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## *Original Contributions.*

### TREATMENT OF INJURIES OF THE GENITAL TRACT OF THE PARTURIENT WOMAN.\*

BY J. F. W. ROSS, M.D., TORONTO.

*Perineum and Pelvic Floor.*—The perineum is not *per se* a very important supporting structure. Support is mainly given by muscle and fascia. Each of these plays an important part. The pelvic floor is frequently injured and its function is impaired by child-bearing. The injuries done may be visible and invisible. The visible may be indicated by complete or incomplete lacerations. The invisible are due to a forcing apart of the fibres of the levator ani muscle, so that its function, as a pelvic diaphragm, is seriously interfered with. We have to deal now with the visible damage and to decide when and how it shall be repaired. Many remarkable cases of injury have been recorded, and it may be well to mention them. One foot has been forced out of the normal introitus and the other foot out of the anus. A head has been found pressing down on the perineum, while a hand protruded through the rectal outlet. A child has been delivered, not over, but through the perineal body. Such a rupture is called a central rupture. The main feature to be noticed in considering these tears is the presence or absence of damage to the sphincter ani—the one line of demarkation between complete and incomplete laceration. The sphincter ani is not frequently torn through when we consider that about 20 per cent. of all primipara suffer some damage to the perineum.

*Complete Tears.*—It has been my fortune or misfortune to

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\*Read at the meeting of Ontario Medical Association, June, 1905.

have met with a number of cases of complete perineal rupture. These have been both old and recent cases. My first experience was away in the country far from help, in very bad weather, with very muddy roads. I was pulling hard at an impacted occiput posterior head in the pelvis of a primipara, when suddenly the head slipped out, and I found that the perineum had given away like a piece of wet paper, and that the rent extended some distance into the rectum. With poor lamplight, the assistance of an untrained woman, a surgeon's needle and some ordinary sewing cotton, I repaired the parts by uniting first the rectal mucous membrane, then the vaginal mucous membrane, and then the main body of the perineum. Before inserting the sutures, the blackened and bruised tissues were carefully pared off with scissors, and the parts were thoroughly irrigated with warm water. Union took place by first intention and I have never seen a more perfect result. This case set me thinking and stood me in good stead later on. A brother practitioner, some miles from the city, was delivering his wife with forceps and tore the perineum into the rectum. It was many hours after the delivery before I arrived at the house. A proceeding similar to that outlined above was carried out. The black and bruised tissue was pared off. The rectal wall was repaired and at the end of three weeks the perineum was as complete as before the injury. The sphincter controlled the bowel perfectly. Some years after I was again called out of town to repair a perineum, torn completely during a difficult labor. Many hours had thus elapsed between the injury and its repair, but, notwithstanding this fact, union took place by first intention and we had a perfect result. With such a gratifying experience one is led into only one line of practice, namely, immediate operation. Why should we wait? We should not wait. Let us now look at the result of waiting. What happens? The pelvic floor is left in a damaged condition and we favor some downward displacement of a heavy uterus or relaxed pelvic structures. We leave the patient, if the rupture is complete, in a loathsome condition, suffering from incontinence of feces. I operated on one case that continued in such a condition for 18 years, and then only submitted to operation, after having passed successfully through an operation for the removal of gall-stones. The laceration was the worst I have seen. The rectum required isolation from a mass of cicatricial tissue before the old rent on its anterior wall could be closed. A slight leak occurred, subsequently, but by careful douching sepsis was warded off and a good result was obtained. Here the silkworm gut, as a suture, proved of great service. I have seen the entire wound reopen on the 9th or 10th day as a consequence of the too rapid absorption of the catgut ligature used. It is now conceded on all sides that the damage should be repaired,

and properly and thoroughly repaired, without delay. It requires the union of a very small amount of tissue in front of the rectum to obtain control of the lower bowel. But this tissue must be well banked up in front of the rectum after the mucous membrane has been united, in order to approximate the separated ends of the sphincter ani muscle. These ends need not be approximated exactly, so long as they are closely united in a body of scar tissue that will close up the circle of the sphincter, or, in other words, that will repair the elastic band that has been broken. The essentials of success are that we should have a non-capillary suture that can be rendered aseptic, is non-absorbable, and is strong enough to allow the very tight constriction of the tissues. By such a strong suture, we are enabled to draw the tissues of the pelvic floor firmly together and, in this way, to prevent wound infection. We must see to it that these sutures do not penetrate the rectal wall.

The rectal wall itself must be carefully sutured with absorbable or non-absorbable sutures, according to the fancy of the operator. The tissues must be well banked, as I have already stated, in front of the rectum, if we hope to obtain control of the bowel by the torn sphincter. We must endeavor to guess where the torn and retracted fibres of the sphincter are, and to approximate these points. A pair of forceps should grasp these deep structures so that they may be raised while the suture is passed deeply into them.

The bruised and blackened tissues must be pared off and continual irrigation should be used during the operation. The amount of pain is slight and the parts may be found to bleed freely at first, but the operator must not be alarmed. Suture pressure will soon stop all hemorrhage. Irrigation plays a very important part. It gives great protection to the patient. The wound is liable to be infected from the rectum or irritated with the urine, and such infection or irritation must be much lessened by the running water. The bowels should be moved daily by enema. It is bad practice to allow fecal matter to collect from day to day, until at last we have a very large formed stool to come through the recently repaired sphincter.

Urine should be drawn by glass catheter for two or three days, after which time it may be passed with safety, provided the parts are protected with some sterilized vaseline or zinc oxide ointment, and wiped off with sterilized gauze. When the laceration is not complete, the operation for its repair should be very complete. Unfortunately, insufficient attention is paid to this fact. Every obstetrician should carry a good perineum needle and some first-class silkworm gut. Much of the gut sold is not strong enough for this work. I always use a superior quality, and when tying it always use the first part of the surgeon's knot, so that the loop will not slip when it is tightened or until the second knot is tied.

In removing the sutures great care must be exercised. If a loop is left in the tissues much trouble may arise. I have seen patients annoyed for months by the presence of loops of silkworm gut in a restored perineum.

*Lacerations of the Vagina.*—The vagina may be lacerated below near its outlet, in the middle part of its course or at its uterine end. Lacerations at its lower end have a tendency to implicate the perineum. Lacerations are very frequently met with and are frequently overlooked. Large scars are often felt during an examination and these mark the situation of an old tear.

Laceration of the vagina at its middle portion is frequently produced by the use of those deadly weapons in unskilled hands, the midwifery forceps. If care is not exercised in performing craniotomy, the vagina may be torn either as a consequence of the instrumentation or from the passage of the unprotected bones of the fetal skull. The scalp should be left as intact as possible in such cases. As our instruction of students improves and their knowledge of the use of forceps is augmented, the percentage of vaginal tears will diminish.

After severe lacerations of the vagina, narrowing may occur, as a consequence of cicatricial contraction. The vagina may be so narrowed that coitus may be rendered almost impossible, and future labors extremely dangerous. Rupture of the middle portion of the vagina is not as serious as rupture of the upper portion. Here ruptures are usually due to extension downward of a cervical laceration, though they may occur independently of this. They may penetrate into the abdominal cavity, thus becoming to all intents and purposes similar to rupture of the uterus. They are then usually transverse. Labor pains do not cease so abruptly in cases of laceration of the vagina, as they do in cases of laceration of the uterus, and there is less hemorrhage and shock.

A complete separation of the cervix from the vagina may take place. I met with one transverse tear through the vagina produced by labor pains forcing a fetus against the vaginal fornix. Rupture finally occurred and the fetus was delivered into the abdominal cavity through the vaginal fundus. Attempted replacement of an inverted uterus has caused severe rupture of the vagina. A hematoma of the vagina may form during delivery, and may rupture. It will give rise to a condition similar to rupture of the vagina, but there will not be any prolapse of intestine.

