowels had acted; when I entered the room he rolled over on to his hands and knees and then wheeled round into the sitting posture, there was considerable stiffness about the neck, the head was advanced and he could not raise his chin or bend his head backwards, when told to look up he would arch his body backwards but maintain steadily the fixed position of his head. The ecchymosed condition of the lower lid of the right eye and the subconjunctival effusion had somewhat increased. His pulse was about 90, he took nourishment but although he complained of hunger his food was restricted. On the third morning I learned that after passing a quiet night, he got out of bed and crept into the corner of the room and was found there by the nurse, quietly amusing himself. From this date he steadily improved the bone appeared to

be rising out of its unnatural position, at the present time the depression is scarcely appreciable, the tumefaction of the scalp entirely disappeared; several days after the accident upon carefully inspecting the head the fragments of bone appeared to be loose, but as this examination gave pain I desisted.

This case presents many points of interest to the surgeon, and practically it illustrates the facts that in depressed fracture of the skull in children we should not be too hasty in resorting to operative measures, and again that in some cases of most serious injury in childhood involving the brain recovery will in the majority of instances be the result. In this case there was found irritation of the brain presumably from depressed fracture of the vault of the cranium. Why then, it may be asked, delay following the usual surgical rule of removing the cause of irritation by elevating the depressed bone. It must be observed that it was a case of simple fracture and converting a simple into a compound fracture ought not to be lightly undertaken; surgical writers lay particular stress on this point, nevertheless it must be conceded that in any given case a simple depressed fracture of the skull would demand imperative operative interference, if no chance existed of benefit from delay and auxiliary means—the well known tolerance of children to severe injuries of the head should always be remembered although disease attacking the brain in childhood is always serious if not generally fatal. Children appear to possess wonderful accommodation which is specially marked in injuries about the head. Their powers of repair are more active than in adult life, hence an injury that would be fatal to an adult will be frequently recovered from in childhood.

In fractures of the skull in children when the fragments are separated, or when there is a state of comminution or where a fragment is depressed there is less likelihood of its becoming impacted, this appears to me to be due to the absence of diploë, the entire thickness of the bones of the skull of a child is not much greater, if as great, as one of the

tables of the adult bone, hence the fracture of both tables is simultaneous it is the same difference as will be observed in cracking an inch board and a thin veneer, in the first instance the edges of the fissure on both sides will not correspond, and hence if displacement takes place they become locked. In the other the fissure on both sides will correspond, or nearly so, so that they rarely become impacted. Whatever may be the rationale of these injuries in children certain it is that in many cases of depressed fracture of the skull the bone will in due time be forced out and made to assume almost, if not entirely, its original position.

The prominent symptoms in this case were eccentric. There existed fracture with depression on the right side of the vault of the skull, there was right facial paralysis, paralysis of the right leg and arm and constant movements of the left extremities, from this it was reasonable to infer some more serious lesion than the depressed fracture described, a condition which was not going to be relieved by the formidable operation of elevating the bone at the point depressed. In falls from a height on to the top of the head resulting in fracture of the vault of the skull, it has been noticed in many instances that the fracture has extended through the base of the cranium. Dr. Arran, as mentioned by Mr. Bryant in his practice of Surgery, "found that the part of the vault which first struck the ground gave as it were the key to the fracture which would take place at the base," thus if the front part of the vault was injured, and the fracture continued into the base it would be found in the anterior fossa. If the centre of the vault was the injured point and if fracture of the base occurred it would be found in the middle fossa and if the posterior part of the vault was injured the posterior fossa would suffer.

In the case under consideration we had a depressed fracture at or near the junction of the anterior and middle portion of the vault of the skull, and it is quite possible that the injury had extended into the anterior or middle fossa of

the base. This supposition receives confirmation when we consider the ecchymosed condition of the right eye, both sub-conjunctival and into the cellular tissue of the lid. I can scarcely believe that the injury of the base was extensive, but it was sufficient to give rise to the train of symptoms already alluded to, which were those of irritation at the base of the brain, on the side opposite to that on which existed the depressed fracture of the vault. Practically this case is of importance, as illustrating the expediency of not too hurriedly resorting to surgical interference, more especially in cases of injury to children. I cannot do better than conclude this paper with the very practical remarks of Mr. Timothy Holmes, taken from his work on the surgery of diseases of children. In speaking of fractures of the skull, he remarks: "Many instances are on record of recovery after very formidable compound fractures, involving the loss of large portions of the surface of the brain, and simple fractures if not complicated with lesion of the centre or base of the brain, generally do well. The tendency being in most cases to natural recovery. * * Few cases, I think which will not recover under rest and cold application to the head, will do any better under more active treatment, and it is very rarely indeed that trephining is required."

24 Beaver Hall, February, 1875.

Case of Ovarian Cyst, pointing in the Perineum. By H. P. WRIGHT, M.D., Ottawa.

The following case being somewhat unique in several of its features will probably prove interesting to the readers of the CANADA MEDICAL AND SURGICAL JOURNAL:

Mrs. B., æt. about 50, widow, mother of seven children, all living, has suffered for more than eight years from dropsy of the left ovary. The progress of the disease has been remarkably slow and accompanied, at intervals, by a good deal of inflammatory pain. Shortly after she had first

noticed the "lump" in her side, she began to complain of, what she supposed to be, falling of the womb, which increased in a corresponding ratio to the ovarian disease until it appeared externally, when she became sufficiently anxious to consult a medical adviser, who considered it a case of "inversion of the uterus."

I first saw her a year and a half ago, when she measured 40 inches round the abdomen at the umbilicus, and the vaginal tumor appeared externally about the size of an ordinary orange, presenting a smooth surface, elastic, and very tense. It could be easily replaced when in the recumbent position and retained by a ball pessary. This, however, had soon to be removed, as it gave rise to pain and frequent micturition. By vaginal examination the uterus was found to be in good condition—hardly any displacement. The relations were perfect in front, but I could not pass the finger round the os behind. The feeling was as if the uterus had been doubled over on itself backwards.

No relief could be given and matters kept getting worse, the abdomen increasing in circumference and the vaginal tumor enlarging—the latter becoming so troublesome as to interfere with her walking, and from the constant friction large patches of ulceration made their appearance.

I did not again see her for about four months. The tumor had now attained the size and appearance of a prolapsed and distended bladder; indeed, from a careless examination one might easily conclude that such was the case. There was evidently fluid in the tumor, and in consultation with Dr. Laing, I tapped it and drew off over eight ounces of thin serum. This operation was repeated every week, as it relieved the dyspnoea from which she suffered severely. She lived but a short time after the tapping commenced;—it was but a "*dernier ressort*" to ease her sufferings as death approached. All doubt as to the nature of the tumor was removed by the tapping. The fluid pressure had pushed the recto-uterine fold of peritoneum directly downwards, separating the rectum and vagina, and finally protruding externally to such a degree as to render her utterly miserable.

No autopsy could be obtained.

Correspondence.

Montreal, Jan. 28, 1875.

Editor Canada Medical and Surgical Journal.

As Monobromated Camphor is being prescribed by the profession just now, and as no account of it is found in the text books, perhaps the following items may be interesting to your readers:—

Monobromated Camphor is formed by the combination of Bromine and Camphor at a temperature of 212° Fahrenheit or over, in a retort so arranged, that the products volatilized may be condensed and flow back; subsequent crystallization, &c.

It occurs in white or colorless prisms, also in long flat prisms perfectly transparent and hard, and sometimes in scales, according to the solution from which it is crystallized.

It is perfectly insoluble in water, but readily and freely soluble in alcohol, ether and chloroform. It is permanent in air, not affected by light, and tastes very much like ordinary Camphor.

The dose usually employed is two grains, which should be given in the pilular form.

Probably 1 grain in each pill, with extract gentian, or extract licorice as an excipient, would be the best and most scientific way of administering the drug. It might also be given in powder taken dry on the tongue. Being perfectly insoluble it should never be given in the form of mixture.

I have frequently seen bottles, brought to have the mixture repeated, with at least 8 or 10 grains of the salt adhering to the sides.

Very truly yours

HENRY R. GRAY.

HOSPITAL REPORTS.

Thoracic Aneurism.—Death—Autopsy.—Under the care of DR. WRIGHT.—Reported by MR. GEORGE C. DUNCAN.

J. B., aged 36 years, a strong well-built man, was admitted into the Montreal General Hospital, October 17th, 1874, under the care of Dr. Wright. The patient has served in the Artillery, in India, and while there had "jungle fever," from which he made a tedious recovery. He has never had any other serious illness, but he has been in the habit of taking intoxicating liquors freely. For the past six years he has been in the employ of the Grand Trunk Railway, in Montreal, and has had a good deal of heavy lifting to do. For some months past he has experienced what he supposed to be "rheumatic" pains in his right shoulder and chest, but no other serious symptoms. About eighteen months before his admission he was lifting an iron rail, and felt something give way in the upper and right side of his chest. After saying that he would go home, he turned round, but after walking three or four paces, he fainted and fell to the ground. When his companions reached him he was black in the face, and appeared to them to be in a fit. After loosening his clothes and applying whiskey and water to his head and face, he recovered consciousness, and soon appeared so much better that he insisted on walking home. This, however, he was unable to do, and he was accordingly taken home in a cab by a fellow workman.

