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CANADA

MEDICAL & SURGICAL JOURNAL

Original Communications.

CANCER OF THE LIVER ;

GALL STONES ; OBSTRUCTION OF THE COMMON BILE DUCT ; ENLARGEMENT OF THE GALL-BLADDER ; ATTACHMENT OF THE GALL-BLADDER TO THE PELVIC PERITONEUM ; RUPTURE OF THE ATTACHMENT ; HEMORRHAGE INTO THE GALL-BLADDER AND PERITONEUM ; PERITONITIS—DEATH.

BY JOHN BELL, A.M., M.D.

Read before the Medico-Chirurgical Society, Montreal, March 30th, 1877.

Mrs. T., the subject of the pathological conditions, whose history I shall briefly describe died on the 12th March, 1877. She was then 58 years of age. Until the commencement of the illness which ended in her death, she had always been remarkably healthy. She was married when 25 years of age and had six children in nine years, when her husband died, and she remained a widow since. One of the children died in infancy, and the remaining five are all strong and healthy. Her hair was grey, and the children have a tendency for the hair to turn grey early. They are all of highly nervous temperament. Until the time of her last illness she never required medical assistance, except at the birth of her children.

About fourteen years ago she first felt a tumour in the right inguinal region. About that time a lady in Brantford had had an ovarian tumour successfully removed. This determined her to consult Dr. Henwood of that place, about the tumour she had found in her own person. Dr. Henwood pronounced the tumour

to be ovarian, and said that the only remedy was the knife, but that she was not to let any one interfere with it, until she could suffer it no longer. At that time it caused her no inconvenience, and she dismissed the matter from her mind until last August. Her health had not been so good as usual, and she was suffering from pains in the back and side, the right, if I recollect correctly. She complained very little at any time, but she seemed to be more or less distressed. Her complexion was rather pale and somewhat sallow.

She mentioned the existence of the tumour to me, and on examination externally and per vaginam, I found the tumour to be very much as she described it. It was about the size of a hen's egg, quite movable, firm and symmetrical, and apparently connected with the right side of the uterus. I considered it to be a fibroid or fibro-cystic tumour of the right ovary, and advised her still to follow Dr. Henwood's instructions. For her general condition I prescribed the citrate of quinine and iron. The position of the tumour was about the brim of the pelvis. The tissues about the vagina uterus and rectum were in a healthy condition. Her health must have improved from the treatment, for I heard little or nothing about the pains until the 19th of December last. Her health was then not so robust as usual, and she was suffering severely from pains in the back and principally in the left side above and about the middle of the crest of the ilium. She was not able to go about so much as formerly but remained lying down a considerable part of the time. Her general appearance was very much the same as usual. Various liniments and plasters were used to endeavor to alleviate the pain, but nothing proved effectual excepting hypodermic injections of morphia.

About the 25th December, Mrs. T. became jaundiced, the colour deepening in a few days to a dark gamboge-yellow, and she complained of uneasiness and pain increasing in severity and persistence in her right side and epigastrium.

After most careful and repeated examinations by percussion and palpation the area of the liver was found to be not larger than usual, indeed rather smaller; the breadth of hepatic dul-

ness was about three inches, and the edge of the liver seemed to correspond with the edge of the costal cartilages, as a tubular note was elicited on percussing below them, and no free edge of the liver could be discovered lower down or rounded outline of a distended gall bladder. The tumour which formerly had occupied the lower right side of the abdominal cavity, had lately increased, symmetrically, so much in size as now to reach the lower surface of the liver; and when she was lying down, the dulness on percussion was continuous from the liver to the tumour. A tubular note could still be elicited from what seemed to be the transverse colon overlapped by the upper end of the tumour and the lower border of the liver.

The fæces now became white like mortar, and the urine of a dark brownish-yellow colour. These excretions had hitherto always been quite normal.

As Mrs. T. had recently removed to a large new house, which was somewhat irregularly warmed, and as her appetite and general health were poor, I thought, in all probability, she had "caught cold," and the case was one of catarrhal jaundice. A careful diet was therefore enjoined; poultices, hot turpentine stupes, blisters, etc., were applied around and over the liver; and various alkaline and acid medicines were administered, but without any effect in relieving the symptoms. I might remark that my patient had the strongest aversion to taking medicine of any kind, and it was only by great persuasion I could get her to persevere with any remedy for a short time. Her bowels moved regularly every day, and continued to do so throughout her illness. She began to be more restless and uneasy, especially at night—sleeping only for short periods at a time. The pain was always worse at night, becoming perfectly excruciating during the last few nights of her existence. Her strong dislike to taking medicine prevented her using as freely as she ought the chloral draughts I prescribed for her. Her skin became very itchy all over, but this was entirely relieved by sponging the surface with a weak solution of carbolic acid in water.

By the 3rd February the tumour had increased to about seven inches in length and nearly as much in apparent breadth, and I

thought might press strongly against the lower surface of the liver. The tumour was still symmetrical in form. A ridge, however, could be felt extending horizontally across it at the level of the umbilicus; this had been perceptible, but less distinctly, for more than a month. Simpson's uterine sound could be introduced into the cavity of the uterus in a retroverted direction for only two inches. Moving of the tumour did not seem to alter much the direction of the sound. On examining *per rectum*, the tumour did not seem to encroach on the region of that bowel. In front, the tumour could be traced distinctly narrowing down to a neck or pedicle underneath the arch of the pubes, and was attached to the right antero-lateral surface of the uterus, or lower part of the broad ligament.

I now began to think that this hard foreign body pressing against the lower surface of the liver might be the cause of the jaundice and of its persistence, either by producing irritation and swelling or by direct pressure or by adhesions formed and put upon the stretch causing compression of the common bile duct. On reconsideration, however, it was deemed improbable, as jaundice seldom occurs in pregnant females, and the absence of bile from the stools would not have been so complete and continuous. The possibility of the tumour being cancerous, and the jaundice due to secondary growths had occurred to me, but the idea was dismissed as seemingly not supported by the facts of the case.

About the middle of February, what seemed to be the enlarged or displaced left lobe of the liver could be felt extending two or three inches below the left costal cartilages, the tumour became irregular in outline, and some small tuberosities could be felt between it and the edge of the liver, in the median line. While manipulating the masses in this region I thought I several times perceived a soft crackling, which it occurred to me might be caused by gall stones striking against one another.

During all this time my patient had continued to become more and more emaciated, her appetite failed, the color of the skin continued dark yellow (as yellow as a duck's foot, as she laughingly remarked,) the urine brownish yellow and the fœces

light grayish white. For about a week she had had a small attack of diarrhoea, which was ended by the passage for two days of bilious stools.

On the 3rd of March I again carefully examined the lower part of the tumour, with a view to decide in my own mind as to the propriety of that *dernier resort*—its extirpation, which seemed alone to be left to give the patient a chance of life. I thought I felt fluctuation in the lower part of the tumour, and as I was continuing to press it intermittently it suddenly gave way, producing an impression that might be conveyed by the bursting a tough wet paper bag full of water or air. The inguinal region, which had previously been filled by the hard and well-defined outline of the tumour, was now soft and flaccid. I thought I had ruptured a cyst in the tumour, as the hard main part of the growth could still be felt in the upper part of the abdominal cavity. No pain was experienced for about twenty minutes, when it began with considerable severity, but was at once completely removed by a hypodermic injection of one-third of a grain of morphia sulph. No great pain followed, but there was slight pain or tenderness over the whole belly. On making slight examination the next day (4th March), I found the lower point of the tumour had returned to its old form or place, which I presumed to be due to the refilling of the cyst it had ruptured.

During the whole of her illness up to this circumstance the pulse and temperature continued at or below the normal standard, since then the temperature has been about 101° , and the pulse a few beats over 100 per minute.

On the 19th March, inst., Drs. G. W. Campbell and R. P. Howard met me in consultation over the case and finding the conditions such as I have stated, decidedly advised no interference, as there was a strong probability of cancerous disease implicating the liver. No operation was attempted. The patient died in three days afterwards.

AUTOPSY 30 HOURS AFTER DEATH BY DR. OSLER.

Body, that of a well-made, but spare woman. Skin intensely jaundiced; conjunctivæ yellow. Rigor mortis absent.

Abdomen.—On opening this cavity a few ounces of slightly turbid, and sanguineous fluid were removed. The liver is seen to be somewhat enlarged, and extends fully $3\frac{1}{2}$ inches below the margin of the ribs. Projecting from the under surface of the right lobe is an enormously distended gall-bladder which reaches within two inches of the pubis. The upper surface is free, but to the left side it is attached by loose and somewhat fresh adhesions to the pushed up omentum and stomach. The apex, which is rounded, presents an irregular surface, as if it had been attached, and on the side of the broad ligament, at a point a little to the right of the uterus is a round space, covered on the surface with decolorized fibrin, hæmorrhagic below, which looks very much as if here the gall-bladder had been adherent. Behind it is firmly attached to the transverse colon. Traces of peritonitis in the form of thin flakes of lymph exist over the coils of intestine. An extravasation of blood has taken place into the tissues, about, or rather upon the peritoneum in the pelvic cavity, especially between the uterus and rectum. The corpuscles have subsided, and left a pale-yellow, fibrinous layer above, which is firm, and quite adherent to the parts about.

Heart and Lungs, quite healthy, a few ounces of fluid in left pleura. Slight atheroma in aorta and aortic-segment of mitral.

Spleen not enlarged, and of a deep brownish-red colour.

Liver looks a little larger than normal, and is of a dark-greenish colour. Scattered over the surface are a dozen or more tuberculous masses, ranging in size from a cherry to a walnut, white in colour, the larger of them with depressed centres. The anterior portion of the right lobe is separated from the rest of the organ by a shallow groove, the position of which on the body was just below the costal border. The left lobe is flattened, and its anterior margin notched. On section the liver substance is deeply bile-stained, the lobules are not very distinct. There are only a few of the cancerous nodules in the interior. On opening the distended gall-bladder it is found occupied by a large coagulum, the upper part of which owing to the sinking of the blood corpuscles, is decolorized. Hardly any serum was

present except that contained in the meshes of the clot. Nine or ten gall stones, about the size of marbles, and with numerous facets were found. At the neck a small irregular mass of cancer projects into the cavity, and completely blocks up the cystic duct. The walls of the bladder are thin, not cancerous, and at the posterior part just where the transverse colon is attached, there is a portion infiltrated with blood. On close inspection it is seen that here ulceration and destruction of the wall has taken place. There can be no doubt that by this process a vessel has been opened, and the hæmorrhage caused. The glands in the hilum of the liver are enlarged and cancerous, and compress the hepatic ducts. The portal vein does not appear to be interfered with.