Rupture of the upper portion of the vagina is a grave injury. Danyan records 13 deaths and 4 recoveries. McClintock records 38 deaths and 13 recoveries. These are the statistics of preaseptic days; with careful aseptic treatment this high mortality ought to be reduced.

*Treatment.*—Slight tears will unite or suppurate. It would be ideal surgery to cleanse and reunite the torn surfaces at the



outset, but the tissues are so bruised and gangrenous and soft that they will not readily hold sutures.

If there is hemorrhage, the indication will be to stop it. Many such ruptures, however, occur without giving rise to any symptoms and they are not recognized. If sepsis supervenes, the parts must be cleansed by frequent irrigation. If rectum or bladder are injured, they should be repaired.

In the presence of a post-partum discharge, it is impossible to treat such cases as one would treat an accidental laceration in a non-parturient woman. When a tear occurs into the *abdominal cavity*, the intestine must be replaced and must be kept up in its position. Good drainage must be instituted. To accomplish these ends, even in the face of a lochial discharge, we are forced to use a tamponade of iodoform gauze. The parts must be thoroughly irrigated before the gauze is introduced. Nothing is to be gained by opening the abdomen from the front. The drainage from below will be all that is required, and drainage through such a rent, with its edematous, gangrenous walls, is much more urgently needed than suturing.

*Tears of the Cervix Uteri.*—Small tears are very common, and may be looked upon as an inherent part of child-bearing. In some cases they constitute a serious injury that may be serious at the time or may give rise to trouble in the future. Tears of the cervix are usually bilateral, unilateral, or stellate. The connective tissue behind the uterus or the bladder or the parametrium itself may be implicated in the tear. The whole cervix has been torn off as a ring-shaped body.

Most of these lacerations heal perfectly by first or second intention, and they do not give rise to any further trouble. It occasionally happens that hemorrhage may be excessive. The insertion of a suture or forcible pressure will be all that is required to stop the bleeding. It is supposed that the opening of the parametrium admits of infection. If the vagina, at the end of labor, is the habitat of malignant germs, such lacerations are bound to be infected, but infection is liable to occur even if no laceration is present, and malignant germs are present in the vagina.

*Treatment.*—As most of these lacerations heal kindly, it is wise to leave them alone. The tissues, owing to the pregnant condition, are soft, and do not hold stitches well. The outlines of the cervix are somewhat vague and operation is not satisfactory. In the large majority of cases, if performed immediately, it will be performed unnecessarily. The patient will be still further disturbed at a time when she is badly in need of a well-earned rest.

I have now concluded my task. It was not intended that I should exhaust the subject or inflict upon you a long paper, but that I should open the discussion.

**A SECOND NOTE ON CASES OF SARCOMA OF THE NOSE.\***

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BY J. PRICE BROWN, M.D., TORONTO.

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THIS is merely a short continuation of a report which I had the honor of presenting to this Association two years ago, and which appeared in the transactions of that year. (Transactions, 1903, page 209.) It consisted of brief mention of two cases of nasal sarcoma, which had previously been treated, and a longer report upon a more recent case.

In the first, that of Mr. A. V. P., it is ten and a half years since I operated upon him. His weight was then 130 pounds. He is now 31 years of age, weighs 170 pounds, and reports himself as perfectly well. His only complaint is that the right nasal passage, from which the growth was removed, is always so open that it sometimes becomes dry; while the slightest cold will block up the left passage so effectually that he cannot breathe through it.

The second case, it may be remembered, occurred in a Mr. B., a stoker, aged 50 years. The growth was on the left side of the perpendicular plate of the ethmoid. Like the previous case it was removed by electro-cautery operations, and was reported nine months after treatment was completed. Both cases had been pronounced sarcoma after careful microscopical examination, and both, before operation, had been subject to severe recurrent hemorrhages. On Saturday last, Dr. Cleland, the family physician, at my request, sent Mr. B. over to my office for examination, and I find that after a lapse of two years from my last report, or two years and nine months after operation, there has been no return whatever either of hemorrhage or of the growth.

It is of the third case, however, that I desire to speak a little more fully. To briefly recapitulate, the patient, Mr. L. P., was 21 years old when I saw him. Three years before that time he became subject to hemorrhages from a tumor in the left nostril. This was found, upon microscopical examination, to be round-celled sarcoma. External operation was advised, but declined. Finally he consulted me, and in my former paper I described his condition, the treatment, and the result, at the same time showing pathological specimens, of the weight of over two ounces, which I had at different times removed through the left nasal passage, the largest piece, after evulsion by cold snare, weighing nearly three drams.

When I reported the case, the man had recovered from the

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\*Read at the annual meeting of the American Laryngological Association, at Atlantic City, June 2nd, 1905.

operations, was strong again, the nasal passage and naso-pharynx were both clear, and he had been working at his business in an office for a number of weeks:

During this discussion several gentlemen criticized so early a report of the case. So, when asked by our secretary to present a short paper upon cases in practice, at this meeting, I did not think I could do better than give a second note upon this one.

In doing so I would lay stress upon the fact that, although the original tumor was attached to almost the whole length of the left middle and lower turbinal regions, also the vault, the perpendicular plate of the ethmoid and the vomer, these parts were entirely freed by successive electro-cautery operations; and that, except upon the left ala of the vomer, there has not been any return. In the basillar region, however, over the sphenoccipital union, the inner surface of the inner ptergoid plate, and the ala of the vomer, the site from which the large solid portion of the tumor had been removed by snare, there has been repeated recrudescence, and a continued fight between the operator and the disease from then until now. Two months after our meeting in Washington, the growth commenced to develop again at the upper and back part of the left nasal fossa, extending backward somewhat into the region of the naso-pharyngeal vault. This spot agrees very closely with the one mentioned two years ago by Dr. Myles, when discussing the cases of Dr. Simpson and myself. He spoke of a small cartilaginous mass, which formed in some cases at the junction of the sphenoid with the basillar process of the occipital, and which might possibly be the point of origin of these malignant growths. This theory, although reasonable, could scarcely apply to this case, for, although the growth became enormous, it never covered the right side of the sphenoccipital suture.

The extent of area which the new growth covered in July, 1903, seemed to be about an inch square, and when discovered was again growing rapidly, the patient feeling quite well and entirely unconscious of the change. Through the wide nasal cavity, however, it could be distinctly seen, and also by means of the post-nasal mirror. It had a bright red appearance, was dense on pressure, and yet would bleed when touched by the probe.

As there was ample room for examination and treatment through the nasal passage, I concluded, upon the earnest wish of the patient, to continue the contest upon the old lines, believing then, as I believe now, that the growth was entirely confined to the soft tissues, any osseous involvement being in the nature of pressure absorption.

So, after an adequate application of solutions of cocaine and adrenalin, I made a succession of cuts into the growth with the

electro-cautery point at a bright red heat. There was some hemorrhage at the time, but it ceased before leaving the office.

I will not weary you with a detailed account of the next series of operations, but will simply say that from July 5th to October 31st, 1903, I used the electro-cautery twenty-nine times in a similar way. This was upon an average of nearly twice a week. Of this series of operations, only the last one was attended by hemorrhage severe enough to require plugging. I attribute this to the immense advantage which adrenalin affords, and to the care and exactitude with which the electro-cautery work was done. At the same time the growth of the tumor was so rapid that fewer operations at longer intervals would not have succeeded so well. With this last effort the disease seemed to be entirely removed again, and operative treatment ceased.