After he recovered consciousness he began to vomit, as soon as he attempted to rise and walk, and the vomiting continued almost incessantly during the night. On the following morning, after taking some brandy, it stopped, and during the early part of the day he got up and dressed himself, but complained of feeling weak. On his return to

work, about a week afterwards, his fellow workmen noticed that his voice was husky and weaker than formerly, and also that he frequently stretched his right arm over his head, to relieve the cramp, as he said. During the dinner hour also he used to rub his right shoulder with coal oil and other remedies. When he had any heavy weight to lift he complained so much of his shoulder that his comrades nicknamed him "Shirking Jack." From this time until his admission he did not work very steadily, and was supposed by the other men to be drinking hard.

Condition on Admission.

There is an elevation in the right infra-clavicular region, and considerable bulging above the clavicle. The veins of the right side are enlarged, and there is œdema of the right arm.

On percussion, distinct circumscribed dullness is apparent over the left side and upper end of the sternum, extending to the right as far as the middle of the clavicle.

The stethoscope reveals a distinct bruit and thrill over the tumour. The heart sounds are muffled and indistinct, and the respiration is loud and sonorous.

The patient complains much of pain in his chest, and there is considerable dyspnœa and severe cough, which interrupts his sleep. He is obliged to have his head and shoulders raised, in order to relieve to some extent the dyspnœa.

Treatment.—He was ordered good nourishing diet, and the following mixture :

R. Potass. Iodid.

Tinct. Lobeliæ, aa ʒii.

Mist. Pect. Chron. ad oz. viii.

Sig : Tablespoonful three times a day.

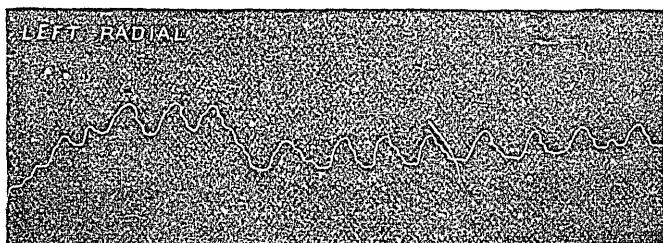
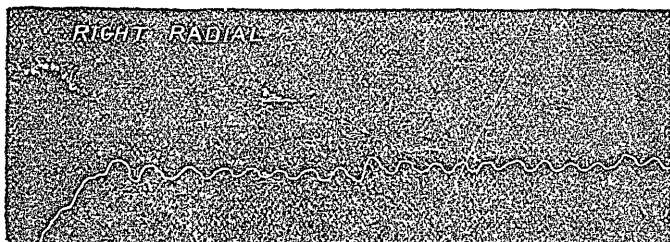
After taking the mixture for a few days, he was to some extent relieved from the pain and cough ; the bruit, also, was not so distinct.

November 6th.—Not so well to-day ; the voice is more

husky, and the paroxysms of coughing are very distressing, and seem to prostrate him very much.

November 15th.—To-day he is sitting up in bed, being unable to lie down on account of the dyspnoea, even for a few minutes. The cough is almost incessant, and large quantities of tenacious phlegm are expectorated. The radial pulse differs in the two arms, both in volume and rhythm.

November 30th.—Condition much the same. He is dizzy when he attempts to stand, and there is some dysphagia. The pressure of anything tight about his neck is not endurable, and even the pressure of the stethoscope causes such violent coughing that no satisfactory examination can be made. The pulse remains much the same, and on applying the sphygmograph, I obtained the following tracings:—



December 2nd.—Condition much the same, but he appears rather weaker.

December 5th.—Patient died last evening. He had been walking about the ward during the day, and in the evening, he asked to be helped across the room to a chair at his

bedside, on reaching which he took a few long breaths, and falling over on one side, he died without a struggle.

Autopsy.—A large double sacculated aneurism was discovered on the innominate artery, involving the superior border of the arch of the aorta, between the origins of the innominate and left common carotid arteries. The tumour extended above the upper end of the sternum and inner extremity of the clavicle, to both of which it was firmly adherent. A large mass of dense tissue and fat, which also enveloped the left carotid artery for about two inches and a half, surrounded the aneurismal tumour, to which it was firmly adherent, and from which it was with difficulty separated. The clavicle was dislocated forwards at its sternal extremity. No rupture of the sac, which was filled with fibrinous laminæ, could be found.

Case of Cerebral Aneurism—Softening of the brain—Death from Hæmorrhage. Under the care of Dr. Ross.
Reported by Mr. Dorland.

M. W., aged 53, was admitted into the Montreal General Hospital on the 29 December 1874 complaining of headache and debility. She is of thin spare habit and unhealthy appearance. When questioned as to her symptoms it was found that she had suffered for some time from severe pain in the head which apparently had no special locality. She then immediately of her own accord commenced to give a long, rambling and incoherent account of a series of adventures in which she had, she said, taken part, and which were entirely irrelevant to her case. Whenever any questions were put to her she would thus in the same way wander off to something entirely foreign to the subject. She however gave correctly the number of the house and name of the street where she lived. Beyond this it was impossible to learn anything of the history of her illness up to the present time. Three days after her admission she had a slight epileptiform convulsion followed by a lengthened condition

of drowsiness. Following this at intervals during the next 48 hours there occurred four such seizures each of them slight, accompanied by but little spasm or lividity of the face, and during the intervals she appeared to be increasingly obtuse and drowsy. She could, however, be easily roused for the moment, by a question, to a degree of semi-consciousness. When left alone she continued talking quietly in an incoherent manner. Ordered Ammon Bromid gr xv every four hours in mixture—and Tinct Iodi to nape of neck.

Jan. 7th.—No return of convulsions. Is still quite delirious and could not for some time recognise her son who called to see her, but is sensible enough to ask for assistance to attend to the calls of nature. Bowels costive, respiration irregular, and headache still complained of when roused. *Ordered Black Draught.*

Jan. 8th.—Examined urine to-day and found about 10 per cent of albumen. A few light granular casts, numerous blood-disks and some debris were discovered by the microscope.

Jan. 9th.—Is very weak to-day but seems rather more rational and recognises her sons but cannot call them by name.

13th Jan.—Since last report has remained much the same. When left alone, she lies in a dull, stupid condition, making no complaint and asking for nothing. When spoken to, assumes a peculiar sickly and silly smile and answers in a foolish manner. She takes singular fancies into her head, for instance concerning her food, when sufficiently aroused to understand a question suggesting change of diet, she will answer for a day at a time in exactly the same words asking for some special article. When somewhat excited by the daily physician's visit she talks more and in a silly meaningless fashion and often smiles as above mentioned, at her own remarks. Urine remains albuminous. Microscopical examination same as before. Both pupils somewhat dilated.

25th Jan.—Has been daily becoming more insensible. By loud talking or shaking can now only be roused sufficiently to give some slight sign of perception. When undisturbed, lies quietly unconscious. No stertor. To-day for the first time, although repeated examinations have been made, is evidence found of the existence of paralysis, the right arm feels quite flaccid when raised and the right eye does not close when touched. There is retention of urine for which the catheter is used and the fæces are passed involuntarily.

21st Jan.—Profound insensibility, inability to swallow, Paralysis of right side, slight muscular twitchings in the left arm, pulse failing rapidly.

22nd Jan.—Died at 1 p.m.

Post Mortem 24 hours after death. *Brain*—slight serous effusion in the sub-arachnoidean space. General fullness of the veins on the surface. A small bony plate about the size of the little finger nail was found under the pia mater and attached to one of the convolutions of the left hemisphere of the Cerebrum near the Parietal foramen. It did not seem to cause any disturbance in the part. It was smooth externally and marked by the convolution internally. Arachnoid at the base healthy. Walls of the arteries at the base thick and atheromatous. All the ventricles healthy, Cerebellum normal.

A small sacculated aneurism about the size of a hazel nut was found situated on the left internal carotid artery just at the commencement of the fissure of Sylvius where it divides into its terminal branches. On slitting up the vessel the aperture to the sac was discovered, oval in shape about 1 line in length by $1\frac{1}{2}$ line in width. The sac was completely filled with a firm decolorized fibrinous clot. From the delicacy and thinness of the walls of the vessel it could not be made out how many of the coats composed the sac. The coats of the vessel were atheromatous and patchy in the neighbourhood of the aneurism. The vessel was pervious under the sac, though it may have been compressed somewhat

by the pressure of the tumor. The tumor itself probably produced no symptoms during life. In the course of the middle cerebral artery along the fissure of Sylvius there was a soft black clot of recently effused blood. The cerebral substance was beneath this reduced to a soft reddish pulp over a space the size of a half dollar and extending to the depth of about one line. The blood had been probably effused gradually, corresponding to the gradual development of the symptoms of compression during life.