Dr. Charles Murchison in his work on diseases of the liver, says that "tumours of the uterus and ovary have, in rare instances, been known to compress the bile duct and cause jaundice. It is sufficient here to mention the fact, as the diagnosis of these diseases from other causes of obstruction of the bile duct can seldom be difficult."

CASE OF SUPPRESSION OF THE SALIVARY SECRETION.

By DONALD BAYNES, M.A., M.D., L.R.C.P. Edin.

Late Clinical Assistant at the Hospital for Diseases of the Throat, London.

The following case came under my observation last November. It is the first of the kind I have seen, or, in fact, have either read or heard of.

The subject of this curious malady, J. B., aged 32, an hostler and driver at a livery stable, came to me November 10th, 1876, complaining of great dryness of the mouth, inability to swallow food, unless washed down by a draught of fluid, and a desire to spit in order to clear his throat but inability to do so. He said that he felt as if the tongue was too large for the mouth and as if his mouth was filled with bird-lime or tallow. He was continuously obliged to wash his mouth or drink both night and day. He

was unable to sleep more than one hour at a time owing to his mouth and throat getting so dry that he thought he would choke.

On examining his mouth I found the tongue swollen and covered with a thick white fur; at the junction of the lips with the gums might be seen a substance resembling the roe of a fish extending quite round and on both jaws. This I at first thought was a growth of a vegetable or fungoid character, it, however, on examination by the microscope, turned out to be composed of starch granules, &c., and was, in fact, simply the detritus of his food, which had collected there owing to the want of saliva to wash it away. On examining the ducts, Steno's and Wharton's, they were found open, and no obstruction existed in them to account for the singular phenomenon. The man's health otherwise was excellent. He, however, about the 20th of October, had been suffering from a severe cold, in an attack of tonsillitis, which yielded to the ordinary treatment.

The suppression of saliva lasted about three weeks, during which time I gave various stimulating gargles, together with pot. iod. and nux vomica and quinine and iron, with an occasional aperient, but to no avail.

Nov. 28th.—I passed a probe into Steno's duct, and connected it with the negative pole of a galvanic battery (zinc-carbon, 12 cells.) The positive pole I applied to the nape of the neck, this seance I kept up for about ten minutes frequently reversing the current. The battery hardly was in use for 3 minutes when he said, "Oh, my mouth is much moister." He returned next day and said he had slept all night, and his mouth felt better. I repeated the electricity, which was followed by a copious flow of saliva, since which time he has had no return of his previous symptoms.

Hospital Reports.

MEDICAL AND SURGICAL CASES OCCURRING IN THE PRACTICE OF THE
MONTREAL GENERAL HOSPITAL.

Acute Bright's disease, accompanying pregnancy; miscarriage, peritonitis, death, autopsy. Under the care of Dr. ROSS.
Reported by MR. C. L. COTTON.

M. D., 27, servant, admitted November 2nd, 1876, for dropsy.

History.—Family history good. She was married last February. She always enjoyed very good health before her marriage, occasionally suffering from indigestion. Her catamenia were always regular. Since first of last May her menses have ceased. During the month of June she vomited every morning on rising. After that she felt heavy and indolent, but she always had a good appetite. About two months ago her legs were very stiff for three days, but this disappeared. About the middle of last summer she perceived her abdomen getting enlarged, and she thought she was pregnant. It did not increase very rapidly until about four weeks ago. Her face, feet and abdomen became puffed up. In about three days it disappeared from the face and feet, but the abdomen did not lessen in size. During this time she did not notice her urine appreciably diminished. The abdominal swelling has gradually increased in size until the present time. She never perceived any movements of a foetus in utero. Since last Sunday the swelling has come into her feet again.

Present condition.—Sallow complexion. Abdomen immensely enlarged. Umbilical girth 44 in. From ant. sup. spinous process to umbilicus on both sides, 11 in. From pubes to umbilicus, 8 in. Umbilicus to ensiform cartilage, 8 in. Abdominal walls very tense and shining. There are numerous dark purple lines, about $\frac{1}{4}$ ' broad, on the inferior abdominal zone on both sides, corresponding to the lineæ albicantes. The small superficial arterioles are injected in several places.

Fluctuation very distinct all over the abdomen. Sides and inferior part of abdomen dull on percussion. Ant. and sup. part from umbilicus to ensiform cartilage gives an amphoric note. Umbilicus on a level with surrounding surface.

Heart.—Apex beat in fifth interspace; very apparent. Area of præcordial dullness normal; action of heart very rapid. A systolic murmur at base. Heard best at mid-sternum.

Lungs.—Physical signs give negative results.

Breasts.—Enlarged. A distinct dark areola around the nipples. Nipples turgid and prominent.

Vaginal examination.—Os uteri œdematous and patulous. Finger can be introduced into the cervix.

Legs, from knees down, œdematous. Considerable anasarca over the hips.

Tongue clean and moist.

A good deal of soreness on the right side—the side on which she always lies. Back is very œdematous.

Urine.—Only 5 oz. during last 24 hours. Turbid, smoky and opaque. About 75 per cent. albumen; no sugar; numerous epithelial and granular casts, and a large quantity of epithelial cells and numerous blood corpuscles. She vomited once during the morning. Had no sleep last night. Complained of a pain in the pit of the stomach, which was relieved by vomiting. Ordered: Pulv. jalapæ co., ʒi. ; pot. bi. tart, ʒss. ; *sum. nocte* and pot acet, xx. grs ; infus digit., ʒij., to be taken every four hours. Plenty of diluents and dry cupping to the back, to be followed by poultices.

November 4th.—The powder moved her bowels four times. Very little urine besides that passed at stool. Slept very well. Superficial veins of the abdomen and chest distended and very apparent. Vomited last night. Abdomen feels very sore. Tongue slightly coated. Not much appetite, but a good deal of thirst. Pulse very quick and weak. Feet and legs anasarca. Urine presents the same appearance.

November 5th.—Did not sleep. Had severe pains in the bowels, and complains of a soreness over the mid-sternum at base of heart. Had two movements of bowels last night; 5 oz.

urine besides that passed at stool, dark and turbid. Abdomen very tense. Right loin very sore—the side on which she lies. Tongue slightly coated. Appetite rather better, and not so much thirst. Pulse very quick, 140 ; small and rather weak. Vaginal examination shows very little bulging in Douglas' cul-de-sac and ballottement is very distinct. Left loin gives a tympanic note and right loin tympanic with a certain amount of dullness. The abdominal dullness is on a level with the umbilicus.

November 6th.—Slept well. Feels sore over the abdomen. Appetite better ; no vomiting ; not troubled quite so much with wind. Pulse, 136, weak. Abdomen very tense and shining. Feet rather more œdematous ; no soreness. Tongue clean. Two movements of bowels last night ; 5 oz. urine ; about 50 per cent. albumen.

November 7th.—Slept pretty well, but had severe pains across the bowels, as if from wind. Bowels moved twice ; 10 oz. urine ; about 25 per cent. albumen. Not much appetite. Tongue slightly coated. Urine not so smoky-looking ; quite clear when passed : abdomen slightly less tense ; casts still present in urine.

November 8th.—Slept very well. Bowels moved three times. An occasional pain in abdomen ; girth, 44 in. Appetite better. Abdomen still tense ; 7. oz. urine ; a heavy deposit of lithates ; numerous casts ; not more than 15 per cent. albumen ; urinates often, but only a small quantity at a time.

November 9th.—Slept very well. Has a frontal headache. Had severe pain in her bowels last night ; bowels moved four times ; 5 oz. urine. Pulse still very quick, 132. She is a good deal more swollen, especially the right foot and leg. Appetite still very poor. Vomited twice last night, after taking the medicine. Casts in urine, but no blood corpuscles.

November 10th.—Only 43. urine. Two stools, at which only a very small quantity of urine was passed, with a heavy deposit of lithates. Troubled very much with nausea and flatulence ; no appetite ; amount of albumen increased.

November 11th.—Vomited twice last night. Pulse rather

slower, 116, and stronger. Temperature normal. Feet still very much swollen. Bowels moved twice this morning; 7 oz. urine; 25 per cent. albumen.

November 12th.—No more vomiting. Right foot more swollen.

November 13th.—Severe pains in abdomen last night and to-day; girth, $44\frac{1}{2}$ in.; very tense. No appetite; very anxious. Tongue clean. Bowels moved once by a powder; 7 oz. urine, besides that passed at stool; clearer than it was; a smaller deposit of lithates; about 40 per cent. albumen; casts still present. Ordered: Pulv. jalapæ co., ʒi; pot. bi-tart., ʒss.

November 14th.—Abdomen more tense and very painful. Superficial veins fuller. A large mass of œdematous tissue on right side. Appetite improved. Medicine operated twice freely, and besides that 7 oz. urine; albumen same; girth, 46 in.

November 15th.—A good deal of pain in the bowels last night from flatulence and retching, but no vomiting. Had chloral, which gave her a good night's rest. Some erythematous patches on lower part of abdomen. Pulse, 124, weak. Bowels moved twice; $8\frac{1}{2}$ oz. urine; about 25 per cent. albumen. Right side still sore. Mixture stopped, and ordered: Spt. eth. nit., ʒi; tr. scillæ, ʒss.; inf. scop., ʒj., 6, q, h.

November 16th.—Ordered a hot air bath.

November 17th.—Had the hot air bath for ten minutes yesterday, at 3:30 P. M., and about 6 o'clock perspiration broke out on her face, and during the night she perspired very freely—drenched in perspiration. Slept well, and since 6 P. M. she has passed $46\frac{1}{2}$ oz. urine, much clearer. No pains, but much soreness in back and loins. Much more cheerful. Girth, $43\frac{1}{2}$ in. Feet about same. Abdomen not quite so tense. Tongue cleaner. Pulse stronger, 120. Appetite very good. Feels altogether better. Urine acid, 50 per cent. albumen. Casts still present.

November 18th.—Slept badly. Had severe pains in right side and in bowels. Had a hot air bath this morning, but it has had no effect yet. Urine, 20 oz.; same qualities; girth, $44\frac{1}{2}$ in.; abdomen very tender.

November 19th.—Yesterday afternoon a profuse perspiration broke out over the body, and lasted until about 3 A. M. this morning. She slept well; 30 oz. urine. Bowels moved four times.

November 20th.—Passed a good night. A pillow placed under the right side supported it, and since then she has had no pain in it. Girth, 44 in.; 21½ oz. urine. Appetite better. Abdomen not so tense. Superficial injection not so extreme as it was. A vaginal examination shows the uterus low down in the pelvis. The os dilated to the size of a shilling. The bag of membranes protruding and distinct uterine contractions. No bulging in Douglas' cul-de-sac.