Four months later, however, in February, 1904, it suddenly reappeared in the same old site, and for several weeks grew with more rapidity than I could control by means of the electro-cautery. It was too sessile to be seized by a snare. So on March 31st, under chloroform anesthesia, I curetted through the nose and naso-pharynx a large section of the basic tumor away. Still, from difficulty of access to instruments I could not get it entirely removed. The hemorrhage was enormous, and to check it I packed the huge cavity through the post-pharynx with large pledgets of absorbent cotton. The posterior naris on that side was so large that the packing filled the nose before the bleeding ceased. This, unfortunately, was followed by extensive ecchymosis over the eye, nose and cheek. The eyeball escaped, but the lids became badly swollen and two days later were covered with blebs. Absorption, however, quickly took place, and in two or three weeks the discoloration had disappeared.

Two weeks after the operation, when able to come to my office, I found that there was still a segment of the tumor left, and it took occasional burnings until June 25th to destroy it. During the next nine months, or up to March of the present year, there was very little return of the growth. On only three occasions during that time did I require to singe the granulations with electricity in the sphenovomerian region.

Three months ago, however, recrudescence began to show itself vigorously upon the internal surface of the inner pterygoid plate, and from that date until May 26th, at intervals of a week, I have applied the electro-cautery about twelve times, and on each occasion as thoroughly and extensively as I deemed safe. Now it seems to be well under control again, the nasal passage and the vault both being clear of abnormal tissue. It is useless to believe that the battle is over, but the contest is still worth pressing, and I think the odds are again in favor of the patient.

There are several objective points, of which he handed in a report a week ago, that may be of interest.

Five months after presenting his case to this Association, he commenced attending a school of telegraphy. Seven months later, or one month after the operation under chloroform, of March 31st, 1904, he took a situation in the G. N. W. Telegraph office on day work. This he occupied for six months. Then he was transferred to night work. During the whole of this time, over a year now, he has worked eight hours in each twenty-four, and, notwithstanding the operative treatment, has only lost three days' time. His physical health is very good, and he says that the operations have caused very little inconvenience and scarcely any pain. He never was so heavy in his life, his present weight being 145 pounds.

In closing, I want to plead more earnestly than ever for electro-cautery treatment of sarcoma of the nose. Although in this case the latter indications have all been at the junction of the posterior naris with the naso-pharynx, three-fourths of the original tumor was within the nose and attached therein; and it is this fact that has enabled me to keep it under control through the wide nasal chamber in its successive developments during the past two years, attacking it vigorously whenever it made its appearance, without injury to the surrounding healthy tissues. Another point worthy of mention also is the comparative painlessness of sarcomatous tissue. Week after week, this young man has come to my office about 4 p.m., submitted to an operation, returned home for tea, gone to his office at 6 p.m., and worked until 2 a.m. For the ensuing week I would not see him, but the daily routine of work would continue, until he would turn up smiling for the next seance, the only home treatment prescribed being a spray at intervals of one of the hydro-carbon oils.

**MYELOID SARCOMA OF THE FEMUR: AMPUTATION AT THE HIP JOINT: SECONDARY GROWTH IN THE LUNGS.\***

BY A. PRIMROSE, M.B., C.M. (Edin.), M.R.C.S. (Eng.),

Professor of Anatomy and Associate Professor of Clinical Surgery in the University of Toronto, etc.

THE patient was a lad 20 years of age, who first complained of trouble in the right thigh and leg four months before he came under my care. Pain at the knee and ankle were the first indications of anything amiss, and subsequently a slight, somewhat tender swelling above the knee. He continued his work as a student at the School of Practical Science, however, and was able to take his examinations in April. I saw him immediately after this for the first time in consultation with Dr. Todd. I found a fusiform growth situated at the lower end of the right femur, most prominent in the upper part of the lowest third of the bone. At the level of greatest prominence the circumference of the right thigh was one inch larger than the circumference of the left thigh at the same level. There was some tenderness on pressure over the growth, and also over the whole length of the femur. The right leg, at the most prominent part of the calf, was half an inch smaller in circumference than the left leg. His temperature was normal and his pulse 88. He was thin and anemic, and had a somewhat hectic look. I strongly suspected sarcoma, but I could not positively exclude chronic osteomyelitis of tuberculous origin.

The patient was kept at rest for a week with the right limb on a splint, and then came into hospital for operation. The night before operation, whilst turning in bed, he experienced a sharp pain at the seat of the growth, and subsequently it was found that the bone had been fractured at that point. Under an anæsthetic the growth was cut down upon. Its limitations did not appear well defined, but the periosteum was undoubtedly involved in it, and a piece of this tissue was removed for microscopic examination. Under this periosteal covering there was a thin lamella of roughened bone through which the forceps crashed readily, and which even on pressure of the finger exhibited "egg shell crackling," giving way with the application of slight force. The expanded medullary cavity of the bone was filled with soft vascular material, which resembled granulation tissue, but was less firm and evidently very cellular. The femur had been fractured through the growth. There seemed little doubt as to the nature of the growth, but I had promised to make a preliminary investigation before amputating at the hip, and accordingly a

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\*Read before the Pathological Society of Toronto.

piece of the tissue was sent to the Pathological Laboratory, where it was found to be a very cellular, large, round-celled sarcoma, with many multinucleated cells (myeloblasts) here and there in the section. The diagnosis of myeloid sarcoma having been made, we proceeded after three days' interval to perform amputation at the hip joint. The method employed was the "anterior racket operation." The femoral artery was first tied, and then the flaps made, and the limb removed with the minimum loss of blood. This is not the place to discuss the method of amputation at the hip, but let me say in passing that one cannot understand why this simple method is not more universally employed. It is infinitely superior to any other method in my opinion. The patient loses much less blood than in Wyeth's so-called "bloodless" method. Lister long ago pointed out that the pressure of a constricting ligature around a limb so paralyzed the vaso-motor nerves that the subsequent oozing from numerous small vessels which failed to contract was very great, and the amount of blood lost after amputation at the hip, where such an enormous raw surface is produced, results in the loss of a very large amount of blood after the patient has left the operating table. Such is the case where constricting agents are used to control hemorrhage during the operation; but by the operation which I am advocating no such constriction is employed. I am sure there was not more than an ounce of blood lost during the operation, and the amount of oozing subsequently was very slight. The patient made an excellent recovery from the operation, and went home at the end of the third week with the wound entirely healed. For a time his general health improved, but during the early summer it was seen that he was failing, and he had a distressing cough. He died a little more than three months after the operation, and the post mortem showed that extensive secondary growths had occurred in the lungs. There had been no recurrence in the stump.

The microscopic section made of the tumor shows it to be a typical myeloid sarcoma. Sections were also made of the secondary growths in the lungs and in the mediastinal glands. In both of these localities the tumor presented the characteristic myeloid sarcomatous structure. These secondary growths were exceedingly vascular, and show evidence of rapid cell proliferation.

## *Selections, Abstracts, Etc.*

### REMARKS ON THE USE OF THE ANESTHETIC, SOMNOFORM.

BY WILLIAM L. HESS, M.D., DENVER, COLO.

SOMNOFORM is a new anesthetic that was originally introduced into dental surgery as a safe and efficient anesthetic for short operations. It was first described several years ago by Dr. G. Rolland.

He gives the formula of somnoform as follows: Chloride of ethyl, 60 per cent.; chloride of methyl, 35 per cent.; bromide of ethyl, 5 per cent.

These constituents are each known as efficient anesthetics, but by this happy combination a mixture called somnoform has been elaborated that surpasses in its qualities the combined, good qualities of each of its individual components. It is far superior to nitrous oxid gas as a short, safe anesthetic in that it has a shorter period of induction of anesthesia, generally thirty seconds or less, and has a period of real anesthesia from one to three minutes, which is two to four times as long as "laughing gas."