Heart.—An unusual deposit of fat on the heart and pericardium. Valves healthy except a large atheromatous patch on the upper segment of the mitral. Large white antemortem clot in the right heart.

Lungs.—Lower lobes collapsed. Congestion of the substance of both lungs. Puckering at the apex.

Liver.—Rather small but healthy.

Spleen.—Normal.

Kidneys.—Natural size. Surface of the capsule smooth and non-adherent, section shows marked congestion of the pyramids. No thinning of the cortical portion. Surface of the organs not granular, weight $\frac{3}{4}$ vi.

Case of Pleurisy with effusion—Tapping—improvement

Under the care of DR. DRAKE. Reported by Mr. T. G.

HOCKRIDGE.

I. T., a French Canadian, aged 27 years, a storeman by occupation, was admitted to the general wards of the Montreal General Hospital, May 6th, 1873, under the care of Dr. Drake. Previous to his admission he had suffered for two or three weeks from chills, headache, fever and considerable dyspnœa, which increased very much when he attempted to lie upon the left side. Although he suffered a good deal, he was not confined to bed, but merely remained in the house. On admission, a physical examination revealed marked fullness in the left infra-clavicular region, with depression of the left clavicle and shoulder; measurement round the left side of the chest $\frac{3}{4}$ of an inch greater

than that of the right ; marked dullness over the left lung both in front and behind, the dullness extending about $3\frac{1}{4}$ inches to the right of the median line of the sternum. The apex beat of the heart was visible over the ensiform cartilage. Respiratory murmur intensified over the unaffected side. He was prescribed the following, three times a day.

R

Potass. Iodid. gr. x

Potass. Acetat. gr. xx

Tinct. Cinchon ʒiiss

Over the left lung he was ordered a fly blister, the skin to be subsequently dressed with Ung. Hydrarg dil.

May 8th.—Pulse 120, weak and irregular ; Temperature 102 4-5 ; Respiration 36. He was ordered the following pill to be taken three times a day :

R

Pil Hydrarg gr. i

Pulv Scillæ gr. ii

Pulv Digital gr. ss. Ft. pil.

May 9th.—Pulse 120, very irregular and also intermittent ; Temperature 103° ; Respiration 36 ; He was ordered a pint of beef tea and two ounces of wine.

May 10th.—Pulse 123, weak and irregular ; Temperature 103° ; Respirations 36 ; On measurement, the left side was found to have increased $\frac{1}{2}$ an inch, and the dullness had extended $\frac{3}{4}$ of an inch further to the right side of the sternum. Dr. Drake made an exploratory puncture at the posterior base of the left lung and drew off about an ounce of highly albuminous fluid.

May 12th.—Pulse and temperature remain the same. No albumen in the urine ; No dyspnœa or pain ; Dr. Drake tapped the chest with Dieulafoy's aspirator and drew off $7\frac{1}{2}$ pints of fluid ; the last two ounces drawn off contained a small quantity of blood. Immediately after the operation the dullness was considerably diminished both in front and behind, the heart resumed its normal position and a good pulmonary note could be elicited $\frac{3}{4}$ of an inch to the left of

the sternum. On measuring the chest the left side was found to measure an inch less than the right. A slip of adhesive plaister was placed over the aperture caused by the aspirator, and a light flannel bandage applied round the chest. During the operation the patient coughed severely and the cough continued troublesome for the rest of the day. The mixture and pills were stopped, and a draught of Tinct. Opii and Chloric Ether ordered at bed-time. He was allowed ice to allay the cough.

May 13th.—Pulse 124; Temperature 103 3-5; Respiration 36; Cough less frequent; Slight diarrhoea; No pain in chest, vocal resonance and vocal fremitus absent over the affected side, expansion of the left side improved and also the percussion note is clearer.

May 14th.—Pulse 120; Temperature 103 3-5; Respirations 32; not much cough, much heat of skin, dullness diminishing.

He was ordered R

Tr. Ferri Perchlor	̄iii
Potass Acetat	̄iv
Ac Acetic	̄i
Aquæ ad	̄vi

A tablespoonful every four hours.

May 15th.—Pulse 120; Temperature 103; Respirations 30; Does not feel so well; felt pain through the night over the left lung, and turpentine stupes were applied, which relieved him. The mixture of yesterday was changed to

R Tinct Ferri Perchlor	̄iii
Potass. Acetat	̄iv
Acid Acetic	g. s.
Infus Digitalis	̄iii
Aquæ ad	vi

A tablespoonful three times a day.

8 p.m. Pulse 112; Temperature 104 $\frac{1}{2}$; Respirations 30. Skin hot, diarrhoea has ceased.

May 17th.—10 a.m. Pulse 96; Temperature 100 4-5; Respirations 30. Passed a good night, slight dullness over

the left lung both in front and behind, respiratory murmur audible all over the left lung, but weak. A few moist rales at the apex, and fine crepitation at the base. The left lung was painted with tinct of iodine and covered with cotton wadding and oiled silk. 10 p.m. Pulse 112; Temperature 103 4-5; Respirations 36; Patient easy and comfortable.

May 18th.—10 a.m. Pulse 112; Temperature 99; Respiration 36. He complained of pain in the right side, and he was given morph. gr $\frac{1}{4}$ hypodermically.

May 19th.—10 a.m. Pulse 115; Temperature 102 1-5; Respirations 36. The left side of the chest was found to be still an inch less in measurement than the right. 10 p.m. Pulse 112 Temperature 103; Respirations 31.

May 20th.—10 a.m. Pulse 112; Temperature 102 1-5; Respirations 30. Moist rales all over the posterior part of the left lung, loudest at the base, heard also in front at the apex. Pain over the left lung, for which he had morph gr $\frac{1}{4}$ hypodermically. 10 p.m. Pulse 93; Temperature 100 1-5; Respirations 28; Sleeps quietly.

May 21st.—Pulse 112; Temperature 101 1-5; Respirations 30. No pain anywhere; appetite good; ordered a pint of beer.

May 25th.—Pulse 96; Temperature 102 1-5; Respirations 28; Medicine discontinued; Bowels regular.

May 26th.—Pulse 100; Temperature 102; Respirations 28. He was ordered

R. Tinct Ferri Perchlor	℥iii
Quinæ Sulph	gr xii
Syrup Simpl	℥iv
Aquæ ad	℥vi

A tablespoonful three times a day.

Dullness and moist rales over the left side as before, depression under the left clavicle, respiratory murmur over the right side intensified, but no moist sounds; appetite remains good. The temperature is highest about noon each day and declines towards the evening.

May 29th.—Pulse 100; Temperature 101 2-5; Respiration

tions 24; Feels well and wants to get up. He was ordered to have Infus Digitalis $\bar{\text{v}}\text{iii}$ added to his mixture.

June 2nd.—Pulse 100; Temperature 100 4-5; Respirations 24. Chest measurements the same as before; moist rales and dullness over left lung; Condition of the right lung remains as before. From this time until he left the Hospital, which he did soon after, the condition of the patient remained much the same. The average morning temperature was 100 to 102, and that of the evening was 102 to 103 4-5. His general health improved in spite of the continued elevation of temperature, and he left the Hospital three weeks after the operation.

Reviews and Notices of Books.

Essentials of the Principles and Practice of Medicine. A Hand book for Students and Practitioners. By HENRY HARTSHORNE, A.M., M.D., Professor of Hygiene in the University of Pennsylvania, &c., &c. Fourth Edition thoroughly revised, with one hundred illustrations, 8 vo. pp. 548; Philadelphia, HENRY C. LEA, 1874.

This little work first saw light in 1867, and in the preface to the first edition the author observed that it was an unambitious effort to make useful "the experience of twenty years of private and hospital practice." His unambitious effort has been to all appearance appreciated as the work has run through four editions.

We are puzzled how to commend this little book because although it contains much that is useful, nevertheless we are convinced that practical instruction is not to be gained through an epitome of this description. It is just this kind of work that will be selected by the ignorant or idle man, as here he has at hand a short, concise list of symptoms,

also pathology, prognosis and treatment of disease, all in readable space and which will not over fatigue him by being too voluminous, and again if he requires any suggestions as to remedies to be employed he will find an extensive formulary from which to select.

But these formulæ are not even reliable, indeed there are few that we should care to prescribe, and some that would require considerable alteration before they could be prescribed.

We should suppose that the author has very little practical experience of the qualities of drugs, for instance at No 54, we read R Chlorate of Potassium, half an ounce, water six fluid ounces, dissolve, the dose of which is half an ounce every three or four hours. Chlorate of Potassium is very insoluble, this fact is known to all practical men and we doubt much whether six fluid ounces of water at the ordinary temperature will hold in solution two drachms of Chlorate of Potassium let alone double that quantity.

The work however contains much that is essential, and that will be understood by a man who has been properly grounded in the elements of his profession, it may aid the practical man as he will find ready at hand, descriptions, definitions, terms, and conditions of the economy met with in disease and which require to be discriminated and interpreted by the physician before he can treat his patient with a chance of success.