November 21st.—Last night, about 6 o'clock, she miscarried of a male foetus of about six months. Dead apparently some time. A footling presentation. Very small quantity of liq. amnii. Placenta, battledore, friable and slightly fatty. The uterus contracted well; no hemorrhage. Skin of foetus a good deal discoloured. Feels better to-day, and is quite cheerful. Slept pretty well during the latter part of the night. Abdomen apparently in much the same condition; girth, 43 inches. Fluctuation very distinct. A good deal of tenderness in left side, with œdema. Feet about same. Very œdematous. Appetite good. Pulse 120. Temperature normal. Tongue clean. Bowels moved twice. Urine contains about 15 per cent. albumen, and a few casts.

November 22nd.—Yesterday, about 3 p.m., she had a very severe rigor, followed by a rapid rise in temperature to 102.2. Pulse 160. Vomiting, great pain in abdomen, and tenderness. Morphia was given, but it could not be retained. Vomiting continued the greater part of the night. In the morning she fell into a state of collapse, and died at 9 a.m.

AUTOPSY, BY DR. OSLER, EIGHT HOURS AFTER DEATH.

General Appearance.—Body that of a medium-sized woman. Rigor mortis has not yet come on. Face swollen, and a dirty-yellowish fluid oozes from the mouth. Pupils of moderate size. On pressing the breasts a milky fluid flows from the nipples.

Abdomen enormously distended; the skin near the hypogastric regions thickly set with lineæ albicantes. Thighs and legs œdematous, the right more than the left; both of alabaster whiteness.

Thorax and Abdomen.—Twenty pints of opaque, somewhat milky serum, mixed with flocculi of lymph, were removed from the peritoneal cavity. Both visceral and parietal layers of this membrane of a bright rosy colour, due to the intense injection of the finer vessels. Thin flakes of lymph covered over the coils of intestines, in many places matting them together. The liver was closely united to the stomach by a tolerably thick layer of greyish-white lymph. The pelvic peritoneum also involved; the ovaries are dark in colour and coated with exudation. The stomach and intestines are much distended, their coats infiltrated and easily torn. No effusion into the pleural sac or in the pericardium.

Heart.—Right chambers gorged with blood, and in removal over 30 oz. escaped from the cut vessels into the pleural cavities, and there speedily coagulated. Right ventricle: no ante-mortem clots. Tricuspid and pulmonary semi-lunar valves healthy. Left ventricle firmly contracted and hard to the touch. Cavity small. No clots. Anterior segment of mitral valves thickened, and aortic valves competent.

Lungs.—Right, adherent posteriorly, and at the apex by a few bridles. Organ crepitant except at base and hinderpart of lower lobe, which is very dark in colour, collapsed, and almost airless, and contains a large amount of blood. Left.—Upper lobe, with the exception of the extreme apex, in a state of engorgement, the section bathed with much blood, and the tissue almost airless. Posterior parts were also much congested, and six small apoplexies are present. The anterior portion of the lower lobe alone presents a natural appearance.

Spleen.—Firm, dark in colour. A fissure exists at the anterior border. A fresh hemorrhagic infarction presents in this situation irregularly wedge-shaped, $1\frac{1}{2}$ " long by $\frac{1}{4}$ " in width, colour reddish-yellow, with a zone of hyperæmia about it.

Left Kidney.—Capsule easily detached (except at one spot) and thin. Organ soft, rounded, and swollen. The surface of

the cortex is smooth, the venæ stellatæ small but uniformly filled. On section, not much blood exudes, the cortex is pale, opaque, and mottled; the Malpighian tufts are distinct, but only here and there are the loops of vessels passing down the cortex, full. The pyramids are of a uniform dark red colour. *Right.* Presents the same appearances. The pelves of both are injected, and about them is a moderate amount of fat.

Bladder contains hardly one drachm of turbid urine. Mucous membrane appears healthy, the smaller vessels injected in places.

Stomach.—Much distended with gas, and contains about a half pint of dirty-yellowish fluid. Mucous membrane looks natural.

Intestines.—Beyond the swelling and infiltration of the coats, there is nothing special to be observed. A single ascaris found in the duodenum.

Liver.—Consistence good. On section lobules distinct, and much blood flows from both large and small vessels.

Brain.—By request, not examined.

Reviews and Notices of Books.

Cyclopædia of the Practice of Medicine.—Edited by Dr. H. VON ZIEMSEN. Vol. vi. Diseases of the Circulatory System, together with the chapters on Whooping Cough, Diseases of the Lips and Cavity of the Mouth, and Diseases, of the Soft Palate. By Professor Rosenstein of Leyden; Prof. Schroetter of Vienna; Prof. Lebert of Vevay; Prof. Quincke of Berne; Dr. Bauer of Munich; Dr. Steffen of Stettin; Prof. Vogel of Dorpat, and Professor Wagner of Leipsic. Translated by G. W. Balfour, M.D., of Edinburgh; E. G. Geoghegan, M.D. of London; Thomas Dwight, M. D., Boston; J. H. Emmerson, M.D., and G. G. Wheelock, M.D. of New York; and J. Solis Cohen, M.D. of Philadelphia. Albert H. Buck, M.D., New York, Editor of American edition. 8 vo. pp. 1014. New York, William Wood and Company, 27 Great Jones Street, 1876.

This important work is fast approaching completion, the volumes so far have come out with regularity,—that is, not precisely in regular order, but still the translators have done their work well, and the publishers fulfilled their engagement to

give the volumes almost with as great regularity as they have appeared in the original. In this volume, the sixth of the series, the first article is from the pen of Professor Rosenstein of Leyden. The author begins his article by an introductory chapter on general anatomy of the heart, the changes in form and position and the origin of heart sounds. He then touches upon the method of examination, the physical signs or symptoms of heart disease. In treating of the pulse he illustrates the subject by several sphygmographic tracings showing alterations in the pulse wave in a variety of conditions. The author then passes on to the consideration of diseases of the endocardium, giving at the outset a short historical sketch of the subject. He shows that inflammations of the endocardium terminate either in ulceration, thickening of the membrane or villous formations, which, in course of time undergo further change, and he discusses the subject under three heads:

“ 1. Acute, ulcerative or diphtheritic endocarditis.

“ 2. Acute and subacute verrucose endocarditis.

“ 3. Chronic sclerotic endocarditis.”

The author then passes on to the consideration of diseases of the valves of the heart as resulting from these conditions. The next paper is from the pen of Schroetter, on the changes in the position of the heart, and also diseases of the heart substance. In respect to change of position, the author mentions some very unusual cases, which have been reported, and he remarks that “in spite of opposing statements it is now settled beyond all doubt, that in changes of position of the body the heart follows the laws of gravitation.” We were not aware that this ever was questioned, as it is customary in making an examination of the heart to lean the patient forward so as to bring the organ as near to the chest wall as possible, but besides these cases of changes of position of the heart we have others of greater moment to the patient, such as changes which are caused by pressure, as in pleuritic effusions of any kind, or again changes in position of the heart in spinal curvature, or in thoracic or abdominal tumours, due to contraction, or diminution of the size of the lung, resulting from previous existing disease. In such cases, according

to our author, the change in position of the heart, is often very considerable. These changes in position, although they may be quite noticeable, and will aid the observer in his diagnosis of the condition present, yet they seldom give rise to symptoms referable to the heart itself, the alterations are gradual in their development, and the heart itself rarely suffers. The author then passes on to diseases of the heart-substance, taking up seriatim hypertrophy and dilatation, atrophy of the heart, inflammation of the heart-substance and the formation of abscess, partial aneurism of the heart, fatty degeneration, colloid degeneration, spontaneous rupture of the heart, wounds of the heart, traumatic rupture, foreign bodies entering the heart substance. New growths and parasites of the heart form the next subjects of discussion, and he concludes this most interesting paper with a short account of heart clots, and nervous palpitation of the heart.

We have next a short description by Prof. Lebert of congenital malformations of the heart. In this paper the author follows the classification of Kussmaul, who has done more than any other writer to elucidate this subject. There is considered congenital narrowing or closing of the mouth of the right side of the heart; stenosis and atresia of the pulmonary artery, with closure of the septum; stenosis of the right conus arteriosus with an opening in the interventricular septum; stenosis and atresia of the pulmonary artery, with an opening in the ventricular septum; and combined stenosis and atresia of the pulmonary artery. The author points out the connection between these congenital conditions and the development of tubercle. In stenosis of the pulmonary artery the circulation is greatly disturbed, and in very many of these cases there is found imperfect development of lung substance. The author states that direct disturbance of the supply of blood going to a part—an unequal distribution of the blood—is more liable to give rise to irritation, and is more conducive to inflammation, than an excessive but regularly increasing supply, and he remarks, “it is a difficult question to decide how much the excessive supply of arterial blood to the lungs eventually disturbs their nutrition.”

Diseases of the arteries, veins and lymphatics form the subject of the next article from the pen of Prof. Quinke. Morbid affections of the external, middle and internal arterial coats are taken up and discussed seriatim. Acute and chronic affections and their consequences, resulting, in many cases, in hypertrophy of the arterial coats, atrophic degeneration, fatty degeneration, calcification, amyloid degeneration, &c. and he points out that these various conditions have been found to exist in syphilitic subjects. General dilatation of the arteries, &c. after which the author discusses the subject of aneurism. After giving the various methods of treatment he observes, "that of all the local methods of treatment, next to ligature and compression, galvanopuncture is most deserving of confidence." Narrowing of the arteries is the next subject under discussion, and he closes this part of his paper by the consideration of rupture and perforation. Diseases of the veins and of the lymphatics form the subjects of the balance of this very excellent paper.

Dr. Bauer in the next paper treats on diseases of the pericardium. Commencing with malformations, such as absence of the pericardium, the formation of diverticuli and tendinous spots, or milk spots as they have been termed, due apparently to local pericarditis with exudation, although this is denied by some writers. He then treats on inflammation of the pericardium, tubercular pericarditis, adhesions between the visceral and parietal layers of the pericardium, pneumopericardium, hydropericardium, hæmopericardium and free bodies in the pericardium.

The remaining papers in this volume do not properly belong to it, but the editor in a note intimates that "owing to the great size of volumes VII. and VIII., it has been deemed best to incorporate the article on whooping cough, as well as those on diseases of the lips, cavity of the mouth and soft palate, into this volume." These several articles are written by Dr. Steffen, Prof. Vogel and Prof. Wagner, and are full of interest. The Cyclopædia maintains its position as a work of importance, and readers will find in it subjects treated of, which are not to be found elsewhere. It is of great use to the real student of the science of medicine, and its practical teaching is by no means deficient.