Somnoform conforms exactly to the physiologic laws for anesthesia, that is, it produces its effects within fifteen seconds after inhalation—the time it takes a red blood corpuscle to make the complete circuit of the body from the left ventricle and through the arterial and venous system, back to the lungs. It is eliminated in the same proportion of time it takes the blood to become purified.

Somnoform was first advocated as an anesthetic for the dental surgeon, but lately I have become attached to it as a ready anesthetic for short operations upon the upper respiratory tract. It is easily administered and leaves no bad after effects. It only requires a special inhaler, which allows it to be given in the manner of ether anesthetization. If the operation should by chance have to be prolonged even up to ten minutes, the anesthetic can be renewed when the signs of consciousness return. No bad after effects are seen except when we push the anesthetic too rapidly, when slight nausea may occur.

I have used somnoform in sixty-two operations, including two enucleations, the remainder being adenoid operations, opera-



tions for the relief of deviated septa, hypertrophied turbinates, enlarged tonsils and incisions of the ear-drum. The results have been uniformly satisfactory; excepting in one case of enucleation of the eye the reflexes could not be completely subdued. In operating for adenoids and dissections of the tonsils, the anesthetic has generally to be repeated on account of the prolonged nature of an operation of this kind. During the period of analgesia, which is about twice as long as the anesthesia, the patient will obey the command of the operator, but will feel no pain and will have no recollection of events occurring during this period.

Somnoform can be used in a great many of the minor operations in which it is desirable to avoid shock and pain and which require from a second to a minute or two for their completion. It is especially to be recommended in operating upon the upper air passages, because no asphyxia is developed; none of the suffocating feeling which nitrous oxid gas produces; no cyanosis, no stertorous breathing, and rarely jactitation of the limbs of the patient. It is especially well borne by children because it acts quickly, and the narcosis is lasting. It is readily absorbed and as readily eliminated; the dose being 5 c.c. and in children usually about 3 c.c. With strong men it must be given in increased amounts. The same is true of alcoholics. In complicated heart and kidney troubles, where ether or chloroform would be contra-indicated, Dr. Rolland has demonstrated that somnoform is well borne.

The following rules will illustrate the method of using this gas, which is administered better with the De Trey Inhaler, as much of the drug, being so volatile, becomes wasted in using the ordinary cone. When adapting the face piece, request the patient to breathe deeply and regularly, to keep the eyes open and to follow the movements of the index finger of the right hand, which should be slowly moved from side to side. After a very short space of time, it will be noted that he fails to do so. At this point, if a short narcosis is wanted, remove the face piece.

The indications of complete anesthesia are the complete flaccidity of the arms although several cases have been reported where there was complete rigidity of the muscles during the anesthesia; drooping eyelids, dilated pupils, and quiet, snoring breathing. The conjunctival reflex, though usually absent, cannot be relied upon. As a rule, complete anesthesia is obtained only when a patient has made from twelve to fifteen inhalations. With children, six to eight inhalations will be ample.

Dr. Rolland found in experiments upon animals that the respiration ceases before the heart's action becomes impeded, consequently a close watch should be kept on the respiration, and the usual precaution of having the hypodermic syringe ready should be observed.

This agent should appeal to those who want a short anesthesia, as the patient is generally in an upright position and can walk out of the chair in a few minutes after the operation, very rarely with any bad after-effects, and usually with a recollection of having had a pleasant dream and with a feeling of gratitude toward his physician.—*Colorado Medicine*, May, 1905.

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### GONOCOCCUS INFECTION IN CHILDREN.

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ONE of the difficulties constantly occurring in children's hospitals, orphans' homes and other like institutions, is that outbreaks of this infection are very common and extremely hard to cure. The physicians of the various charitable and other institutions in Toronto have had to contend with this again and again. Professor L. Emmett Holt has recently published two valuable articles on this subject in the *New York Medical Journal* and *Philadelphia Medical Journal*, describing a serious and prolonged epidemic in institutions under his charge in New York. The following conclusions are presented as a summary of the paper:

"1. We must recognize gonococcus vaginitis as a very frequent disease and one to be constantly reckoned with in institutions for children. It is also very frequent in dispensary and tenement practice and not uncommon in private practice of the better sort.

"2. In its milder forms and in sporadic cases it is extremely annoying because so intractable; in its severe form it may be dangerous to life through setting up an acute gonococcus pyemia or infection of the serous membranes, and in its epidemic form it is a veritable scourge in an institution.

"3. The highly contagious character of gonococcus vaginitis makes it imperative that children suffering from it should not remain in the same wards or dormitories with other children. A similar danger, though less in degree, exists with the gonococcus ophthalmia and acute gonococcus arthritis or pyemia.

"4. It is practically impossible to prevent the spreading of the disease if infected children remain in the wards with others. They must either be excluded from the hospital or, if admitted, immediately quarantined.

"5. Cases of gonococcus vaginitis can only be excluded from hospital wards by a systematic microscopic examination of smears from the vaginal secretion of every child admitted. If a purulent vaginal discharge is present, such examinations are imperative, and should be made as much a matter of hospital routine as the taking of throat cultures in children with tonsillar exudates.

In the absence of microscopical examinations a purulent discharge in a young child may be assumed to be due to the gonococcus.

"6. The quarantine to be effective must extend to nurses and attendants as well as to children. Furthermore, the napkins, bedding, and other clothing of infected children must be washed separately from that of the rest of the house.

"7. Where the gonococcus is found with no vaginal discharge, or with a very slight discharge, children should also be quarantined, although it is impossible to say to what degree such cases may be dangerous in a ward. One of the greatest difficulties in connection with the gonococcus vaginitis arises from the prolonged quarantine rendered necessary from the fact that these cases are of very chronic character and very resistant to treatment.

"8. The danger to nurses from accidental infection, especially in the eyes, is considerable. At the present time they are not sufficiently instructed in this respect."

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## X-RAYS IN THE TREATMENT OF CANCER.

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BY CHISHOLM WILLIAMS, F.R.C.S. (EDIN.), ETC.

Electro-Therapeutist at the West London Hospital; Surgeon to the City Orthopedic Hospital, etc

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THERE are many medical practitioners at the present time who have gradually come round to the belief that the X-rays can effect some good in the treatment of cancer. Among those who have followed the results of treatment which have been reported from time to time in the medical journals or who have had the opportunity of personally testing its value the general impression is that it is of great therapeutical value. There is no doubt that there have been very many failures in the past but it must be borne in mind that the majority of these failures occurred when we were using very imperfect and untrustworthy apparatus and when our experience was but small regarding the effects which could be produced. Another cause of failure in the early days of X-ray therapeutics was that many cases that were declared by the surgeon to be inoperable were sent to the X-ray practitioner. Increased knowledge of the capabilities of the X-rays has led surgeons to send to the radiographer patients who had a fair chance of life for, say, six months or more; in these one has been able to obtain a goodly number of encouraging results.

Gross failures are not reported here, as at the present time there is little to learn from them, for until quite recently cases of

cancer were only sent to the electro-therapist for X-ray treatment when they had already become "derelicts" to the knife or any other form of treatment. The custom of sending post-operative cases for treatment when the recurrence is as great in amount as, or greater than, the original condition at operation is quite absurd and has certainly accounted for many failures in the past; on the other hand, some patients will not persevere in consequence of their generally feeling and looking much better and locally being in an improved condition they discontinue the treatment. Another cause of failure is too energetic treatment and one is led to think that in many of the earlier cases the healthy parts instead of being stimulated to resist the inroads of the cancer were exhausted and ultimately rendered inert, consequently the growth advanced even more rapidly than before. It is not, in my opinion, good practice to shield the surrounding area in most cases, as the unshielded rays have a chance of reaching remote parts that, unknown to us, may be affected; but it seems possible that a layer of dry lint or other "stuff," which is transparent to the rays, placed over the whole part lessens the tendency to dermatitis—at least, that is my experience after a fairly extensive trial with various materials.