In the early editions the author confined his remarks in a great measure to what he had himself learned at the bed side. In this edition he has partially modified his plan, "so far as to embody the most important suggestions as well as results of observation, presented in recent medical literature.

The author has enlarged his scope. In part I. we notice he discusses the subjects of Chronic Inflammation, Morbid Growths, Neuropathology and the modes of death. In part II. he considers the semiology of diseases of women, the use of the ophthalmoscope, the pneumatic aspirator &c.,

Under the heading "General Therapeutics" he considers in addition the following, Climatic treatment, Hydropathy Movement cure and Transfusion of blood. All these are additions given in the same short concise method as is observed throughout the work. The present edition is likewise embellished by one hundred wood engravings, they have been carefully selected with a view of elucidating to the student a number of subjects of especial interest and importance.

Clinical Lectures on Diseases of the Urinary Organs. Delivered at University College Hospital. By Sir HENRY THOMPSON, Surgeon Extraordinary to His Majesty, the King of the Belgians, Professor of Clinical Surgery, and Surgeon to University College Hospital. Second American, from the third and revised English Edition, with Illustrations. 8 vo., pp. 195. Philadelphia: Henry C. Lea. 1874.

These lectures were published originally by the London *Lancet*, in 1868, from a short-hand report, taken at the time of their delivery before the Clinical Class at University College Hospital. They were delivered by Sir Henry Thompson, in a colloquial style, the subjects having been prearranged, but were never committed to writing by the author. This Course of Lectures, the author has given before the clinical class year by year, with such modifications and additions as were demanded by his increased experience.

The present edition contains the substance of the lectures on this important subject, delivered during the Session 1872—73, and comprises the latest views enunciated by the author, with all the alterations he deemed necessary. When first delivered, these lectures were twelve in number. In this edition, the author gives us a general *résumé* of the entire subject of the treatment of Stricture, specially referring to internal urethrotomy. This is found in Lecture IV., and Lecture XI, he devotes to the consideration of

the early history of Calculous diseases, and the treatment best adapted for their prevention. The work partakes of the same practical character which distinguishes the former writings of the author, and which has been so fully appreciated by the profession. Alterations will be found throughout the text, more especially on those points in which the author has gained experience by a careful and judicious record of the cases which have come under his observation.

We regret to notice, that Sir Henry Thompson has resigned his connection with University College Hospital; but although the increased demand on his time by private patients, has apparently led to this change, we feel convinced, that a career so full of usefulness, will not, in any respect, be at an end; but, that with additional opportunities for following out his specialty, he will continue to give the results of his observations in future editions of his lectures on urinary diseases.

Periscopic Department.

MÉDICINE.

Clinical Lecture on Itch in Private and in Public Practice, and its Treatment. By TILBURY FOX, M. D., F.R.C.P., Physician to the Department for Skin-Diseases of University College Hospital,

Gentlemen,—There are certain differences in the cases of itch that come under our treatment in public and in private practice respectively, to which I wish particularly to direct your attention. By public practice, I mean such as hospital, infirmary, and Poor-law practice, amongst the poorer classes. The matter is one of practical importance to you. You know that, in describing scabies to you, I do not follow the usual method of books, and divide the disease into papular, vesicular, and pustular scabies, and so forth; but I speak of the disease as consisting in an *essential* element or lesion, the acarus in and with its furrow,

and certain *accidental* concomitants, which result as consequences of the irritation set up, and the scratching practised for the relief of the latter; of, in fact, the acarian furrow and imbedded acarus, and the results of irritation. These latter vary in kind, and include hyperæmic papillæ and follicles, vesicles, pustules, and excoriations, &c. Now, in private practice amongst the better classes, the differences in cases of scabies, as compared with those observed in hospital practice, are those of *degree*, not kind, and have reference chiefly to the *accidental* concomitants, and only slightly to the essential lesion of scabies.

In private practice, cases are occasionally met with equal in severity to any that are seen in public practice; but, on the other hand, as the rule, they are not so severe, and the disease is not so extensive, and *very frequently in private practice instances come under observation, in which the accidentals of scabies are scarcely if at all marked*. There are a certain amount of itching, and an acarus or two here and there, and nothing more; and such cases are often erroneously diagnosed. There are many instances of scabies only a slight shade worse; a few acarian furrows, with a few papulations.

The variations are due to several causes, chiefly to the observance of greater cleanliness, the seeking of medical advice earlier (so that the disease has not time to put on the aspect of severity), and to the better nutrition, amongst the better to do, as compared with the poor classes. Cleanliness has the greatest influence, because it is a great check to the development, and migration from part to part, of the acari; and mal-nutrition amongst the poor favours the development of the pustular concomitants; and, lastly, the longer the disease lasts, the greater, of course, is the scratching. When want of cleanliness, much scratching, and mal-nutrition go together, the worst cases of scabies occur, and they may now and then, as I have said, be met with in private practice. But, inasmuch as private patients are more cleanly than public ones, seek advice

earlier, and are well fed, scabies amongst them occurs in its least expressed form. But even when the disease has existed some time, it is surprising how slightly marked the disease is in some cases, on account of the extreme cleanliness observed, and the repeated washings practised by private patients.

It is with these slighter cases of scabies that I wish to deal specially—with those in which a solitary or a few acari are present, and very little else. A hasty observer may readily overlook the nature of such cases as those to which I now refer more particularly. I occasionally see instances of scabies which, at first sight, would seem to be instances of pruritus simply. There are two circumstances, however, about them, which should always put you upon your guard. The one is the seat of the pruritus—viz; the front of the abdomen, the penis, the inner and upper part of the thigh, and the front of the forearms; and the other is the occurrence of the pruritus especially, or perhaps only, at night, when the sufferer gets warm beneath the clothes. If careful examination in such cases be made, a reddish papulation may be detected along the upper line of the penis, or a solitary acarian furrow at one of the interdigital spaces or about the wrist; and this may not be readily found. I have often detected after careful search a stray furrow concealed by some of the little folds of skin in the interdigital spaces, which had escaped observation for awhile. About the forearm may or may not be a few very delicate papulations that require, for their clear detection, that the skin should be looked at obliquely. Of course I mean that, in the cases I describe, acari have been actually extracted from these solitary cuniculi. There may be no eruption any where but on the penis, one or two acarian furrows being seated there. I have known such cases complicated by glandular swellings in the groin, and mistaken for syphilis; but, if careful examination be made, the acarian furrows may very plainly be made out; and the swelling accompanying the furrow lacks the indurated

character of a true chancre, and is clearly simply inflammatory. In these cases of very slightly marked scabies, there is mostly no concomitant aid to diagnosis; I mean, for instance, no infection of others in the same family, &c. In a somewhat more marked degree, where there are a few acari and furrows about the interdigits, or the wrists, or perhaps the penis, with a small amount of rash on the forearms and the abdomen and thighs, the disease is very common. The acarian furrows, if the persons attacked be very cleanly, may readily be overlooked again, because they are not discoloured and rendered more distinctly visible by dirt; and frequently the acari are scratched away, and only the opened up cuniculus remains; but the form or skeleton of the cuniculus is seen. A little circular area, whence the cuticle which was upraised into the vesicle is gone, is seen; and, stretching away from this, is a line marked out on each side by loose cuticle, forming at one time the walls of the now opened up cuniculus. This is practically diagnostic of scabies. The papulation, if any, in these cases, about the forearms and the thighs, is made up of hyperæmic papillæ and follicles more or less scratched. There are no acari anywhere, but about the wrists and interdigits and the upper line of the penis. In these cases, the occurrence of itching at night, and the presence of fine papules on the anterior surface of the forearm and about the abdomen and thighs, at once suggest the probability of scabies being present.

The next degree of scabies does not differ from that ordinarily seen in public practice. I would say, then, as regards private practice, be very careful to satisfy yourselves that scabies is not at the bottom of what at first sight appears to be pruritus, which is intensified or developed at night, and is specially seated about the abdomen, the inner part of the thighs, and the forearms or hands. I know that such cases are oftentimes scabies, but are not diagnosed correctly till the disease develops to a decidedly significant extent.

Of course, I have been speaking of the disease in adults.

In the case of children, there may be no characteristic evidence of scabies about the hands, but only about the feet and buttocks. It is often difficult to detect *cuniculi acari* in very young children. But one very good guide is to be found in the character of the eruption. The disease most liable to be confounded with scabies is lichen urticatus. Well, that consists of wheals leaving behind papules. It may be said to be an uniform disease as regards eruption. There is no eruption besides the wheals and papulation. But in scabies the eruption is uniform. It is papular, vesicular, and pustular. In public practice, the scabies of children is marked by complicating ecthyma, as might be expected; but this is not so common in my experience in private practice.