Extracts from British and Foreign Journals.

Unless otherwise stated the translations are made specially for this Journal.

Surgical Electrolysis.—*The Progrès Medical* gives a very interesting *resumé* of the history of this valuable application of electricity, and the results of its use up to the present time.

The decomposing action of the pile on water and on salts had just been discovered, when Brugnatelli, Dumas, and others studied also its effect upon animal matter. Plunging a piece of flesh by its two extremities into two vessels full of distilled water, each vessel was connected with the electrodes: there was found in the negative vessel, potash, soda, lime and ammonia; and in the positive vessel sulphuric, hydrochloric, phosphoric and nitric acids. After several days, during which the current was passing without interruption, it was found that the piece of muscle was completely deprived of its salts. In another experiment, Davy introduced two fingers into the vessels, which were in connection with the piles, he equally established the presence of the acids in the positive vessel, and of the alkalis in the negative. Therefore the action of the currents is the same on the living tissue as on the dead.

In 1860, Ciniselli (of Cremona), conceived the idea of utilizing the properties of the electric currents for the destruction of morbid tissues. In fact the alkalis and the acids generally by the currents in the substance of the tissues, react in their turn on the neighboring elements; they cauterize them as when one applies caustics to the surface of a sore or to the skin. It is to this chemical action of the currents in the tissues, that the name electrolysis has been given, a term employed first by Faraday to designate the action of the pile on water.

The needles used for electrolysis are of platinum or copper gilt, in order that they may not be attacked by the acids or the bases which result from the decomposition of the tissues by the electric currents.

Sometimes one needle is introduced into substance of the tissues, sometimes both. The action of the two poles is different: at the positive electrode are the acids, at the negative the bases; around the former an eschar, hard and dry is produced; at the latter it is an eschar, soft and moist, which appears, as when a part is cauterized with potash; later, there is a cicatrix, fibrous and retractile, or slight and not adherent to the subjacent tissues, according to the pole which has acted. It is easy in practice to utilize these different properties of the two electrodes; it suffices to render one of them inactive, and reduce its rôle, merely to serve for closing the current.

This application of electrolysis, which is called chemical galvano-cauterization has been used with great success in the treatment of fistulæ in various situations, and for the cure of strictures of the urethra, and nasal duct. Thus far we have only spoken of the application of electrolysis to the chemical cauterization of the tissues; it has another rôle equally important.

When a current is passed through a solution of white of egg, the acids produced coagulate the albumen. An analogous result is obtained by the action of the currents on blood which has just been drawn from the veins. Two English doctors, Fraser and John Duncan, have recently analysed with more care the effects of the currents upon the blood. At the positive pole, is formed a greyish mass of small volume, but of very firm consistence. There appears on the contrary, at the negative pole a sort of mass of foam composed of gaseous, viscous vesicles, and of a volume greater than that at the positive pole. A third product is formed with great abundance; it is a liquid having the colour and appearance of fluid tar.

For a long time the cure of aneurism has been attempted by electricity. Dr. J. Duncan only has determined the different actions of the two poles. According to him, if the currents of which he indicates the intensity and nature are used, at the positive needles (in aneurisms of considerable volume, several needles in communication with the positive pole can be introduced) there are formed hard fibrinous masses. He also estab-

lished in several autopsies, that after a certain time, the masses formed by the galvanic action assumed consistence, became decolorized and stratified like the masses which are obtained by intermittent digital compression. The accidents which have followed the application of the currents are, inflammation of the sac, the formation of an eschar along the track of the needles, principally of the negative needles, and on the separation of these eschars, a fatal hæmorrhage, gangrene of a part of the walls of the tumour, and finally the displacement of the masses and embolism.

To avoid the most of these accidents, Dr. Duncan has used since 1866, needles insulated by a coating of vulcanized caoutchouc. Ciniselli tried, by the aid of the current, to produce first a mass of moderate volume at the end of the needles; this, he thought, acted as a foreign body, and became the centre of an abundant coagulation of blood. Duncan, on the contrary, endeavors to fill the sac as rapidly as possible, in a small number of sittings, with the products of electrolysis; with his needles insulated, he affirms that he has no grave accident to fear, and particularly he avoids the eschars along the track of the needles and inflammation along the walls of the sac. Also as he has recognized the special action of the positive pole in the formation of resistant masses, he introduces the two poles at the same time. He utilizes the special action of each of the two electrodes; he produces at the same time firm clots and soft clots, and rapidly the tumour is filled with a large solid mass. If the first application does not produce satisfactory results it is well to wait some days; for it is possible that the clots formed primarily may be the origin of secondary coagulations. Let us add that he employs batteries of considerable electro-motive force; if the two needles are introduced, he uses six cells of moderate size; if he introduces only one needle, in small aneurisms and in fusiform aneurisms, a large number of small cells are used.

In 37 cases of aneurism of the aorta treated by electrolysis, six complete cases have been observed; three deaths only were attributed to the operation, and these were due to the fact that

the needles used were not insulated, eschars formed in their track, and a fatal hæmorrhage occurred. We ought to remark with Dr. Duncan that, in the six patients cured, in no case were observations followed up for more than nine months after the operation. But if, without regarding the pretended complete cures we consider the effects of the mode of treatment—we find that always a notable improvement followed the operation; not only a lessening in the violence of the pulsations, but also a complete arrest in the development of the tumour, a notable diminution in the pain, or the disappearance of alarming attacks of suffocation.

There are recorded for aneurisms of the innominate, carotid and subclavian, thirteen operations, yielding three complete cures, six deaths. The external iliac artery, two cases, one cure. The femoral, popliteal and brachial arteries, twenty cases, sixteen cures, three deaths; smaller vessels, eight cases, six cures. Total: 89 cases, 12 deaths.

In cirroid aneurisms the effects produced by electrolysis are much more favorable still to the employment of the method. In four cases there are three absolute cures. The needles in this variety of sanguineous tumours cauterize the walls of the vessels, coagulate the blood, and easily induce an obliterative retraction.

Dr. Duncan has treated by electrolysis two *aneurisms by anastomosis*. He has reduced considerably and arrested in its onward progress a vast tumour of this kind occupying the neck, the temple and the parotidean region. He has had the same success in a case in which the mass covered the inferior part of the neck and the clavicular region; it communicated, however, with the subclavian vein. In all these tumours, by reason of the large communications of the arteries and the veins, it is necessary to destroy them little by little by the electrolysis; thus the eschars and the consequent hæmorrhages are avoided.

Nævi only become dangerous when they tend to progress in surface and to increase in volume. Electrolysis can be utilized in two ways it cauterizes at the surface, and in the interstices of the tissues, but if it is advisable to avoid the eschars of the skin, which are apt to follow, it is necessary to use insulated needles and to introduce them obliquely.

It has finally been pretended that electrolysis could cure *malignant tumours*; but this is not the case. Sometimes, however, interstitial cauterization by means of insulated needles has removed the intense pain which allowed no rest to the patients, and which completely disappeared; A vascular sarcoma of the thigh has been very much reduced in volume; several goitres, very rich in vessels, have also lost their pulsations.

The uses of Pepsin in medicine, and its preparation.—Physicians are now falling more and more into the habit of employing in practical therapeutics those substances which are produced in the healthy organs for effecting digestion. Amongst these pepsin must always preserve the most important position, because others, such as pancreatic juice, bile, &c., must, when administered by the mouth, pass through the stomach, which by its acid secretions modifies or destroys their efficacy as ferments.

There have been some attempts to employ the peptones as therapeutical digestive agents. These are, however, open to very serious objections, and have great disadvantages, by reason of the readiness with which they decompose into those very disagreeable substances, leucine and tyrosine. It is unnecessary to speak of their very disagreeable physical character; these products of the decomposition of the peptones are incapable of supporting the nutrition of the body; and as the object of the administration of the peptones is to make them readily available for such absorption, the promptitude with which they enter on the stage of decomposition is a very serious drawback. There is also great difficulty in preparing them in a state of purity; and even if this be successfully achieved, I believe it would still be much better to entrust the work of preparing the peptones to the stomach, and aid it in the task, when necessary, by the administration of pepsin.

I believe that the field of usefulness of pepsin in practical therapeutics is very great; and that it may be still further extended with very great advantage. But the success of this

remedy has been greatly hindered, and the result of clinical and of scientific experiment as to the results which may be obtained have been much confused by the number of comparatively worthless preparations which have been employed, and by the instability and uncertainty of some of those preparations, which in their most active states have from time to time yielded excellent results, and have thus attained a good reputation. The uncertainty of a potent remedy is almost as injurious and even more misleading than the inertness of a popular remedy, and the treatment of disorders of the digestion by pepsin has suffered greatly from both these drawbacks and from both these sources of fallacy.

Besides the cases of obviously defective and imperfect digestion, in which the use of an effective and reliable form of pepsin is directly and clearly indicated, there are various classes of disease in which the nature of the malady tends to produce imperfect digestion; and in which this defective digestion reacts so as to intensify the disease, by impairing the general nutrition of the body. Here pepsin may often be employed to break the vicious circle, and by artificially restoring the digestion and improving the nutrition, to facilitate the introduction and reaction of remedies, or otherwise assist in the process of recovery. Thus in chlorosis, digestion always suffers; the blood not being in a healthy state, the deficiency of blood-globules prevents the healthy hyperæmia of the stomach, which should result from the stimulus of food; the nutrition of the blood is injuriously affected, and the chlorosis is aggravated. It is found in practice that, as we would anticipate physiological observation from the administration of an effectual preparation of pepsin, by breaking the vicious circle, it becomes a powerful agent in the cure of chlorosis.

The process of cure of chlorosis by preparations of iron is not always, I believe, if indeed it is at all, that which it is commonly held to be. The quantity of iron contained in ordinary well-arranged dietaries is sufficient and more than sufficient to supply the wants of the blood and the tissues. The doses of iron which are administered therapeutically are of course enormously in

excess of what is required for the purposes of absorption and nutrition. We have in chlorosis a relaxed and atonic state of the intestines, and absorption goes on imperfectly. The effect of the various preparations of iron is to astringe and give tone to the intestinal coats, and by this action to facilitate the processes of digestion and intestinal absorption. For this purpose iron has a more advantageous action than the bitter tonics, because its action is more extensive upon the intestinal tract, and less easily destroyed and neutralized by the preliminary influence of the gastric juices.

Thus also in the exhaustion succeeding typhas, measles, and other debilitating diseases, the inanition is due to the impoverishment of the blood, and to the defective power of digestion. Hence it is necessary to administer food with great precautions. Strength is slowly recovered; and any excess of diet is punished by symptoms of dyspepsia. The condition is one of anæmia, and to this is due defective digestion. Pepsin may be employed in the convalescence from all exhausting diseases with excellent effect. It facilitates nutrition, and at the same time directly quickens the restoration of natural digestive power.