A certain amount of selection is nowadays required for the effectual application of X-rays. Broadly speaking, the more recent the growth the greater the chance of a favorable result. Cancerous ulcerations, primary or secondary, can be made to heal very readily, and it is often astonishing with what rapidity they close in. Many cases of sarcoma, even of large size, have been recorded that have disappeared under the X-rays; this is especially the case in recent sarcomatous growths of the young. In the majority of cases that I have had to treat where there was much glandular enlargement it is a curious fact to note that the glands actually infected became of stony hardness before they disappeared. One has so often seen the glands depart in such cases that I am led to the conclusion that frequently they are only affected with a simple inflammation from irritation of the secretions of the original growth and not from actual infection. In Case 7 (see below) there may be a doubt if the glands, though greatly enlarged, were actually infected. Another patient had the glands enlarged many months after the breast had been removed and the resulting scar was white and perfect; these were undoubtedly infected but readily disappeared with a few months' treatment, though this patient succumbed to a recurrence 11 months after, during which time no X-rays were applied. In one patient, a woman, aged 48 years, who had a primary carcinoma of the left mamma, quite two-thirds of the gland were involved and there were many lumps in the axilla which practically filled that space. She had refused any operative

measure. Under X-rays, administered for three times a week for over four months, the lumps cleared up and the breast contained a hard tumor much less than half the whole gland; this was then removed and was proved to be an ordinary scirrhous carcinoma. This patient has been since October, 1903, and is at the present time, in excellent health.

The above and other cases which have been reported seem to point to the advisability of X-rays being used in all cancerous cases before operation, for even a few weeks will tend to arrest further infection, and the glands if enlarged with simple inflammation or only slightly affected may disappear with a certain amount of shrinkage of the original tumor. It is becoming admitted that cases should be treated by the rays after operation to prevent a recurrence, and if used to prevent a recurrence why should they not be used at the very earliest occurrence, especially during that period, sometimes weeks, during which the patient is being prepared for operation? In skilled medical hands it is a treatment absolutely painless and free from danger. Again, in extreme ulcerations with sloughing fetid discharge there is not the slightest doubt that the offensiveness can be allayed if not made to vanish entirely.

The cases on which these notes are based were all of undoubted cancer, as will be seen from the pathological reports and microscopical evidence which are furnished in each case. I have purposely excluded rodent ulcer as it is common knowledge that that affection is readily cured by this form of treatment. My cases have nearly all been operated upon and the disease had recurred, some only locally; others were accompanied with glandular enlargement. The best cases for the X-rays are those in which the disease is strictly local, as in epithelioma of the lip, or has recurred in the scar in the shape of small lumps with the glands not largely affected. In some the better treatment may have been another operation, but the patients very naturally shrank from further operative measures after the second or third operation. Even in primary cases where the patient from either age or other causes refuses operation then much may be effected by X-ray treatment. In nearly all patients pain can be alleviated and reduced to a bearable quantity even when the growth is of most extensive nature. The actual bulk of the growth is very frequently reduced—this may possibly take place by allaying the irritation and thus getting rid of simple inflammatory products. The mere fact that something is being attempted for the patients' benefit has an extraordinary effect on the mind of the patients and very materially assists them to bear their burden.

One is often asked when should X-rays be tried? The answer is, in my opinion, directly the diagnosis is made, whether the

case is to go to operation or not. After operation, directly the scar is healed or even before that time if it shows the slightest appearance of being sluggish in the healing, a nodule of the size of a pea should have immediate treatment whether in the scar or not; this requires for its proper fulfilment constant observation by the medical attendant. A weekly examination is of the utmost importance to the patient. Even healthy wounds will heal the more readily under the stimulation of X-rays cautiously applied and in small doses, sufficient protection to the surrounding parts being all that is necessary. This form of treatment can only be applied with any degree of safety by medical practitioners; some terrible results have occurred in the hands of laymen and this fact has probably deterred patients and their advisers from taking full advantage of such suitable measures. One cannot promise, except in small superficial growths, a cure, but one can almost invariably obtain a measure of alleviation. I am chary of using the word "cure" to cases of cancer which have been under the X-rays but arrest and alleviation are terms which may be fairly used. My usual method is to treat the patient on several days a week to short exposure (from five to ten minutes) with the tube at a varying distance according to the quality and quantity of its discharge, etc., generally at a distance of from two inches to twelve inches from the skin, in order to produce the effect desired. If septic symptoms arise they are treated in the usual way, sometimes allowing a greater interval between each further application.

Case 1.—The patient was a woman, aged 64 years. She attended at St. George's Hospital in March, 1899, for a tumor in the right breast. She was admitted under the care of Mr. J. W. Haward, who removed the breast containing a scirrhus carcinoma. In July, 1901, there was a recurrence in the scar and axilla, for the relief of which she was operated upon by Mr. H. C. Jeffreys. Six months later, in December, 1901, Mr. Clinton T. Dent removed several lumps from the right axilla. This patient then remained free and well for nearly three years, but in March, 1904, she consulted Mr. L. A. Bidwell at the West London Hospital. There were then found to be one small ulcer at the inner end of the scar and several lumps in the scar and axilla, which were adherent to skin and the underlying tissues; also there was great edema of the whole of the right arm. Microscopically the ulcer proved to be epitheliomatous. X-rays were applied twice a week with an exposure of from five to ten minutes; the ulcer readily healed in a few weeks and the axillary lumps one by one broke down and became simple hematomas; these were from time to time tapped and yielded disintegrated blood, the small incisions closing quickly. In June, 1904, treatment had to be stopped for a somewhat extensive dermatitis. It was resumed in August of the same

year. From that time onwards she has shown no sign of malignancy but has had intermittent treatment with the idea of softening if possible the lump or scar in the axilla, thus relieving the edema of the arm which still persists though much improved. Even at the present time occasionally a lump will break down and the contents on aspiration consist as before but no trace of carcinoma cells can be found. The patient has gained 18 pounds in the past 15 months. She has practically no pain now and is in a good state of general health.

Case 2.—The patient was a man, aged 63 years. In October, 1904, he attended the West London Hospital for a little lump of a dark purple color situated on the right temple; it had been noticed four months before. He complained of its being very sore and stated that it bled very readily to the touch. He was referred to the X-ray department and a minute portion being detached it proved to be a typical epithelioma. He had 11 applications in all of about five minutes each. The lump came away as a dry scab. There has been no recurrence during the past 11 months.

Case 3.—The patient was a man, aged 59 years. In May, 1900, I removed by a V-shaped incision an epithelioma of the size of a large cherry from the lower lip. The Clinical Research Association reported that the part examined was "a squamous-celled carcinoma with surrounding tissues normal." In October, 1900, it had recurred in the outer edge of the scar as a dark purple nodule of the size of a pea. The X-rays were applied through a lead screen for six sittings of five minutes each. There has been no return during the past five years.

Case 4.—The patient was a man, aged 52 years. In March, 1903, Mr. H. T. Butlin removed an epithelioma from the inner side of the right cheek just in front of the entrance to Wharton's duct. Five months after it had recurred as a hard edged ulcer with raised rims, bleeding readily to the touch, even if the tongue was pressed unduly hard against it. Microscopically it proved to be a squamous-celled epithelioma. In July, 1903, the patient was treated to nine applications of the rays of about ten minutes each sitting. The ulcer quickly healed and at the conclusion all that remained was a hard-puckered scar. The rays were applied—through a glass Fergusson's speculum held in the mouth and the face was protected by a lead screen. It is now more than two years since the last treatment and there has been no recurrence.