Turning to scabies in public practice, I have only to observe, on this occasion, that the diagnosis of scabies, as ordinarily seen, is, as the rule, very easy. But, in rarer instances, the disease is so general, and so intermingled with excoriations and puriginous papules, etc., that it presents the aspect rather of a pruriginous eczema, or phthiriasis mixed with eczema, than a scabies, since the eruption is not confined to the usual seats of itch-rash, but attacks the parts about the shoulders, the back, the lower parts of the legs, and back of the forearm, as well. But there is one very safe guide in these cases; and that is, the history of the eruption, which shows that the latter began as scabies usually does, whilst acarian furrows will be detected, although most of them may be obscured by the free suppuration about them.

Treatment.—I have some special remarks to make in regard to the treatment of itch-cases in private and in public practice. You may very readily overtreat cases of itch in the former, for the reason that the disease is less severe, and the acari are not present over so large an area. In the mass of instances occurring in public practice, the disease exists for the reasons I have before given, extensively over the surface, and acari have burrowed, not only about the hands, but in other parts of the body, especially

the penis, the feet, the scrotum, and the abdomen perhaps. But in many cases in private practice, I mean amongst the well-to-do, the acari are *only* present at the interdigital spaces. Hence it is a rule of prime importance in treating itch, to accurately determine, at the outset, how far the acari have disseminated themselves about the body. The reason is obvious. There is no need to apply paraiticides to parts in which acari do not exist, because the irritation and eruption elsewhere are due to sympathetic action ; and these irritated parts will get well if the acari be destroyed, and they do not require the use of irritant remedies, such as parasiticide are, but soothing remedies. The practice is to apply to every part of the body where eruption exists in cases of itch. Clearly this is wrong, from what I have just said. My rule is this : if the disease be recent, if it be only slightly marked, if it began about the hands, and there be no cuniculi about the penis, I order the parasiticide to be rubbed into the interdigits, the palm of the hand, and the wrists, and I apply a soothing lotion to all other irritable parts of the body. If, however, there be—I am speaking of the slighter degrees of disease—cuniculi about the penis as well as the hand, and especially if the disease appeared to begin coincidently in point of time by itching about the lower part of the abdomen, then I apply the parasiticide to the hand and the penis ; but even here I do not rub in the remedies very long (for three nights and three mornings), and I only, for precaution sake, let the patient smear the parasiticide upon the scrotum and the thighs, and for two or three times. I then order a soap bath, a change of linen, and I expect my patient to be quite well. The absence of pruritic irritation at night on the third day I take as a good test to the cure of the disease. In no case do I use any but parasiticides of moderate strength ; half a drachm of sulphur to the ounce of lard is a sufficiently strong ointment, if sulphur be the remedy chosen.

But I will suppose that a well marked case of itch comes before you in a well-to-do person. Here I recommend you

not to depart from the rule I have laid down, viz., not to use your parasiticide generally to all the body, but to rub it freely in where the acari are, about the hands, the penis, and the scrotum, and to smear it gently on a few times only to the adjoining parts; to use it for three days only, and not in too great strength. This suffices to kill all acari, and the secondary results, viz., those of irritation, quickly subside. What frequently happens is, that the remedies kill the acari, but their use is persisted in longer than is necessary to effect this object, and only aggravates the already existing irritation and secondary eruption.

I repeat, then, by way of summary, that in private practice, if the disease be slight and recent, use the parasiticide to the hands only, and soothe the other parts with some emollient or astringent lotion or ointment: and, in all other cases, treat actively the hands and the parts about the genitals, but other parts only very slightly. In all cases, use remedies of moderate potency; at the end of three days leave off the parasiticide, give a soap and water bath, and see if the itching at night have ceased. If any visicles appear between the fingers or about the wrists subsequently, these may be touched by the parasiticide. But if the latter be used for any length of time, the itching and irritation which had at first subsided, may increase, and this increase is often mistaken for an exaggeration of the itch, whereas it is that of the secondary pruritic eruption. In these cases, the skin becomes so irritated that it is a difficult matter to get it into a quiescent and healthy condition. *Over-treated cases of itch in private practice are by no means uncommon.*

I have one word to say in conclusion, about bad cases in private and public practice, and the use of sulphur vapour-baths. In these bad cases, no doubt the acari are disseminated widely, and active treatment is needed. One remedy in common use is the sulphur-bath. I think a caution is needed as regards its use. I believe that it is abused. Though I much prefer a good soaking in a sulphuret of potassium bath, and the prescription of a mild parasiticide

ointment, yet sulphur vapor-baths may be employed; but I think a single one properly administered—at most two—sufficient. I would have the patients well washed, first of all with soap and water, and then put into the sulphur-bath. If the effect be that the pruritus at night is destroyed, I do not think it needful to repeat the bath, especially where the skin is much inflamed. You have seen, yourselves, many cases in which these baths have cured the actual scabies, but have set up a severe inflammation and pruritus in the skin that are most difficult to subdue. I never use sulphur vapor-baths in itch, on that account, except where the disease is of the severest kind, because I believe all the acari can be destroyed by simpler and less irritating applications. In these cases, the same rule holds good, I think as in the simpler cases. It is easy to over-treat these cases. If, at the end of a few rubbings with mild sulphur or storax ointment the skin be less inflamed, less irritable, the vesicles and pustules drying up, and the patient get a good night, I consider that the itch itself is practically well, and I then treat by parasiticides the usual haunts of the acari and soothe other parts. But there is another very important matter in these cases. It is to keep the same linen on next the skin during the use of the parasiticide, and when a change of linen is made, to disinfect all the clothes by heat. I cannot now go into the question whether the acari dwell temporarily in the clothes. They can, no doubt, live long enough off the body in the clothes to be conveyed by clothes from one person to another, and, if so, then it is important to prevent these clothes from serving as the media of re-propagating the disease or transmitting it from the infected to the healthy.—*British Medical Journal*.

Diphtheria.—The Board of Health of New York has published (*Medical Record*, Jan. 9, 1874), for popular information, the following precautions which should be observed wherever diphtheria prevails:—

Precautions—(a.) *The Dwelling or Apartment*.—Cleanli-

ness in and around the dwelling, and pure air in living and sleeping rooms, are of the utmost importance where any contagious disease is prevailing, as cleanliness tends both to prevent and mitigate it. Every kind and source of filth around and in the house should be thoroughly removed; cellars and foul areas should be cleaned and disinfected; drains should be put in perfect repair; dirty walls and ceilings should be lime-washed, and every occupied room should be thoroughly ventilated. Apartments which have been occupied by persons sick with diphtheria should be cleansed with disinfectants; ceilings lime-washed, and woodwork painted; the carpets, bed-clothing, upholstered furniture, etc., exposed many days to fresh air and the sunlight (all articles which may be boiled or subjected to high degrees of heat should be thus disinfected); such rooms should be exposed to currents of fresh air for at least one week before reoccupation.

(b.) *When Diphtheria is Prevailing.*—No child should be allowed to kiss strange children nor those suffering from sore throat (the disgusting custom of compelling children to kiss every visitor is a well contrived method of propagating other grave diseases than diphtheria); nor should it sleep with nor be confined to rooms occupied by, or use articles as toys, taken in the mouth, handkerchiefs, etc., belonging to children having sore throat, croup, or catarrh. If the weather is cold, the child should be warmly clad with flannels.

(c.) *When Diphtheria is in the House or in the Family.*—The well children should be scrupulously kept apart from the sick in dry, well-aired rooms, and every possible source of infection through the air, by personal contact with the sick, and by articles used about them or in their rooms, should be rigidly guarded. Every attack of sore throat, cough, and catarrh should be at once attended to; the feeble should have invigorating food and treatment.

(d.) *Sick Children.*—The sick should be rigidly isolated

in well-aired (the air being entirely changed at least hourly), sunlighted rooms, the outflow of air being, as far as possible, through the external windows by depressing the upper and elevating the lower sash, or a chimney heated by a fire in an open fireplace; all discharges from the mouth and nose should be received into vessels containing disinfectants, as solutions of carbolic acid, or sulphate of zinc; or upon cloths which are immediately burned; or if not burned, thoroughly boiled, or placed under a disinfecting fluid.

On the Minute Pathology of Enteric Fever: Preliminary Notice. By E. KLEIN, M.D.

[Dr. Klein has kindly furnished us with the following notes translated from the *Centralblatt für die Medicinischen Wissenschaften*, Berlin, 1874, Nos. 44 and 45, in which it first appeared.]

1. Sections through the hardened ileum of persons who have died in consequence of enteric fever, show that there takes place an abundant absorption of peculiar organisms, by the lymphatics and venous vessels of the mucous membrane over and around and in the Peyer's glands.

2. In the earliest case I have examined (seventh day from the day on which headache came on), Lieberkuhn's crypts contained in their lumen peculiar greenish-brown, generally spherical, bodies of various sizes: the largest being twice and three times as large as a human colored blood-corpuscle; the smaller ones only one-half or one-fourth as large. They are densely crowded together, and appear then of a dark olive-green color. At the margin of such clusters, where they lie more isolated, numerous kidney-shaped or hourglass-shaped forms are to be met with, thus indicating rapid division. Similar bodies are to be found in the tissue of the mucous membrane, when they appeared to be enclosed within the lymphoid cells of the adenoid tissue. They are also contained in the venous vessels, and occasionally in a lymphatic space. In the

former, they undergo rapid division in two and three, whereby they gradually split into small granules—micrococci, which are of a yellowish-green color. These micrococci are arranged either as dumb-bells, or as necklaces of four and more joints, or they form true zooglœa. Finally, these micrococci stand in a genetic relation to a mycelium, the filaments of which are branched, apparently smooth, and of a yellowish-green color. (Similar observations I have published in a paper on sheep-pox, read before the Royal Society.)