Without dwelling upon this class of cases, of which the varieties will at once suggest themselves to the practitioner, I would refer to another series of cases, those in which imperfect digestion has for a time been successfully stimulated by the use of irritating condiments, pepper, mustard, vinegar, curry, or by the use of alcohol. Here the digestive powers presently become enfeebled, and do not respond to the peptic stimulus. These cases are of very ordinary occurrence in practice. The food remains in the stomach; and after undergoing only a partial digestion, enters one stage of putrefaction. In such cases, if vomiting occurs, it will be found that the matters vomited are of foul odour and alkaline reaction. So when children, after over-eating, vomit from indigestion, the matters ejected are of bad odour and evidently semi-putrid. On the other hand, when vomiting occurs during healthy digestion, as in sea-sickness, the contents of the stomach are acid, and have no putrid odour. The ordinary symptoms of this kind of dyspepsia are depression

of spirits, flatulence, foul evacuations, headache, distension after eating. In a great many cases the diarrhoea of children is due to defective digestion by the stomach; the imperfectly-digested and partially putrefying mass of food gives rise to irritating substances, which produce intestinal diarrhoea by reflex irritation transmitted from the nerves of the stomach. The occurrence of diarrhoea from this kind of reflex irritation may be illustrated by the well-known and prompt purgative action which is often found to follow the drinking of a glass of cold water in the morning before food. The water has not any inherent or direct purgative action, but it produces peristaltic action by the reflex transmission of the impression produced on the mucous membrane of the stomach. In all the above cases the use of pepsin is strongly indicated, and for the prompt and happy cure of this class of infant diarrhoea, which is often found to be very intractable to remedies, I know of nothing which is better worthy of trial than pepsin.

There are certain contra-indications of the use of pepsin, to which it may be well to refer. Among them are carcinoma and ulceration of the stomach. Where there is an ulcer of the stomach, it is an object of treatment to afford a smooth covering to the ulcer by bismuth, or by the administration of nitrate of silver; to administer pepsin is to incur the risk of hastening the process of thinning, which there is already too much reason to fear from the action of the normal pepsin of the stomach.

To fulfil the therapeutical indications of pepsin it is, however, necessary to have a pure and reliable pepsin. There are various methods of obtaining the article. Thus there is the method of Brücke, by treating the gastric juice (obtained by well-known methods) with a solution of cholesterine in ether; the cholesterine being precipitated, enters into mechanical combination with the pepsin, and pure pepsin is obtained by removing the cholesterine by the further addition of ether.

This form of pepsine is absolutely pure, and from it may be learnt the qualities and powers of pepsin. But the method is too costly for general use, and its advantages are mainly for scientific purposes. There are various dry preparations of pep-

sin in powder and cake, which are well known, and, I believe, much used in medicine. But these preparations are very far from stable or reliable, and however active some of them may be when perfectly fresh, they do not remain active, and a large part of the pepsin powders prescribed are absolutely inert. Pepsin, although an albuminoid, differs among other things from ordinary albumen-in being soluble in diluted alcohol. Advantage has been taken of this to prepare "pepsin wines;" but the alcohol does not prevent the ferment from undergoing change, and if a "pepsin wine" be examined after some time it will be found not to contain a trace of pepsin, and to be absolutely devoid of digestive power. I have found, many years ago, that to preserve the ferment of pepsin there is only one reliable agent, that is glycerine, the powerful preserver of vaccine matter and other animal ferments. My first researches on this subject, made many years ago, have been amply confirmed by a great number of observations, and for all scientific experiments on digestion, I have now for many years employed only these solutions. I strongly recommend practitioners for all therapeutical purposes to employ such a solution. In this way they will avoid the fallacies and disappointments due to the employment of deceptive and unequal preparations, and they will the more readily define the true limits of pepsin as a therapeutic agent, and its place in the armory of medicine. It is not to be reckoned among the most powerful and heroic remedies. but it is one which is of very agreeable and efficacious action; which very frequently gives exceedingly good results in large classes of ordinary and troublesome complaints, and which may be employed with confidence and advantage when its powers are stable and reliable.—By *Oscar Liebreich, M.D., Professor of Therapeutics in the University of Berlin.*

Mode of Union of Amputation Flaps.—
(Read at the Congress of Lyons, by DR. AZAM, of Bordeaux).

M. Azam has long since removed the chimera of immediate union—chimera, because there is one part of the stump, the bone, for which immediate union is impossible. He has chosen

a method which consists in uniting certain elements of the stump, and leaving others to suppurate. Here is what it consists of: he makes his amputation by two flaps nearly equal, arrests all hæmorrhage as completely as possible, passes, in the bottom of the wound, in front of the bone, a very large drainage tube, previously washed in warm water; then, this drain being fixed, coapts the flaps, applies, to hold the muscles, two or three points of deep quill suture, with silver wire; he then coapts exactly the edges, and maintains them in apposition by a superficial suture, made with great minuteness, with as much care as in the face. We get thus a union by first intention of the skin and muscles: as to the bone, this mode of union would be chimerical; to try it would be dangerous. The dressing consists in applying cotton over the end of the stump, and enveloping the whole by a tight bandage.

At the end of three or four days we take off the dressing and remove the superficial sutures; the adhesion of the skin is perfect. As swelling of the subcutaneous tissues is produced, we untwist one of the deep sutures to allow of the development of the tissues. The drainage tube remains. M. Azam has completely renounced the use of injections. It is bad to introduce water into a wound: (1) because this water cannot be pure; (2) by reason of the mechanical effect, distension and pulling of the drainage tube, with injury to the neighbouring parts. Generally, everything does well. In some cases there are complications, the most common of which is secondary hæmorrhage. If a slight hæmorrhage occur from the fifth to the seventh day, it unglues the flaps, and pus is produced in the deep parts of the wound; it is sufficient then to destroy the deep part of the suture.

M. Azam has seen a stump absolutely healed on the eleventh day; the greatest number from the twelfth to the sixteenth; some from the twentieth to the twenty-fifth day. That is a good result.

Assuredly this method, which belongs, for the rest, to several surgeons of the hospital Saint Andrè, of Bordeaux, is only a

resumé of certain previous practices; that which constitutes its originality is the addition of the drainage tube, which assures the escape of the pus from the deep parts. We apply closely the subcutaneous parts, and assure this thing if necessary, the repose of the flaps.—*Revue Médico-Photographique des Hopitaux de Paris*, Nov. 1873.

A New Sign.—A new sign, from inspection of the Ear, indicating respiration in the new-born.—(By DR. GELLE.)

We draw particular attention to this work of M. Gellè, which furnishes to the medical jurist a new means of recognizing, in the case of infanticide, if the new-born infant has breathed, and which makes a useful adjunct to the signs furnished by the lung test.

In the foetus the middle ear is void of air, and filled with a gelatinous magma. By the act of respiration this magma disappears, and in its place air invades the tympanic cavity. This transformation takes place in the following manner: under the influence of respiration, and the derivation of blood towards the new vascular region opened to the circulation, the contents of the tympanic cavity become absorbed. This reddish, thick mucous matter, becomes pale and thin, and leaves only a surface. The cries, and the efforts at suction, favour the aeration and the circulation of the cavities. The time necessary for the complete establishment of these two functions is proportionate to the vigor of the respiratory function; it averages three hours. On the contrary, if the respiration languishes, if asphyxia, slow or rapid, take place, the aëration of the cavities is incomplete, often only unilateral; it can be abortive.

In this case, one finds, at the autopsy, an intermediate condition of the intra-tympanic contents, in which the foetal state manifests itself clearly, notwithstanding the certain presence of air.

When the lung test is impossible, or if it gives doubtful results, the expert can find, by inspection of the ear, signs

confirmative or negative of the penetration of air, and of the respiration of the infant. Furthermore, this examination of the middle ear of the new-born infant will enable one to judge of the kind of death, of its cause, whether by hæmorrhage or by asphyxia, &c., &c.; and also of the period at which death has taken place, before or after birth, before or after the first inspirations.

Death by hæmorrhage can, by anæmia, bring about the artificial production of the auricular vacuum: it is sufficient to state this cause of error.

To the question, Has the child breathed? the expert can reply in a satisfactory manner, verifying the conclusions of the lung test by the results of inspection of the ear.

In late investigations, undertaken a long time after the period of the crime, or of the burial, the lung test giving no evidence, one will be right in reckoning upon the persistence of the auricular sign of the foetal state. Thanks to the resistance of this gelatinous magna to the causes of decomposition and putrefaction, justice will yet know the truth, and the absence of respiration will be susceptible of a demonstration clear and precise. In a word, when the expert finds the middle ear free from air, and filled with this gelatinous magna, he is authorized in concluding that the infant has not breathed; when the magna has disappeared, and air has penetrated the cavity, he should conclude that the infant has lived the extra-uterine life.

Inspection of the middle ear, then, of the new-born, is expected to render great services to legal medicine.—*Mouvement Médical*, March and April, 1876.

Four Cases of Movable Spleen.—(1.) A boy 15 years of age who had suffered for seven months from intermittent fever. The spleen was very hard, upper end extending in the left hypochondrium, the lower in the right upper abdominal region. The fissure was plainly to be felt, with alterations in position the tumour also changed, while in the normal situation, the splenic dulness was absent. The symptoms complained of were sensations of pressure on the stomach, and loss of appetite.

(2.) A woman 39 years of age, x para, who had formerly suffered from typhoid. The spleen lay at the left of the pubic arch, readily movable, and not painful. The change in position followed an injury.

(3.) A woman 43 years of age viii para. The spleen was situated just above the navel, and could be easily pushed up.

(4.) A woman 48 years of age, nullipara, who had long suffered with ague. The spleen is absent from the usual position, but can be felt between the navel and anterior superior spinous process of the left side, and can be pushed up. Except in the 2nd case, in which there was apparently a traumatic luxation, the condition appears to depend chiefly upon the increase in size of the organ. The spleen is supported by the phrenico-lienale and gastro-lienale ligaments, lying upon the first, which by stretching, adopts itself to enlargements of the organ. If such takes place without this ligament yielding to it, the spleen being no longer fixed, becomes movable. The extent of movement will depend upon how far the gastro-lienale ligament also yields; the more it does the greater will be the motion, but the less the traction upon the stomach. The great relaxation upon the abdominal walls in women who have borne many children is not without influence in the production of this condition.—(Muller, Pest. Med. Chir. Presse.—Ctb. Med. Wis. No. 3, 1877.)