Case 5.—The patient was a man, aged 38 years. In April, 1900, I removed a small tumor from the left parotid region; it had first been noticed in the preceding January. The incision healed by first intention. The Clinical Research Association reported on the growth that it was a "fibro-sarcoma with spindle cells." Four months after, in August, it had recurred in the

shape of a lump of the size of a walnut, fairly hard, and adherent to the skin and underlying tissues. The patient was treated to 13 applications of about five minutes each. The tumor rapidly disappeared. During the treatment a slight dermatitis was produced to the degree of dry exfoliation. There has been no recurrence during the past five years.

Case 6.—The patient was a man, aged 34 years. This is a very similar case to the foregoing. In October, 1904, I removed a small parotid tumor of the size of a large cherry which proved microscopically to be a mixed-celled sarcoma. Recurrence had taken place by March, 1905, to about the same size. During the treatment it became of stony hardness, then quite loose and shrunken to one-third its original size. It is still discharging externally a thin serous fluid at intervals. The patient has had in all nineteen doses of five minutes each.

Case 7.—The patient was a woman, aged 39 years. She attended at the Westminster Hospital in September, 1902, where Mr. E. P. Paton removed the left breast for a scirrhus carcinoma and, according to her statement, "it never healed properly." In June, 1903, she consulted Mr. Bidwell at the West London Hospital, who diagnosed the affection as recurrent carcinoma in the scar with infected axillary glands. There were four lumps in the scar, three of which were ulcerated in their middle; each was of the size of a penny and they were slightly raised; they were adherent to the deeper tissues. The lumps in the axilla were not very hard but each was of the size of a walnut and there was also a supraclavicular gland of the same size. The treatment by the X-rays was commenced on June 15th, 1903, and consisted of ten minutes' application given twice a week at a distance of three inches from the skin which was completely bared. After the ninth application a severe dermatitis was produced. The size of the area that ultimately peeled was 8 1/4 inches by 7 inches; it was practically the whole of the breast, the axilla, and the upper third of the inner side of the arm. This gradually subsided, when it was found that the lumps had all disappeared. On Sept. 14th I resumed treatment on the lumps in the axilla, carefully screening the healed parts; these quickly vanished. The patient had in all sixteen applications during a period of four months. During the past two years there has been no sign of a recurrence and the scar is very loose, and in the position of the ulcers the skin is peculiarly transparent owing to its extreme thinness; the underlying parts can be easily seen through them. At the present time there are no glands to be felt.

Case 8.—The patient was a man, aged 59 years (sent by Dr. H. Roxburgh Fuller). He was suffering from a very extensive growth of the rectum and anus which he had had for some 18 months and which had been diagnosed as a carcinoma by Sir Fred-



erick Treves and Mr. Anthony A. Bowlby. He was advised not to undergo an operation owing to the extensiveness of the growth. The examining finger could not reach beyond the hard masses in the rectum. Outside there was a horseshoe-shaped mass at the anal site; this was 3 1-4 inches across by 4 inches long and projecting 1 1-8 inches above the surrounding skin. A very slight trace of anus could be detected at the lower part. The growth, though fairly hard, bled very readily to the touch. Microscopically it was a carcinoma with much fibroid tissue. The patient suffered from incontinence of feces and had done so for over a year; he also had much pain and discomfort. He was compelled to eat his meals in a standing position. The treatment which I administered was from a high-frequency electrode giving off X-rays for an area of the size of a five-shilling piece which showed the terminal phalanges of the fingers well with the fluorescent screen. The applications were each of 20 minutes' duration from three to five times weekly and extended from June to November, 1903. A peculiar feature was the almost immediate production of an enormous flow of clear mucous discharge which only ceased towards the end of the treatment, when the original tumor consisted of a hard, fibrous, horse-shoe-shaped lump but only of the thickness of one's little finger. The incontinence had ceased and there was no pain to the examining finger which could easily get above the growth, the remains of which seemed to be limited to the sphincter alone and consisted of very hard tissue. The natural opening was considerably contracted. Colotomy was subsequently performed, the growth remaining arrested. There has been no recurrence.

Case 9.—The patient was a single woman, aged 42 years (sent by Dr. H. V. Griffiths). In June, 1899, the late Mr. Christopher Heath removed the left breast and glands for scirrhus carcinoma. There was recurrence in the scar and in the axilla 11 months after. A second operation was performed in March, 1900, and eight months later an ulcerated lump formed in the axilla, discharging thin serous fluid tinged with blood. The Clinical Research Association reported on a minute portion, "Consists of scirrhus carcinoma cells." X-ray treatment was commenced in November, 1900, with daily exposures of ten minutes each sitting, there being no shielding of the surrounding parts. After 16 applications a mild dermatitis was set up. There was a cessation of treatment for five weeks, during which time the patient went to the seaside. On her return she was treated for a further six weeks by two applications a week of five minutes each sitting. In all 28 exposures were given and there has been no recurrence during the past four and a half years and the patient is still in excellent health.

Case 10.—The patient was a man, aged 60 years (sent by Mr. P. Warner). In May, 1905, he was examined in consultation by Mr. Charters J. Symonds, Mr. Herbert Tilley, and his own medical attendant. He was also seen by Dr. L. Hemington Pegler and the unanimous diagnosis was epithelioma of the throat. There was a typical malignant ulcer of the size of a penny on the left back part of the root of the tongue, invading the base of the left tonsil and left lower part of the pharynx. In the submaxillary region a fairly large lump could be felt and seen from the outside; it was adherent to the deeper structures and of the size of a large walnut. Several smaller lumps could be easily felt in the deeper parts. A minute particle proved the growth to be a squamous-celled epithelioma. The whole of the parts were indurated and matted together. The patient complained of constant dribbling and great pain with difficulty in swallowing even fluids. On May 31st treatment was commenced and consisted of exposures of from ten to fifteen minutes twice a week. The rays were passed through a glass Fergusson's speculum held in the patient's mouth. The ulcer quickly began to put on a healthy appearance and on August 9th, on coughing, the expectoration was saved and examined by Mr. G. L. Eastes who reported as follows: "These cells I certainly think are derived from a neoplasm and though the majority of them do not present characters which I consider diagnostic of malignancy, yet there are a few which have a very suspicious appearance." After three months, with 24 applications in all, the ulcer had contracted down to the size of a threepenny piece; the enlarged submaxillary gland was extremely small and soft, the other glands being of the size of peas, all freely moveable and without the slightest sensation even on hard pressure. The patient is much improved in every respect. The pain is slight and is due to the mechanical pressure of the scar; swallowing is easy, even of semi-solids. He is still under mild X-ray treatment but all signs of malignancy have disappeared.—*The Lancet*, November, 1905.

(Harry W. Cox, Limited, London, Eng., is one of the largest makers of X-ray apparatus in Great Britain. The J. F. Hartz Co., of Toronto, are their Canadian agents, and have their goods on hand).

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#### Indirect Palpation to Outline the Heart: the Ictometer.—

L. Kurt (*Wiener klinische Wochenschrift*, Vienna) uses a wooden rod about 20 cm. long, with a small plate at each end, to estimate the movements of the thorax wall over the heart. He calls it the ictometer, as the heart-beat is sometimes called the ictus. It is possible with this little instrument to note delicate variations in the heart action over different segments of the heart, as he describes in detail.

## SYNTHETIC PURGATIVES—THE PURGATIVE ACTION OF DIHYDROXY-PHTHALO-PHENONE.

BY F. W. TUNNICLIFFE, M.D.,

Professor of Pharmacology, King's College, London; Physician to the North London Hospital for Diseases of the Chest, and Out-patient Physician to the Victoria Hospital for Children.