The organisms just mentioned are to be met with, not merely in the neighbourhood of Peyer's glands, when moderately swollen, but also in portions of the intestinal mucous membrane, which, on microscopical inspection, except a slight general swelling, do not present any marked changes; microscopical observations show, however, also here, changes in the lymph follicles of Peyer's glands, which will be described hereafter. Besides these organisms mentioned above, there are also found lumps of the same micrococci, as before mentioned, penetrating from the free surface through the epithelium into the substance of the mucous membrane, especially into the Lieberkuhnian crypts, and hence into the lymphatic spaces surrounding the latter.

3. In a case more advanced (twelfth day), I found exceedingly large quantities of micrococci penetrating from the free surface of the mucous membrane into the tissue of the latter and into the Lieberkuhnian crypts, and hence into the lymph-spaces and venous vessels: this was the case, not only with the mucous membrane around the Peyer's glands, but also with parts of the mucous membrane that were somewhat remote from these glands, and which did not show marked changes on macroscopical inspection. Where these micrococci form close groups, as in and around the Lieberkuhnian crypts, they appear of a rather yellowish-brown color.

4. In another case, still more advanced (sixteenth day),

I met with the same relation ; the number of micrococci being, however, much smaller.

5. The lymph follicles of the Peyer's glands showed, in the first case, (seventh day), a peculiar change, consisting in the centre of the follicles being converted into a spongy mass, owing to their blood-vessels being surrounded by spaces, lined by the adenoid tissue ensheathing the blood-vessels. The lymphoid cells of the adenoid tissue were transformed into large granular corpuscles containing two to five and more nuclei, which very much resembled the nuclei of "endothelial" cells. In some of the lymph follicles, I found two giant-cells.

In the later stages (twelfth day) also, the mucous membrane showed similar changes ; the lymphoid corpuscles of its adenoid matrix being transformed into large, coarsely granular cells, containing either one large vesicular or constricted nucleus, or several such nuclei. Some of these cells possessed a vacuole, containing two or three small spheroidal nuclei. Similar cells were found in the venous vessels of the mucous membrane and the submucous tissue, as well as in the lymphatics of the latter.—*British Medical Journal*.

The American Agave. By A. N. ELLIS, M. D., A. A.
Surgeon U. S. A., Fort Wallace, Kan.

Through the columns of your Journal, I would like to say a few words on the "American Agave."

Several years ago, when I was the attending physician to the Southern Apaches, in New Mexico, my attention was first called to its valuable properties as an anti-scorbutic. When the Southern Apaches were removed from Canada-Alamosa, on the Rio Grande, to the Tularosa Valley, in the Mogollon Mountains, the altitude was so great—between seven and eight thousand feet above the level of the sea—and the seasons so short, that but few vegetables were raised. The food of the Indians being almost exclu-

sively meat, an anti-scorbutic was demanded. Much to my surprise, there was not even the slightest appearance of scurvy. Investigation showed that these Indians were making use of the agave Americana, which grows in abundance in that mountain region. It is an evergreen, succulent plant, often growing to a height of fifteen feet, and is found in Texas, New Mexico, Mexico, and Central America. It bears some resemblance to the genus *aloe*, and hence it is often spoken of as the *American aloe*.

The juice is expressed from the leaves and the root. When fresh it is of a sweetish taste and nauseous odor, and reddens litmus paper. Evaporation converts it into syrup, and fermentation into an intoxicating drink. The Apache seems to be acquainted with the virtues of the plant, more especially those which constrain him to show forth his real disposition. The Mexicans employ it in the treatment of constipation and amenorrhœa.

I made use of this remedy in the treatment of a number of soldiers suffering from scurvy with the happiest results. Found it as prompt and efficacious as lime-juice. Gave two or three ounces, twice a day, of the fresh juice. Maceration of the root and leaves produces a soft lather, and is much used in washing clothes, more especially in garments of beautiful and delicate colors likely to fade under the use of common soap. The fibres of the old leaves—those which have been macerated for several days—are used for making thread.

The American agave is indigenous in tropical America, but has been transplanted to Europe, where it is used in making hedges. It is not this plant which produces the intoxicating *pulque*, so much used by the Mexicans, but one of another species, to which it bears many points of resemblance.—*Cincinnati Lancet and Observer*.

Operation by Professor Lister for Goitre.

Last week Professor Lister operated successfully at the Edinburgh Royal Infirmary, in a case of goitre affecting both sides of the thyroid body. Before proceeding to remove the tumour, the operator ligatured the superior and inferior thyroid arteries, by which preliminary hæmorrhage was almost entirely prevented.—*Students' Journal*.

Brain Disease Simulated by Overstrain of the Convergence Muscles of the Eyes.

Mr. Brudenell Carter described the case. The patient, a young gentleman, was interrupted whilst reading for honours at Oxford, by double vision and vertigo, followed, if the effort to read were continued or soon resumed, by sickness, palpitation, and intense headache. These symptoms were attributed to some obscure affection of the brain, and the patient was directed to leave the university without taking a degree. He remained for some time at home, under medical treatment, without improvement, and, on coming to London for further advice, was told to take a voyage to Australia and back, in order to rest his brain. He did so, but returned no better, and was then advised not to enter into business, and to abandon his engagement to marry. Mr. Carter was consulted about the case, in order that he might say whether the ophthalmoscope revealed anything abnormal in the cerebral circulation. He found the patient to be very short-sighted and that he had never worn spectacles. In reading, he held his book seven inches from his eyes; and Mr. Carter ascribed the symptoms to inability to maintain this degree of convergence for many hours. He ordered spectacles to be worn constantly, and reading to be practised at eighteen inches distance. In three weeks the patient returned cured, with his wedding-day fixed and his arrangements for entering into business completed. In his concluding remarks Mr. Carter said that the case, though exceptional, was exceptional only in degree, and that many patients suffered from headache and other symptoms due only to impaired harmony of the ocular muscles, or to inordinate exertion of some of them. He urged that, in every case of obscure head-affection, the state of refraction, of vision, and of the muscles should be carefully investigated; at all events, before a patient was sent to Australia, or advised to abandon his position and duties in life.

Dr. Hughlings-Jackson considered Mr. Carter's paper to be as interesting to physicians as to ophthalmic surgeons

He (Dr. Jackson) referred to a case in which hypermetropia, which was an indirect cause of nervous troubles, had been by several eminent ophthalmic surgeons and by himself misinterpreted. It disappeared when appropriate glasses were worn. Since then he has always considered the state of the refraction of the eyes as well as the state of the fundus in patients who have what may be called minor cerebral symptoms. He referred to another case he had seen with Mr. Carter, in which severe headache seemed to be fairly attributable to hypermetropia and astigmatism. He considered that cases of ocular palsy were, for the study of the nature of vertigo, the simplest of all cases. It was clear from these cases that vertigo was a motor symptom. It was not due to double vision, as commonly supposed, as it occurred on use of the paralyzed eyeball only—that is to say, under conditions in which double vision was impossible. Yet, as a matter of fact, vertigo, in physicians' practice at least, was not commonly met with in cases of ocular palsy. This was owing to the fact that, in the case of the sixth nerve, the patient, so to speak, dodged the paralysis by holding his head stiffly inclined; and in the case of the third nerve, to the fact that the paralysed eyeball was covered by the drooping lid. In the latter case the patient did not reel nor feel giddy, but if he closed the good eye, and if the paralyzed lid were upheld, he would, when walking, feel giddy, and might feel sick. The vertigo was due to "erroneous projection." There was a duplex condition; there was over-estimation of the range of a movement of the eyeball intended, but not really performed, and action of movements of locomotion in accordance with that false estimate, and thus over-action of them.

Dr. Poore said the case reminded him of some forms of chronic fatigue of the muscles, as in "writer's cramp," where the strain falls on certain muscles only. These after a time refuse their office, with pain, headache, etc. Mr. Carter's patient might be said to suffer from "reader's cramp."

Dr. Rasch referred to the case of a patient who suffered from vertigo and sickness, apparently from a plug of wax in the ear.

Mr. Carter, in reply, said he remembered the case referred to by Dr. Jackson, and as the patient promised to return if he did not improve, but had not again made his appearance, he concluded that he was well.—*Medical Times and Gazette*.

Read before the Clinical Society of London.

The Guaiacum Process for the Detection of Blood and Pus in Urine.

To the Editor of the Medical and Surgical Review (Australasian.)