Use of Chloral Hydrate in Labour.—

Dr. Polaillon has employed chloral in labour in thirty-two cases in the form of clysters 2-3 grmm. (30 to 45 grains) to 60 grmm. of water, (ʒij). 4 to 5 grmm. of chloral generally used. It diminished the acuteness of the pains without destroying their force or frequency in some cases. In the majority of cases, however, whilst it diminished the pain it lessened the contracting power of the uterus, and the labour came to a stand-still. Dr. P. only recommends it where there is excessive muscular contraction of the uterus, and where the pains are very severe. He strongly objects to its use in normal labours.—(L'Union, 45, 1876.) Quoted in *Schmidt's Jahrbücher*, Bd, 172, No. 11, 1876.

Peritonitis in Children.—By Dr. S. KERSCH, of Prague (*Memorab* xxi. p, 251, 1876.)—The difficulty of the diagnosis of peritonitis is in the inverse ratio of the age of the child. The younger the child the more difficult is the diagnosis. The following points are worthy of notice. A child suffering from peritonitis always has its legs drawn up, respiration is shallow, rapid, and is not abdominal but costal; the child can't cry out loudly. The cry itself is pathognomonic of the disease, it is single, long-drawn out and suppressed, the pauses between the cries are long and filled up by a number of short inspirations. The prognosis of peritonitis in children is more favorable than in adults. All the female children treated by Dr. Kersch, that recovered were in after years sterile. Treatment consists in local bloodletting, cold applications, and the abdomen must be carefully covered with gutta percha paper. Morphia to be used as soon as the bowels have been completely emptied. When there is a good deal of fluid exuded, the early use of the trocar is advised. Dr. Kersch relates a case which was serious and which recovered after several punctures. — Quoted in *Schmidt's Jahrbücher*, Bd. 172, No. 11. 1876.

Treatment of Pityriasis by Solution of Chloral.—(DR. MARTINEAU.) — Dr. Martineau has had much success in the treatment of Pityriasis Capitis, by using a 5 per cent. watery solution of chloral; of this he takes two spoonfuls and washes the head every morning but does not dry the washed places. By this treatment he says the disagreeable symptoms soon disappear and the case is cured sometimes in a few days, but generally in about a month. If the disease has lasted some time it generally returns, but can again be cured by the chloral solution. If the Pityriasis is accompanied by erythema or papular exanthem, he recommends a mixture containing 500 parts of water, 25 chloral hydrate, and 100 parts liq. Van Swieten, (0.1 Hydrarg bichlor. corros. ; spirit vini rectific und aq. ana 50.00).—*Bull. de Ther.* xc. page 49, Janv. 1876.— Quoted in *Schmidt's Jahrbücher*, Bd. 172, No. 12, 1876..

Peroxide of Hydrogen.—Peroxide of Hydrogen for the prevention of the spread of Scarlet Fever and Small-pox.—By John Day, M.D.

In October, 1875, by request of the Mayor of Melbourne, I drew up a report which was subsequently published by order of the local Board of Health, on fifty-one cases of scarlet fever which had been treated by me between April, 1873, and April, 1875. These comprised all the cases of scarlet fever which had come under my charge during that period. They were all treated in a similar manner. Each patient was freely rubbed over the whole surface of the body three times a day with a preparation composed of one part of ethereal solution of peroxide of hydrogen (erronously called ozonic ether) and seven parts pure lard, well incorporated with the aid of heat. The inunctions were continued for about three weeks. No other remedies were prescribed, except in a few cases where the throat symptoms were severe, when a gargle composed of two drachms of ozonic ether in eight ounces of water, was ordered to be used every second hour.

These fifty-one cases occurred in thirty-eight different houses, and in four houses only was there any extension of the disease. There were no deaths. Since the above-named period I have attended sixty four cases, occurring in fifty different houses, and in three houses only was there any extension of the disease after I had commenced my treatment. I have been less fortunate, however, in my results, having had six deaths.

Peroxide of hydrogen contains a larger amount of oxygen than any other known substance, and moreover, one half of its oxygen is loosely combined and in a highly active condition, ready to combine with any organic matter with which it may be brought in contact; so that it would appear to be an agent specially suited for the destruction of the poison-germs of scarlet fever, small-pox and other epidemic diseases. Dr. William Squire, in an excellent paper "On Sanitary Precautions against the Infectious Eruptive Diseases," read before the National Association for the Promotion of Social Science, says—"It [infection] cannot be carried far in the air, for fresh air oxidates

d destroys it, so that for the most subtle disease the infecting distance is small." Now, the loosely combined atom of oxygen in each molecule of peroxide of hydrogen is infinitely more potent as an oxydiser than the oxygen of the atmosphere; consequently I think it is reasonable to infer that by coating the body of a person suffering from scarlet fever or small-pox—diseases in which most of the poison is eliminated by the skin—with peroxide of hydrogen in combination with lard, cacao butter, cold cream, or any other substance which will conveniently retain it, we are reducing the danger of infection to a minimum. I have recently slightly modified my formula for the external application, and now generally prescribe it as follows: Ozonic ether, four drachms; pure lard, four ounces; benzoic acid, twenty grains; otto of roses four drops; to be carefully mixed without the aid of heat. The benzoic acid, in addition to its being a powerful antiseptic, possesses the property of allaying cutaneous irritation, a symptom often very distressing to scarlet fever patients. The otto of roses gives an agreeable odour to the preparation.

I now also prescribe, throughout the whole course of the disease, a mixture composed of two or three drachms of ozonic ether in a half a pint of water; the dose ranging from a teaspoonful for a child twelve months old, to a tablespoonful for an adult, to be taken every second hour. This is used for the double purpose of benefitting the throat symptoms, and disinfecting the breath.

I have so much faith in the disinfecting properties of peroxide of hydrogen that I recommend all my friends and patients who are in a position to afford it to use freely, that which for want of a better name, I call oxygenated pertumery. It is made by adding ozonic ether, in the proportion of about a drachm to the ounce, to any kind of perfume, according to individual taste. I give the preference either to Rimmel's toilet vinegar or eau de Cologne. Letters, newspapers, and articles of clothing may be disinfected by sprinkling them over with oxygenated eau de Cologne, or with any other oxygenated perfume.

With regard to any power that peroxide of hydrogen may

possess of destroying the poison germs of small-pox, I must confess myself to be merely a theorist, for we have not yet had small-pox in its epidemic form in Australia. In 1871 a vessel arrived at Melbourne with small-pox on board, and shortly after the passengers were landed a few cases broke out in different parts of the colony; but through the energetic measures adopted by Dr. McCrea, our Chief Medical officer, the disease was soon stamped out. At that time, however, it first occurred to me that it might be possible, by a process of oxidation to destroy the poison-germs of small-pox as rapidly as they are given off from the body, and in a paper "On a Means of Arresting the Spread of Small-pox," read before the Medical Society of Victoria, July, 1871, I suggested the use of peroxide of hydrogen for that purpose.

From a theoretical point of view it might be supposed that peroxide of hydrogen would act more powerfully as a disinfectant in small-pox than in scarlet-fever, in consequence of the curious property that pus cells possess of exalting its chemical activity and giving it the oxidising powers of ozone.—Geelong Australia.—*Medical Times and Gazette.*

Diet and Exercise.—It has been for some time a subject of dispute among physiologists whether muscular force is produced by the oxidation or combustion of the muscular substance itself, or whether the muscular tissue merely serves as, so to speak, a sort of furnace where the alimentary matters are burnt or oxidised, and thus produce force. The bearing of the question on the subject of diet is evident. If during exercise the muscular tissue undergoes rapid destruction, it is plain that the food most suitable for ingestion during prolonged muscular effort is that whose composition is as nearly as possible identical with that of the muscles—i. e., the food should be largely nitrogenous. If, on the other hand, the muscles are not themselves used up, but only serve as the site of other tissue changes, which other tissue changes are the source of the force set free in this case, it is equally evident that the food need not necessarily be

nitrogenous, but may be of any nature adequate to go through the metamorphoses required; *i. e.*, it may be non-nitrogenous, and be chiefly composed of hydro-carbonaceous substances. If the muscular tissue is disintegrated, the nitrogen contained in it must be eliminated in some form or other; for modern physiology teaches that waste matters are not allowed to remain in the organism, but are given off through some channel. The only channels through which it can pass are the skin, lungs, alimentary canal, and kidneys. It does not appear that any appreciable amount passes out by the skin and lungs. That passing out through the intestinal canal is derived from the unabsorbed intestinal juices and undigested food; it has, therefore, no relation to tissue destruction. The urine is, therefore, the only channel "through which the exit of nitrogen arising from the metamorphosis of nitrogenous matter can take place." Most of the nitrogen in the urine is in the form of urea, and the way in which experimenters have endeavored to settle the question is by measuring the amount of urea contained in the urine passed during rest and exercise respectively. Fick and Wislicenus were, we believe, the first to make satisfactory experiments on the subject. "They ascended, fasting, one of the high mountains of the Bernese Alps, measuring carefully the quantity of urea eliminated by the kidneys during and after the ascent. In the case of one of them, the labour developed by this ascent may be represented by 184,287 kilogrammètres; yet no increase in the urea was observed, either during or after this very severe muscular exercise. We see, thus, that the muscle (as the source of labour or heat) consumes only hydrocarbons and fats, and not albuminoids" (*a*). Voit, Drs. E. Smith, Parkes, and Austin Flint, jun., have also experimented on the subject; and all, except the last-mentioned experimenter, have arrived at conclusions substantially the same as those arrived at by Fick and Wislicenus. Dr. Pavy has recently published in the *Lancet* (Nov. 25th, Dec. 16th, Dec. 23rd, and Jan. 13th,) the results of the investigations made by him on Weston and Perkins, during their pedestrian performances at the Agricultural Hall. His conclusions may be briefly summarised as follows:—

1. Dr. Pavy found that in every case the amount of urea (and hence of nitrogen) eliminated during the days of working greatly exceeded that during the days of rest, the amount being nearly doubled.

2. The nitrogen ingested he also found to be greater, though not to such an extent, during the days of walking and during those of rest. Putting these two things together, Dr. Pavy says:—

“The average daily excess in the nitrogen eliminated, during walking, as compared with that eliminated during rest, is 222.54 grains.” He says it is evident that we have an increased alimentation of nitrogen to deal with during the days of walking which is not to be accounted for by the nitrogen ingested. We can only, therefore, refer this increase to the effect of the exercise; but is it the result—is it the expression of the action which has given rise to the power evolved? This is the question that presents itself for solution, and I will attempt to solve it by ascertaining whether the force liberated by the oxidation of muscular tissue corresponding with the nitrogen discharged is sufficient to account for the work performed.”