THE term "synthetic purgative" is perhaps not a very good one; by it, however, may be reasonably understood those organic purgatives which are made not in the laboratory of Nature but in the laboratory of man. The vegetable purgatives are, perhaps, from the standpoint of the chemist, the most impure substances in the pharmacopeia; indeed, in their very impureness rest, according to some pharmacologists, not a few of their virtues. One of the desiderata of a purgative is that the purgative principle shall come into contact with a maximum surface of the intestinal mucous membrane. The accomplishment of this is at least hypothetically favored by the exhibition of a crude drug, in that it may reasonably be inferred that the actual purgative principle will be gradually liberated from the mother-substance as the latter passes down the alimentary tract. The former will thus be brought into contact with successive areas of mucous membrane, and hence exert a continued purgative action. With these crude substances it is possible still further to determine the seat of their action in that some liberate their purgative principle only in an alkaline medium. Even when this is not the case, purgative substances can be protected from the action of either acid or alkali by suitable coatings. If, however, purer chemical substances were initially used, they might yield up their purgative principles *en bloc*, and hence unfold their purgative action high up in the intestines. They would thus tend to stimulate solely the very part of the intestine which needs it least, and leave unaffected the large bowel, to the sluggishness of which our clinical experience points as the most frequent cause of at least chronic constipation.

This reasoning, however, although plausible enough, does not, upon careful inspection, rest upon a very sound basis. We must regard from the pharmacological standpoint all the vegetable purgatives as essentially local irritants. Their irritant action varies according as they find themselves in an acid, alkaline, or neutral medium, and according to the presence in the intestinal contents of certain other substances, amongst which the bile must find especial mention. If, however, we possess a substance with these irritating properties, and if it be absorbed very slowly, or not at all, we have a purgative. It can matter but little whether the substance in question be a pure chemical entity or a crude mix-

ture. It is obvious that the irritation such a substance causes at any given point of the intestine will give rise to peristalsis, and this latter will ensure the irritant being passed on to an adjoining intestinal area, and so on, until the drug is either all absorbed, which *ex hypothesi*, is impossible, or all voided with the feces. From these considerations, therefore, it is evident that there is no cogent *a priori* reason why a perfectly chemical substance, when administered by the mouth, should not act as an efficient purgative of the vegetable as distinguished from the saline type.

The next event in the history of this interesting subject was an accident—one of the accidents of pharmacology. It is mainly of this accident that this paper treats. It was found necessary for administrative purposes in Austria-Hungary to earmark a certain kind of wine. This could best be done by adding to it a substance which, while colorless itself, readily developed a characteristic color upon the addition of some simple reagent. A similar method, it may be parenthetically remarked, has been adopted in Germany to earmark margarine. After some initial experimentation, the substance chosen for addition to this wine was the long-used chemical indicator, phenolphthalein. This substance is tasteless, and, in acid solutions, colorless; it is insoluble in water, but soluble in alcohol. What, however, fitted it pre-eminently for the purpose of earmarking the wine in question was the fact that upon the addition of an alkali to its solutions, owing to the formation of a salt, they assume a very brilliant purple color. Pharmacological experiments had previously shown that phenolphthalein in doses amounting to 1 gr. pro-kilo body weight caused no symptoms when administered to animals.

In consequence of being possessed of the above properties, phenolphthalein was adopted by the authorities for the purpose of earmarking a certain kind of wine, and was accordingly added to the wine in question. The wine to which the substance had been added went into consumption on the commercial scale, and the result was interesting, both to the consumer and the pharmacologist. The individuals who drank the wine soon suffered from diarrhea, and the diarrhea continued so long as the wine was consumed. Subsequently, phenolphthalein was carefully examined with regard to its action upon the bowels, and it was clearly demonstrated by Vamossy that it invariably, even in small doses, acted as a purgative. These initial researches have been amply confirmed, and there can be no doubt that in phenolphthalein we have an important addition to our stock of purgatives.

Phenolphthalein belongs to a class of bodies known as phthaleins, which may be regarded as derivative of tri-phenol methane. The term phenolphthalein is one adopted for convenience, the name which actually expresses the constitution of this

substance being dihydroxyphthalophenone, one too unwieldy even for chemists, just as phenolphthalein itself is too unwieldy for physicians. To meet the exigencies of what will probably be the everyday prescribing of this substance, the name "purgen" has been adopted for it. In relation to what was said above concerning the properties of the active principles of certain of the vegetable purgatives, it is interesting to note that "purgen" itself is not, like chrysophanic acid, for instance, a dye, but that it is nearly related to certain well-known dyes, for example, eosine and fluoresceine.

The phthaleins, as a class, are convertible by certain chemical reagents into anthracene or anthraquinone derivatives. They exhibit also in common with the latter bodies the physico-chemical property of tautomerism. These somewhat erudite facts are, however, of interest in showing that although it might have reasonably been inferred from the graphic formula of purgen that it would have a purgative action, yet nevertheless the fact that it does act as a purgative must tend to make us take a broader view of the so-called éccoproticophore group, and not fasten this exclusively to anthraquinone derivatives, properly so called. If one were to hazard a provisional hypothesis upon so scanty data, one would be rather inclined to regard the purgative action as due to the occurrence of hydroxy side groups in connection with carbonyl groups (CO), a feature which all the above bodies have in common.

#### MODE OF ACTION OF PHENOLPHTHALEIN AND ITS FATE IN THE BODY.

Before giving the result of the observations on the action of purgen on man it would be well to consider the *modus operandi* of the purgative action of this interesting substance and its fate in the body. Our accurate information with regard to the changes produced in the intestine by this drug is at present very scanty, the probability is that in the acid medium of the stomach it remains unchanged, but upon reaching the alkaline intestine it becomes converted into its sodium salt, which is more soluble and more active than phenolphthalein itself. This salt is, according to the observations of Vamossy, possessed of a very low power of diffusion. This property, according to the above observer, explains the purgative action of the substance in that, being indiffusible, its presence in the intestine occasions a high osmotic pressure, and consequently a copious accumulation of fluid in the gut. The purgative action of this substance is much more marked in man than in animals, and this is due, according to Vamossy, to the fact that in the latter the conversion of purgen into its sodium salt

either does not take place at all, or only to a very slight extent. Whether to these physical processes alone the purgative action of this substance is to be ascribed, the data at present at our command do not justify us in stating.

Concerning the fate of phenolphthalein in the body, all that can be said is that it is only to a very slight degree, and only after very large doses have been taken present as such in the urine. Its presence in the urine can, of course, easily be demonstrated. Upon adding a small quantity of alkali to such a urine it becomes at once either rose-red or deep purple, according to the quantity of phenolphthalein present. The question as to whether it is excreted in the urine as some derivative is not easy absolutely to decide. It must at once be admitted that anthracene, anthraquinone, and the phthaleins are, from the chemical standpoint, stable bodies, and only split up under the influence of strong chemical reagents. Reasoning from analogy, if phenolphthalein were split up in the body we should expect the resulting aromatic residue to be excreted in the urine in combination with sulphuric acid as a so-called aromatic sulphate.

With a view of ascertaining whether any increase took place in the aromatic sulphates of the urine after the administration of purgen two series of experiments were made, one upon two hospital patients who were on a constant but not weighed diet, and one upon myself, also on a constant but not weighed diet. The results of both these series of experiments showed no increase in the aromatic sulphates of the urine during the purgen period as compared with the fore and after periods. These experiments were not very accurate, for two reasons. In the first place the diets were not absolutely constant. In the second place purgation, *qua* purgation, invariably diminishes the aromatic sulphates in the urine. Nevertheless, it may reasonably be inferred from the above results that purgen is not excreted in the urine to any extent, either as such, or as an immediate derivative. This conclusion confirms that of Vamossy, who also found no increase in the aromatic sulphates of the urine after the administration of purgen.