SIR,—Your last issue contains a notice, taken from the *Medical and Surgical Reporter*, of a plan suggested by Professor Almen for the detection of blood in urine, which is as follows:—"A few cubic centimetres of tincture of guaiacum are mixed with an equal volume of oil of turpentine in a test tube, and shaken until an emulsion is formed. The urine to be tested is carefully added, so that it may sink to the bottom. When the emulsion and urine come into contact, the guaiacum resin separates, and falls as a fine white, dirty yellow, or green precipitate. If blood is present in the urine, the resin will have a more or less intense blue color, often almost indigo. In normal urine, or that containing albumen or pus, this blue color does not appear, and thus proves the absence of blood."

The guaiacum test for blood in urine is not new, as the following extract from a paper "On Colour Tests as Aids to Diagnosis," read by me before the Medical Society of Victoria, October 6th, 1869, will show:—

"The piece of paper I now show you contains traces of blood upwards of twenty years old. On applying tincture of guaiacum to it no change of colour will occur, but on adding a drop or two of ozonic ether, the guaiacum will be rapidly oxidized and acquire a bright blue colour. The test for pus is made by exposing a saturated alcoholic solution

of guaiacum to the air until it has absorbed a sufficient quantity of oxygen to give it the property of burning green when placed in contact with iodide of potassium. Perfectly sound tincture of guaiacum, such as should be used for the blood test, undergoes no change of colour in the presence of iodide of potassium. On this piece of paper there is a small quantity of pus. It is more than nine weeks old, and yet you will see that on moistening it with water and pouring a drop or two of the oxidized tincture of guaiacum over it, a clear blue colour will be produced. In operating on pus which has become dry, it is always necessary to moisten it with water before applying the test. . . . As aids to medical and surgical diagnosis, these tests bid fair to become of great service. The ease with which, by their agency, the presence of minute traces of blood and pus may be recognized in sputum and urine, renders it unnecessary for me to occupy your time in pointing to cases in which they may be usefully applied. I will mention, however, that in surgical cases where any doubt exists regarding the presence of pus in deeply seated parts, the use of a grooved needle and the pus-test would at once decide the question."

I generally carry these tests with me, and often find them of great service as aids to diagnosis. In examining urine, all that is necessary is to place a small quantity of it on a white plate and then add to it a little newly-made tincture of guaiacum, which alone should not undergo any change of colour; a few drops of ethereal solution of peroxide of hydrogen—erroneously called ozonic ether—should then be added, when, if blood be present, a bright blue reaction will quickly take place. In testing for pus, the process is, if possible, still simpler. It is merely to add to a little urine, on another part of the plate, a few drops of the oxidized tincture of guaiacum, when, if pus be present, a blue reaction will be the immediate result. The reactions from these tests should be observed within a few minutes of the time of their application, for guaiacum resin

has an affinity for atmospheric oxygen, and in the course of a little time begins to turn green, which would be apt to mislead.

I am, Sir, your obedient servant,

JOHN DAY, M.D.

Geelong, September 23rd, 1874.

—*Medical and Surgical Review (Australasian.)*

SURGERY.

On Subhyoid Pharyngotomy (v. Langenbeck, December 1st, 1869.

This operation, first suggested by Malgaigne in 1835, and first carried out on the living subject by Prat in 1859, was twice performed by the author for tumours in the throat. One case recovered: one died. The method followed is given by v. Langenbeck. The first step is tracheotomy, after which a sponge is used to plug the larynx and prevent the blood entering the trachea during the further steps of the operation. This done, the incision along the lower border of the hyoid bone is made, reaching from one omohyoid to the other. The fascia and sternohyoids having been divided, the thyrohyoid membrane and finally the mucous membranes are cut, and the epiglottis thus exposed is drawn forward by forceps. When the cut is properly made, the larynx is found to drop away to some extent from the hyoid bone. The superior thyroid artery and nerve are not in the way in making these incisions. When the larynx is thus drawn forwards the interior can be inspected, and any growths removed by the usual means. The author thinks the operation indicated where (*a.*) Foreign bodies in pharynx, situated in the pharyngolaryngeal cavity, cannot be removed by the mouth. [*b.*] Tumours in this part of the pharynx are seated with broad basis in the mucous membrane, or in the wall of the pharynx between the mucous membrane and the muscular layer. (*c.*) Growths exist on epiglottis, aryteno-epiglottidean ligaments or arytenoid cartilages.—*Glasgow Medical Journal*

Amputation of a Child's Tongue.—

Prof. Azzio Caselli reports, in the *Bulletino delle Scien. Med.*, the case of a child nine years of age, which had wounded its tongue by a fall. A cancerous tumour followed, which in two years had extended over the entire right half of the tongue, except its summit; the tumour also invaded the central portion of the left half and the right half of the floor of the mouth. At the point where the tumour first made its appearance there was a large ulcer, from which flowed blood and ichorous matter. There was no ganglionic enlargement, but the child was anæmic and emaciated.

The patient entered the hospital September 1, 1873. There was then a very acute glossitis, consecutive to the mastication of irritating substances. There was also some obstruction to respiration. In a few days, while the child was nourished by means of the œsophageal catheter, introduced through the nostril, the inflammation yielded to the bleedings and cold applications. On the eleventh day Professor Caselli commenced the removal of the entire tongue by Rizzoli's method, dividing the lower jaw at the median line, and applying a ligature. On the fifth day, as the tumour was slow in disappearing, he removed it by means of Chassaignac's *craseur* without the least hæmorrhage. At the end of thirty days the wound had entirely healed and deglutition was normal. Although three-quarters of the tongue had been removed, the child was able to pronounce *s* and *z*.—*New York Medical Journal*.

Sterility after Lithotomy.

Mr. W. F. Teevan has published ("Trans. Clinical Society," vol. vii., pp., 179, 180; and Trans. Path. Society vol. xvii. p. 186), four cases of this in males operated on by the lateral operation for stone. The stones removed from the bladders do not appear to have been large, and the subjects of operation were all young, two being infants. Mr. Teevan explains it by the operation, as usually performed, involving a laceration of the floor of the prostatic urethra, the ejaculatory ducts being torn across, or the orifices plugged with inflammatory exudation in the process of healing.—*Students' Journal*.

CANADA

Medical and Surgical Journal.

MONTREAL, FEBRUARY, 1875.

THE LATE WILLIAM SUTHERLAND, M.D.,
EMERITUS PROFESSOR OF CHEMISTRY, MCGILL UNIVERSITY.

We have to record the death of our friend and colleague, WILLIAM SUTHERLAND, M. D., Emeritus Professor of Chemistry, McGill University, which sad event occurred on Tuesday morning, the 9th February, 1875.

Dr. SUTHERLAND has for years been an invalid, although with remarkable tenacity he has followed the practice of his profession almost to the very last. He was a man of remarkable determination and will, full of kindness and gentleness. It was with a pang of regret that some two years ago he found it necessary to sever in a large degree those ties which bound him to his patients, reserving his remaining strength to give counsel and advice to those who sought it from him at his office.

Dr. SUTHERLAND graduated at McGill University on the 25th May, 1836. On that occasion he submitted to the Faculty of Medicine and defended publicly an inaugural dissertation on asphyxia. This treatise is exhaustive, the style clear and lucid, the language pure and powerful,—a faculty possessed by him in a remarkable degree to the end of his public career.

After graduation, the subject of this notice removed to Western Canada, and practiced his profession on the Niagara frontier. He was induced to return to Montreal, about the year 1840 or 1841, since which

period he has been engaged in the active pursuit of his profession in this city.

In the autumn of the year 1843, Dr. SUTHERLAND, in association with several other medical gentlemen, of whom Dr. MUNRO alone remains, established the "Montreal School of Practical Medicine and Surgery." This school was established ostensibly to give the French Canadian students an opportunity of hearing lectures on the Science of Medicine in their native tongue. It entailed much labour on the teachers, because they delivered lectures daily in both languages, so that two hours of the day were given by each lecturer for the instruction of pupils. The Chair of Chemistry in this school was ably filled by Dr. SUTHERLAND. We speak of what we know, as during that exciting time we followed the lectures at McGill University, but frequently attended Dr. SUTHERLAND'S lectures, as we were personally acquainted with him and admired him as an able lecturer and kind friend.

We remember with what pleasure and instruction we listened to his clear and lucid explanations, his classic language, and with what interest we watched his rapid manipulation and accurate results. All those pleasing and attractive features were to be found in him as a lecturer. It was indeed the fact of his capacity in this respect which induced the authorities of McGill University at a later date to secure his able assistance as a teacher of chemistry. With the establishment of the school appeared the Montreal self-supporting Dispensary, an institution which was started to afford clinical instruction to the pupils of the school. It was found, however, that many persons able to pay took advantage of the dispensary, and sought aid and surgical and medical relief at this institution because it could be obtained there *gratis*. This was fully

recognized as an abuse and led to the discontinuance of the Dispensary. We notice the last entry in the books is dated 5th December, 1844, the first entry being 2nd October, 1843.