We have not the space to give the method of calculation adopted by Dr. Pavy. (Those who wish for details may consult *Lancet*, December 16th.) He arrived, however, at the conclusion that the force obtainable from the nitrogenous matter disintegrated is totally inadequate to supply the power for the work done.

Dr. Pavy says:—

“I have been arguing as though the nitrogenous matter disintegrated represented muscular tissues oxidised. This however, is undoubtedly by no means the case. There can be no question, from what we know upon the subject, that a large, if not the chief portion of the urinary nitrogen eliminated is derived directly from the metamorphosis of the nitrogenous matter ingested without passing through muscular tissue. Again, I have only taken into account the power expended in the mere act of getting over the distance walked. I have said nothing of the muscular power expended in maintaining the circulation and respiration and the movements of the body occurring during

walking, supplementary to those actually concerned in affecting passage over the ground. These must form an item of considerable significance in relation to the whole muscular action taking place, and serve to bring out more strikingly the conclusion suggested by the figures which have been furnished."

Hence he concludes that even allowing a large margin for error in calculation, it is utterly impossible that the force produced could have been produced by oxidation of muscular disease. Dr. Pavy says:—

"It is not, indeed, surprising, looking at the increased activity of the circulation and respiration, that there should be an increased metamorphosis of nitrogenous matter throughout the system, and therefore an increased wear and tear of the muscles as part of the general action occurring. The oxidation of nitrogenous matter, furnishes, it must be remembered, a source of force, for after the separation of its nitrogen as urea, an oxidisable residue remains; but this has no intrinsic association with the view which ascribes the source of muscular power to the direct oxidation of muscular tissue."

We may remark that Dr. Pavy says that Dr. Flint has adopted a wrong method of calculation, by which the results obtained appear widely different to Dr. Pavy. Dr. Pavy has, however, verified many of his determinations of urea by actual combustion analyses of the quantity of nitrogen. Dr. Pavy's results certainly appear trustworthy to us, while Dr. Flint's figures certainly offer a fair field for criticism, and his inaccuracy detracts considerably from any force his argument may have.—*Doctor*, March 1st.

Treatment of Hydrocele by Electricity.

Von Friedenthal has used electro-puncture in this affection with good results. He uses gold needles, and only sticks them under the skin (not into the sac of the testicle). The needle of the negative pole is put in the skin of the scrotum, and the positive somewhere in the neighborhood. He passes a current for three minutes and repeats the operation every second day. Five or six sittings are generally enough to produce complete absorption of the hydrocele. In some cases the hydrocele returned, in others it did not. The same thing occurs with the injection of iodine.—(No. 28. *Prager Med. Wochenschr.*.)

The Night Cries and Night Startings of Children.—Caspari attributes them to frightful dreams. In children under a year old, and especially in delicate, anæmic children, they are associated with mild or severe convulsions. He uses as a specific, bromide of potassium, and according to the age gives 0.5 grmm. to 1.5 grmm. (gr. $7\frac{1}{2}$ to gr. $23\frac{1}{2}$) a day. (Gr. xxv. potass. bromid., aq. $\bar{3}$ iss— $\bar{5}$ i 4 times a day).

According to Edlefsen's experience bromide of potassium always causes quiet and peaceful sleep in young children, but does not act so well in older ones. It acts well in convulsions, teething and meningitis. He gives a strong six months old child 0.5 grmm. ($7\frac{1}{2}$ grains) 3 or 4 times in the day, or once or twice in the evening. Younger and less robust ones, he gives 0.25 grmm. as a dose. In older children he often increases the dose to 0.75 grmm. several times a day.

(Deutsche. Ztsch. f. Prakt. Med 28. p. 234, 1876, und *a.a.* 0.38, p. 412, v. Dr. Edlefsen in Kiel.) Quoted in *Schmidt's Jahrbücher*, Bd. 172. No. 11, 1876.

On a new Treatment in Post Partum Hæmorrhage.—Although not an obstetric practitioner, I have recently been consulted in two cases of severe *post-partum* hæmorrhage. In both cases every means had been adopted but unavailingly. It flashed across my mind in the first case to try the effect of the ether-spray, and accordingly I directed a large spray over the abdominal walls, along the spine and over the genitals; the uterus at once responded, and the cessation of the hæmorrhage was almost immediate. In the second case I lost no time in adopting a similar treatment, and with an equally successful result. I have consulted several eminent obstetric practitioners in Dublin, and am informed by them that they are not aware that this treatment has been heretofore proposed. The advantages of the ether-spray over the application of cold water and the other means usually adopted in these cases must be patent to every practitioner of midwifery.—By *W. Handzel Griffiths, P.H.D., L.R.C.P.E.*

CANADA

Medical and Surgical Journal.

MONTREAL, APRIL, 1877.

RECOGNITION OF CANADIAN DIPLOMAS.

We have received the following letter from Sir Hugh Allan in reference to the subject of the recognition of Canadian qualifications for the emigration and passenger service on board of British ships:—

ALLAN LINE OF ROYAL MAIL STEAMSHIPS,
HUGH & ANDREW ALLAN,
AGENTS.

Sir Hugh Allan.
Andrew Allan.

MONTREAL, 16th March, 1877.

DEAR DR. FENWICK.—Our Liverpool letter to day advises us that the Board of Trade have rescinded the regulation respecting Canadian surgeons, who are now at liberty to sign articles on their own diplomas.

I congratulate you on the successful result of the opposition made to it.

Yours truly,

HUGH ALLAN.

Dr. FENWICK, Editor
Canada Medical and Surgical Journal,
Montreal. }

This is gratifying so far as it goes. Nevertheless the position must be regarded as unsatisfactory. Canadian surgeons, by this action of the Board of Trade, are permitted to serve in their professional capacity through sufferance and not by right. It is an admission—a permit—on the part of the Board of Trade, but not, by any means, a recognition of the qualifications of the holders of Canadian diplomas.

The London *Lancet* of March 3rd, in alluding to an article which we published in the February number of our periodical, remarks:—“The *Medical and Surgical Journal*, published in the Dominion, in its issue for February, deals at considerable length with the ineligibility of surgeons other than those

“ possessing British qualifications for appointments on board
 “ emigrant and passenger ships sailing from British ports. It
 “ strives, and we think successfully, to show that the educa-
 “ tional tests by which admission is gained to the profession are
 “ as comprehensive and exacting in Canada as those imposed
 “ in England; and submits that Canadian surgeons holding
 “ qualifications equivalent to those conferred at home should
 “ not be excluded from serving on board vessels which are
 “ identified with the progress, enterprise and wealth of the
 “ colony. * * * We believe that the Canadian Govern-
 “ ment will be asked to make a representation on the matter.”

We hope that this subject will receive careful consideration and be settled definitely. We have not heard that the Canadian Government has been requested to make any representation. It is very desirable that some explanation should be entered into and some definite line of action decided upon. The matter cannot be allowed to rest in its present shape. If Canadian graduates are admitted through sufferance, at any moment the Executive of the Board of Trade may enforce the wording of the act in respect to qualification to be demanded of ship's surgeons, and we shall on some future day have the grievance of which we complain repeated.

ENORMOUS ABDOMINAL TUMOUR.

At a meeting of the Medico-Chirurgical Society of Montreal, held March 9th, Dr. Osler exhibited for Dr. Malloch, of Hamilton, a solid abdominal tumour weighing 35 lbs. The following history accompanied the specimen:—“ The subject of the disease was a gentleman, aged 47. When first examined, 14 months before his death, a hard nodular tumour, about the size of a foetal head, was noticed on the right side of the abdomen. This had been growing for three or four months, causing irritability of the bladder and pain in the right thigh. It was considered malignant, and the advice was to leave it alone. Subsequently he consulted the leading physicians in Toronto, Montreal and New York, and finally fell into the hands of the

quacks. At the autopsy the body was extremely emaciated and the abdomen greatly distended, the lower ribs being pushed out. It was found to be attached to the abdominal wall in front, to the omentum and to one or two coils of the intestines, which were pushed upwards and to the left. It had an investing membrane (the stretched peritoneum), and was very easily turned out of the abdomen. It appeared to spring from the neighborhood of the right sacro-iliac synchondrosis, and the external iliac artery and ureter of that side were attached to it below. Secondary nodules existed in the vertebral column, the liver, and right lung." The tumour is divided by a number of deep fissures into tubules; it is white in colour; of good consistence. Histologically it is composed of elongated fibre cells, and, from their general arrangement, it would appear that their growth, though originating in the retro-peritoneal glands, belongs to the group of encephaloid cancers rather than the lympho-sarcomas, which more commonly attack the lymphatic glands. The term "Lobstein's Retro-peritoneal Cancer" has been applied to tumours arising from the glands in this situation.

ANNUAL CONVOCATION OF MCGILL UNIVERSITY.

The Annual Convocation of McGill University for conferring degrees in the Faculties of Medicine and Surgery, and Law, was held in the William Molson Hall of the University on Wednesday, the 28th March, 1877.

There was a large assemblage of the friends of the University present. Shortly after three o'clock the members of the Convocation, who had assembled in the Library, entered the hall and took their seats. The chair was taken by Peter Redpath, Esq., the senior governor present, in the absence of the Chancellor of the University.

The proceedings were commenced by the customary prayer by the Rev. Professor Murray, after which the Secretary, W. C. Baynes, Esq., B.A., read the minutes of the last meeting of Convocation.

The President asked Geo. W. Campbell, A.M., M.D., Dean of the Faculty of Medicine, to read the report of the Faculty.

Dr. Campbell alluded to the action of the English Board of Trade in relation to surgeons holding certificates from McGill, being refused the right to practice on board of certain vessels, and was happy to know that the order had been rescinded. He was warm in his thanks to other universities, Sir Hugh Allan, the press and the Government for the warm interest manifested in the University's behalf, and having again expressed himself glad that the order of the Board of Trade had been rescinded, and sensible of the compliment paid to the University by those who had defended it, asked Dr. Scott to read the report of the result of the year's labour.

The following report of the Faculty of Medicine was read by Dr Scott :

The following gentlemen, 27 in number, have passed their primary examinations on the following subjects: Anatomy and Physiology, Chemistry, Materia Medica and Pharmacy, Institutes of Medicine and Botany and Zoology, their names of residences are as follows :

<i>Names.</i>	<i>Residences.</i>
Becksted, Morris	Grantly, O.
Bell, Robert	Montreal, Q.
Cameron, John D.	Glengary, O.
Chisholm, Alexander	Lochiel, O.
Frazer, John R.	Hawkesbury, O.
Gardner, Henry H.	Orillia, O.
Gibson, William B.	Dunham, Q.
Greenwood, Fred. S.	St. Catherine's, O.
Guerin, James F.	Montreal, Q.
Hutchinson, John A.	Bluevale, O.
Howey, William H.	Delhi, O.
Irwin, John L.	Ottawa, O.
McCann, John J., B.A.	Millbury, Mass.
McCrimmon, John.	Woodville, O.
McKinley, John K.	Perth, O.
McNeill, Ernest.	Montague, P.E.I.
Mills, Thomas W., M.A.	Hamilton, O.
Neilson, William J.	Perth, O.
Pinsoncault, Bernard.	Montreal, Q.
Riley, Oscar H.	Franklin, Vt.
Rutherford, Martin C.	Waddington, N. Y.
Setree, Edward W.	Prescott, O.
Smith, Daniel F.	Listowell, O.
Stafford, Frederick J.	Montreal, Q.
Vineberg, Hiram N.	Montreal, Q.
Webster, Arthur D.	Kentville, N.S.
Wright, John W., B.A.	Cressy, O.

The following gentlemen passed in everything but the Institutes of Medicine: Kirk, George W., Cornwall, O.; McCrimmon, Milton, Ancaster, O.; Macdonald, Malcolm C., Glencoe, O.

The following gentleman, 19 in number, have fulfilled all the requirements to entitle them to the degree of M.D., C.M., from this University. These exercises consist in examinations both written and oral on the following subjects: Principles and Practice of Surgery, Theory and Practice of Medicine, Obstetrics, and Diseases of Women and Children, Medical Jurisprudence and Hygiene, — and also Clinical Examinations in Medicine and Surgery conducted at the bedside in the Hospital.

NAME.	RESIDENCE.	THESES.
Armstrong, George E.	Montreal, Q.	Hospital Reports.
Bell, James	North Gower, O.	Pathological Reports.
Boyle, Albert	Charlottetown, P. E. I.	Surgical Reports.
Brodie, John	North Georgetown, Q.	Hospital Reports.
Burland, Samuel C.	Philadelphia, U.S.A.	Acute Bronchitis.
Cannon, Gilbert	Almonte, O.	Fleurisy.
Cameron, Duncan H.	Perth, O.	Tubular Nephritis.
Cotton, Coderic L.	Cowansville, Q.	Hospital Reports.
Farley, James F.	St. Thomas, O.	Bloodless Operations.
Fraser, Alexander C.	Wallaceburg, O.	Malaria.
Gillis, John A. F.	Summerside, P.E.I.	Hospital Reports.
Greaves, Henry C.	Barbadoes, W. I.	Hydrophobia. [System.
Jamieson, Alex. B. A.	Lancaster, O.	The Mind and the Nervous
Lane, John A.	Prescott, O.	Surgical Cases.
Law, William K.	Richibucto, N.B.	Typhoid Fever.
Miner, Frank L.	Abercorn, O.	Placenta Prævia.
Oakley, William D.	Plattsville, O.	Urinary Deposits.
Park, George A.	St. Marthé, Q.	Sanitary Science.
Smellie, Thos. S.T., M.A.	Fergus, O.	Pathological Reports.

Students who have passed their examinations in Botany :

CLASS I.

G. Dibble, (1st Prize)	T. L. Brown,	R. T. Maas,
L. Mignault, (2nd Prize)	H. B. Small,	H. E. Poole,
D. T. Inksetter,	B. L. Riordan,	T. C. McArthur,
W. McEachran,	James Calahan,	G. T. Ross,
W. K. Dulmage,	S. M. Lefevre,	T. Gray,
		W. R. Prime.

CLASS II.

G. C. Brown,	} q.	G. H. Groves,
A. C. K. McCorkill,		F. W. Pulford,
A. Ruttan,		T. O. Steward,
D. K. Crowley,		E. H. Smith,
G. C. Hart,		M. F. Frime,
T. J. Church,		W. De Moulpied,
F. W. Church,		A. K. Teller,
R. T. E. MacDonald,		

CLASS III.

M. McNulty,	W. T. Musgrove,
C. T. Glass,	T. W. Serviss,
G. H. Snider,	S. D. Holcomb,
W. C. McGillis,	E. A. McGannan.

The Medical Faculty Prizes are three in number :

1st. The Holmes Gold Medal, awarded to the graduate who received the highest aggregate number of marks for the best examinations, written and oral, in both Primary and Final branches as also for an inaugural thesis.

2nd. A prize in books awarded for the best examination, written and oral, in the final branches. The gold medallist is not permitted to compete for this prize.

3rd. A prize in books awarded for the best examination, written and oral, in the primary branches.

The Holmes Gold Medal was awarded to James Bell, North Gower, O.

The prize for the final examination was awarded to William Donald Oakley, Plattsville, O.

The prize for the primary examination was awarded to Hiram N. Vineberg, Montreal, Q.

The following gentlemen arranged in the order of merit, deserve honourable mention :—In the final examination, Messrs. Cotton, Armstrong, Fraser, Gillis and Brodie.

In the primary examination Messrs. Neilson, Gibson, Mills, Smith and Greenwood.

PROFESSORS PRIZES.

PRACTICAL CHEMISTRY - - - - -

BOTANY - - - - - Dibble and Mignault.

PRACTICAL ANATOMY.

Demonstrator's Prize in the Senior Class, awarded to John Andrew MacDonald and Thomas W. Mills, M.A., equal.

Those deserving honourable mention for care and assiduity,

Brown, Hart, Lawford, McCrimmon, equal, and Stevenson, and Webster.

Junior Class prize awarded to Thomas Gray. Honourable mention, Messrs. McArthur, Gurd, Inksetter, Small and Groves.

The graduates were then called forward and the *Sponsio Academica* was administered by Professor Craik, M.D., and each in turn presented to Vice Chancellor Dawson, who performed the ceremony of Capping, and delivered to each candidate his diploma of Doctor of Medicine and Master in Surgery.

At the conclusion of this ceremony Dr. Smellie delivered a valedictory address on behalf of his associate graduates. Dr. Gardner, Professor of Medical Jurisprudence, then addressed the graduating class on behalf of the Medical Faculty.

After the proceedings of the Faculty of Law, and an address from Sir Francis Hincks, the benediction was pronounced by the Rev. Professor Murray, and the convocation adjourned.

Obituary.

JAMES HAMILTON, L.R.C.S. Edin.

We regret to have to record the death, on the 1st of last month, of one of the oldest and one of the best known medical men in the Dominion, Dr. James Hamilton, of West Flamboro', Ont. He was born at the village of Douglass, in Lanarkshire, in 1797. Receiving a preliminary education at the parish school, he proceeded to Edinburgh as a medical student, and, after four years study, obtained, at the early age of 19, the diploma of the College of Surgeons, the date of which is 1816. Thus qualified, and being anxious to see something of the world, he came to Canada as surgeon on a vessel, and was induced by friends to begin practice in Montreal. After enjoying himself for four months, and doing, as he told the writer, very little practice, he returned to Scotland. In 1818 he again visited Canada with the intention of permanently settling, and after visiting many localities, began practice in Ancaster, a small village about 5 miles from the head of Lake Ontario, and, at that time, the chief place of business

between York (Toronto) and Niagara. Here, as the only medical man at the head of the lake, he quickly obtained an extensive practice, so extensive, indeed, that the greater part of the day was spent in the saddle. His district at that time lay between the Grand River and twenty miles down the lake on either side, an area about 60 miles by 20. In 1820 he moved across the valley to West Flamboro', about two miles from Ancaster, having purchased one of the most beautiful sites in Western Canada, immediately above the town of Dundas, and overlooking Burlington Bay and Lake Ontario. Here he continued to live until the time of his death. Dr. Hamilton possessed qualities of mind and body which fitted him in the highest degree for his profession, while the strict and conscientious attention which he paid to all cases, early secured for him a lucrative practice. Unfortunately in later years he engaged in some commercial enterprises which proved far from successful, but an indomitable energy enabled him not only to tide over reverses, but to make provision for old age. In all public matters Dr. Hamilton took a deep interest, but had no great desire for parliamentary honours. Though a staunch conservative and a leading man of his party, he was only once induced to contest a county, and then unsuccessfully. He was one of the original promoters of the Great Western Railway, of which he was for many years a Director, latterly holding the position of consulting Surgeon. At the time of the Rebellion he held a commission as Colonel of Militia, and took an active part in its suppression. By his professional brethren Dr. Hamilton was held in the highest esteem, and most deservedly so, for one by one he had welcomed them heartily into his district, holding out to each the hand of good-fellowship. He took a deep interest in the Ontario Medical Council, and represented the Burlington and Home districts from 1869 to 1872. It is much to be regretted that Dr. Hamilton has left us no record of his medical experiences, which, extending as they did over a period of sixty years, would have formed a most valuable contribution to Canadian medicine. To the end he maintained an interest in the progress of the art, and frequently, in conversation, would refer

to the great improvements in medicine and surgery. Possessed of an accurate memory stored with interesting incidents both medical and social, he was a most delightful companion, and will greatly be missed at friendly gatherings in Wentworth. To within a year ago, Dr. Hamilton enjoyed an unusual measure of health, indeed in his long career, he was only once laid up by illness. From his boyhood he was a most enthusiastic curler, and had been for some time past President of the Ontario branch of the Royal Caledonian club. For nearly a year before his death symptoms of declining vigor were apparent to his friends, and signs of grave disease of the heart were discovered. The death last year of his son, Dr. Andrew Hamilton, of Melbourne, Que., was felt very keenly by him, and he never fully recovered from the fatigue of a hurried railway journey undertaken at the time. To the end, however, he was cheerful and resigned, though loth to depart, and on Christmas day, when the writer of the present sketch saw him for the last time, and on leaving spoke of his long and honorable career, he replied that nothing would please him better than to exchange his rusty old body for a young and active one, and work on for another eighty years.

Award to Messrs. Billings, Clapp & Co., Boston.

The undersigned, having examined the products herein described, respectfully recommends the same to the United States Centennial Commission for award, for the following reasons, namely:—

A very fine display of Chemicals, especially Carbolic Acid, Propylamine, [Trimethylamine], Chloride of Propylamine, and also of Pharmaceutical Chemicals, such as Citrates of Iron and Manganese, Citrates of Bismuth and Ammonium, Pyrophosphate of Iron, Bromide of Potassium, Bromide of Ammonium, Chromic Acid, Valerianic Acid, and many others. Commended for fine display and *excellence* of chemicals.

F. A. GENTH,
[Signature of the Judge.]

Approval of Group of Judges.

J. LAWRENCE SMITH,	DR. V. WAGNER,
P. DE WILDE,	CHARLES A. JOY,
E. PATTERNO,	J. W. MALLETT,
F. KULHMANN.	