Almost at the time of the establishment of the School of Practical Medicine and Surgery, and of the self-supporting Dispensary, was there a first attempt made to publish a medical periodical in Montreal, and in April, 1844, appeared *The Montreal Medical Gazette*, a monthly journal of medicine and the collateral sciences, under the joint editorial management of the late FRANCIS BADGLEY, M.D., and the subject of this notice. It was most ably conducted, and on referring to its pages, we learn that the question of establishing a Canadian Medical Association was suggested and discussed in the columns of this periodical, and we believe that failure alone attended the attempt at that time because of the difficulty of travel. Without railroads and with inferior steamboats, Toronto was as far from Montreal in point of travel as is Liverpool at the present time.

The Canadian Medical Association was formed in the year of grace 1867, and received the unqualified support of the profession of this Dominion, extending from Halifax to the Pacific. But the idea was suggested and advocated a quarter of a century before by able editorial articles, which still remain to us, though the writers have both passed to their rest. But more than this, not only was the suggestion made in 1844 by Drs. BADGLEY and SUTHERLAND to establish a British American Medical and Surgical Association on the same basis and with the same objects as the Provincial Medical and Surgical Association of England, but later, in 1850, it appears, on reference to the records of the Medico-Chirurgical Society of Montreal "that " Drs. BADGLEY, SUTHERLAND and DAVID be named " a committee to submit to the members of the " medical profession of Canada a prospectus of the " objects to be attained by the formation of an

“ Association to be styled ‘The British American Medical and Surgical Association,’ the manner in which these may be realized, and to request the co-operation of the profession throughout Canada in carrying out the scheme.” The report of this committee, dated 27th February, 1850, and signed by Drs. BADGLEY, DAVID and SUTHERLAND, is to be found in the March number (1850) of *The British American Journal*, edited by the late ARCHIBALD HALL, M.D.

Dr. SUTHERLAND's connection with the School of Medicine and Surgery ceased at the end of the session 1848-1849. Some time in the month of August, 1849, he accepted the Chair of Chemistry in the Medical Faculty of McGill University. From this date up to the year 1866 he continued to deliver his course of lectures on that branch in connection with McGill University, and from his excellent qualities as a lecturer contributed largely to the success of the University. From this time his health has gradually failed. From what was at first regarded as a laryngeal affection, tubercular phthisis was developed which, at his age, was slow in its advance, and on Tuesday, the 9th February, he breathed his last, in the sixtieth year of his age. No *post mortem* examination of his body was made, nor was it deemed necessary.

Dr. SUTHERLAND was a fluent speaker; an original thinker. Though latterly he did not record his observations, yet while in health he was a valuable and working member of the Medico-Chirurgical Society of Montreal, and twice held the highest honour in the gift of his professional brethren, in being elected their President. He was a general favourite, highly respected, and looked up to by his junior *confrères*. His opinions on subjects of a medico-political aspect were broad and liberal. In private life he was esteemed highly; his manner, though firm, was kind, and his punctuality and attention to the business of his profession enabled him in the decline of life to enjoy that quiet and solace of opulence which is not usually accorded to the medical practitioner.

THE WESTERN HOSPITAL.

We observe, that a site has been secured and money subscribed to build a Hospital in the Western division of this city, and we believe that arrangements are in progress for the purpose of carrying out the scheme. In all honesty we cannot say that this is a necessity however anxious we may be to see a Hospital built on a modern plan. The question of hospital accommodation is a difficult one to deal with, it is not alone the money to be obtained for the erection of suitable buildings, that has to be considered, but to be a useful institution it will require liberal support to maintain it in a condition of efficiency. The want of a convalescent home or a hospital for chronic cases of disease has long been felt. The subscribers to the Western Hospital are with few exceptions interested in the successful maintenance of the Hospital already in existence. What may we ask would the city of Montreal do without the Montreal General Hospital. We all at times individually feel its importance and if in any respect it is to suffer by division of interests what will be the result.

A large number of sick poor are obliged to take advantage of admission to the wards of the Montreal General Hospital who would be far better elsewhere if an institution suitable for their ailments existed.

We are not disposed to throw cold water on the laudable efforts of the promoters of the Western Hospital as we think there is ample room for such an institution if its objects are to be in common with the institution already in working efficiency. There is no actual need for two institutions with the same objects. To speak more plainly there are a large number of patients constantly occupying beds in the Montreal General Hospital whose cases are of a chronic character, a number of persons suffering from consumption that would be benefited and lives that would be prolonged if placed under more advantageous circumstances. In London, England, there is to be found the Brompton

Hospital devoted exclusively to the treatment of cases of consumption. The general hospitals are reserved for cases of acute disease and when cases become chronic or are likely to be benefitted by change they are removed to the institution at Brompton. In connection with this institution there is in process of erection an hospital for the removal of patients to the more southern parts of England at or near some sea-side watering place so as to give those patients who are likely to be relieved the benefit of change of air. This is a scheme which is not required in Montreal or at least if required would not perhaps be judicious but a hospital to relieve the Montreal General Hospital of many of its sick poor would be a great boon. It would be well for the promoters of the Western Hospital to consider the question in all its bearings and not forget the old maxim that "union is strength." The two institutions uniting and working in harmony, having one object and desire, the mutual aid of each, appears to us to be the wisest plan, as there is truth in the text that a "house divided against itself cannot stand."

DESTRUCTION OF THE BEAUPORT LUNATIC ASYLUM BY FIRE.

It is with regret we record the destruction of the greater part of the female wing of the Beauport Lunatic Asylum at Quebec and in recording this catastrophe we cannot but express our astonishment that so few lives were lost. Great credit is due to the superintendent and his assistants for having so coolly and deliberately managed the unfortunates under their care during a time of such peril and excitement.

We give below a report taken from the telegrams of the day.

QUEBEC, Jan. 30.

One of the most fearful conflagrations which it has been our lot to record, occurred last night at the Beauport

Lunatic Asylum. About half-past six an alarm of fire was given, and it is supposed that the cell where it originated had been set on fire by one of the female patients, a woman of very vicious character, named Marie Breton. Her conduct had been such that she had to be put in the cells, and she vowed that she would have her revenge out on the "cursed place," as she termed the asylum. It is very certain that she was treated with the utmost kindness and consideration, but at times her outbreaks were such that she had to be placed under the severest restriction. Whatever may have been the destructive designs she formed, it seems almost certain that she suffered a horrible fate in the flames she is supposed to have kindled. It is supposed that she placed a candle under the bed and then shut the cell door. This seems to have occurred when the inmates were at prayers. There was a terrible scene in the western wing. By extraordinary exertions the female patients who had been in the south-eastern wing had been conveyed through the crowds to the western wing, and there they were cooped up, several hundreds of them, until sufficient means could be found of conveying them to the outlying male department of the institution. In the craze of fright the poor creatures became almost rabid, and when they were huddled together their frantic talk and hysteric shrieks were pitiable. This was about nine o'clock. The room was as full as it could hold, and it required every exertion the nurses and guardians could make to maintain anything like quiet in the ward. Some were sobbing piteously, some silently swaying to and fro, some passionately weeping, some singing triumphal songs and rejoicing in the work of destruction going on around them, some shrieking, howling and blaspheming, some calm and collected, as if fully apprised of the danger impending over the building. Strange to say, one of the worst cases in the female ward entirely recovered her reason in the panic, and is now as sane as possible. When the alarm was given Madame Vincelette took it very quietly and notified her husband, who proceed-

ed to remove some of the patients from the cells to the ward in the western side; but the smell of smoke acted upon some of them as that of blood upon a tiger, and they nerved themselves for the fight. They hit, tore and scratched, and became as refractory as possible. The fire was spreading with frightful rapidity, the corridors filling with suffocating smoke and heat. The unfortunate inmates were noisy, intractable, and they would not leave; they hid under beds, wrapped up in blankets or sheets, and required extraordinary strength to extricate them. The flames were dancing through the corridors, still they hid, and despite the efforts made to save them, it is believed that three inmates perished in the conflagration. Three times Mr. Vincellette broke down under the load he was carrying, and each time was he rescued by faithful coadjutors. On the last occasion he fell from the third to the second story in endeavoring to save two women; he cut himself seriously, and dislocated his right elbow. He was rescued at the point of suffocation by Hypolite Lassard and conveyed to the male ward. But all could not be saved. There were those who put themselves beyond the reach of human help, and went down to the death they courted. These were Miss Bazin of Montreal, Miss Prussien and Miss Breton, left behind in the burning building—at least such is the belief of the Superintendent and his wife—and it is presumed that they were burned or suffocated to death. The supposition as to their disappearance is certainly a most painful one, and there seems to be circumstantial evidence enough to prove that they died in the flames.

After nine o'clock the Mayor and members of the Council were on the ground and every exertion was being put forth to save life and property. The Mayor very properly put himself in charge of the Corporation Fire Service and dispelled whatever doubt there may have existed of his being perfectly competent to deal with fires. But the pillage became something extensive until finally a detachment of the 8th Battalion had to be sent for. The amounts of insurance effected on the building have not transpired but it is said that they are very heavy.