Whatever doubt there may be concerning the presence of minute quantities of purgen or an immediate derivative in the urine of patients taking it, there can be no doubt whatever concerning its presence in the feces. If a small quantity of alkali be added to the motions after purgen has been given to a patient, the whole will quickly develop a brilliant purple color. This reaction is present occasionally for one or two days after the exhibition of a single large dose of purgen, but most often disappears with the purgative effect of the drug. Vamossy has made estimations of the amount of purgen present in the feces after its administration by the mouth, and has obtained from them 87.17 per cent. of the

ingested quantity. I have not had access to Vamosy's paper, and am ignorant of the method adopted by him. Whether the purgen present in the feces is unabsorbed purgen simply voided with them, or whether it must be regarded as having been absorbed and re-excreted by the intestine, is difficult absolutely to decide. All the evidence, however, points to the former view, and thus justifies us in concluding that in man the quantity of this substance absorbed into the body when it is administered by the mouth is a negligible quantity.

#### THERAPEUTIC USE AND DOSE OF PHENOLPHTHALEIN.

With regard to the practical use of phenolphthalein, this substance has always been administered to patients in the convenient form of purgen. This preparation is put up into tablets of three sizes. The smallest of these tablets contain 0.05 gram, or, approximately 3-4 gr. of phenolphthalein. This sized tablet contains a suitable dose for infants and young children, and may be conveniently called "infant purgen." The next sized tablet contains 0.1 gram, or approximately, 1 1-2 gr. of the active principle—the dose usually suitable for adults—and may be conveniently termed "adult purgen." The largest sized tablets contain 0.5 gram of phenolphthalein, or, approximately, 7 1-2 gr., and are suitable for the subjects of obstinate constipation. The English agents for purgen are Messrs. Kirby, Newman Street, Oxford Street, from whom all these tablets may be obtained. In each class of individual mentioned above it is well to begin the treatment with one or two tablets, modifying the dose for further use as may be indicated. In addition to the observations detailed below, the purgative action of phenolphthalein in man has been studied by Vamosy and Unterberg.

During the last six months the author has made a series of observations concerning the purgative action of purgen in man. The cases in which this drug has been used may be divided into three classes:

#### CHILDREN.

Both in the in-patient and out-patient department of the Victoria Hospital for Children this drug has been administered, and for help in this matter the author is indebted to Dr. Turner, the house physician. Children from two months to seven years received the drug in the form of "infant purgen" tablets. In all, some fifty patients were treated in this way. The tablets were always readily taken by the children, as they have a distinctly pleasant taste, and were probably mistaken for sweets. In the case of babies under eighteen months old one to two tablets, that is, from 3-4 to 1 1-2 gr., were given, pulverized, in one or two

teaspoonfuls of milk. To elder children the tablets were given whole, the patients being told to masticate and then swallow them, which they readily did. The effect, as was to be expected, differed largely in different children. One, two, or in obstinate cases, three tablets when given upon going to bed, caused one or more evacuations of the bowels in the morning, or, when given in the early morning, acted shortly after breakfast. The first evacuation with the larger doses was usually liquid, but nothing approaching violent diarrhea or intestinal colic was ever observed. After the larger doses, in a few cases the urine, upon the careful addition of an alkali, gave a rose-pink coloration. In some cases the drug was administered every day, or every other day, for weeks together; it did not seem to lose its effect, nor was there any evidence of renal irritation. The conclusion that is to be drawn from these results is that purgen is a useful and safe purgative for children, but that its dose must be graduated in each case; and for this purpose the "infant purgen" tablets are exceedingly convenient, as, the unit being small, the dose can be easily increased by simply ordering two or more to be taken.

#### ADULTS.

In the case of adults the unit adopted was the "adult purgen" tablet. The patients were mostly the subjects of chest disease, and were either in-patients or out-patients at the North London Hospital for Diseases of the Chest. For help in this work the author has to thank Dr. Williams, the Senior Resident Medical Officer. The dose of the drug given varied within very wide limits, namely, from one adult purgen tablet, that is 1 1-2 grs. of phenolphthalein to two strong purgen tablets, that is 15 grs. The drug was generally administered to the in-patients by the night nurse in the early hours of the morning, and caused an action of the bowels after breakfast. The nature of the motion passed varied with the dose and the individual, but speaking generally, one or two adult tablets caused one or two soft but not watery motions. If the drug were given over night no discomfort ensued during the night, but an evacuation of the bowels occurred in the early morning. In all, some fifty patients were treated. Nine patients took this drug as a regular daily aperient; it did not seem to lose its effect, nor to cause any disagreeable secondary symptoms.

One may conclude, so far as adult patients are concerned, that phenolphthalein is a useful purgative, and may be given in doses of from 1 1-2 to 15 grs., that is, from one or more adult purgen tablets to two strong purgen tablets.



## EFFECT OF THE DRUG IN COMPLICATED CASES; SECONDARY EFFECTS.

The third class of case to which purgen was administered may perhaps best be designated as complicated. The patients were chosen with a view of seeing what, if any, of the effects other than purgation produced by other purgatives were caused by purgen.

The irritant action of certain of the vegetable purgatives upon the kidneys has been referred to above. With a view of ascertaining the properties of phenolphthalein in this respect it was given as a purgative to two cases of albuminuria. These patients were placed upon a constant but not weighed diet for three days, and the albumen in their urine estimated by Esbac's method. They were then given daily two adult purgen tablets, with the usual purgative result. The albumen in the urine was, during these three latter days, also estimated by the same method. No increase in the albumen took place, nor was there any microscopical evidence of increased renal irritation. From this it may be inferred that phenolphthalein may be used as a purgative in renal disease.

Phenolphthalein was given in two cases of jaundice in children. The jaundice was, so far as could be ascertained, what is generally known as simple catarrhal jaundice. The idea in giving this purgative to patients of this class was to see in the first place if it still acted as a purgative, and in the second place whether it exerted any action upon the secretion of bile. In both cases purgation was produced by the ordinary dose (two infant purgen tablets, 1-2 gr.). The motior, however, were clay-colored as before. From this we may infer that the purgative action of this drug is not dependent upon the appearance of bile in the intestine, and also that it has apparently no influence upon the secretion of bile.

The general use of purgatives for the purpose of reducing the systemic blood pressure in cases of hemoptysis or threatened cerebral hemorrhage, for instance, led us to make observations upon the effect of phenolphthalein upon arterial blood pressure. The instrument used for the purpose was the sphygmomanometer of Mosso, with which we have also made a series of observations upon the effect of magnesium sulphate upon the arterial pressure. A reduction of arterial pressure certainly was manifest after the administration of phenolphthalein, and lasted practically until the purgative effect of the dose given ceased, but the fall of pressure, in no case, even after large doses, approached in magnitude that produced by magnesium sulphate. This result is of importance in that it points to the conclusion that purgen will not be of service in cases in which we wish to obtain the secondary depres-

sant effect of a purgative upon the circulation; yet, nevertheless, it will probably be useful precisely in those cases in which we wish to avoid this depressant action. Especially is it advisable to do this in cases of morbus cordis with dilated and degenerate heart. In such cases, especially if associated with albumen in the urine, a non-depressant and non-irritating purgative is a desideratum.

#### CONCLUSION.

The results detailed above seem to justify the following conclusions:

1. For children, phenolphthalein in doses of from 3-4 to 2 1-4 gr. (one to three tablets of infant purgen) is a useful aperient.

2. For ordinary adults, this drug must be given in doses of from 1 1-2 to 4 1-2 gr. (one to three tablets of adult purgen).

3. In cases of obstinate constipation, the dose must be increased to 15 gr. (one to two tablets of strong purgen).

4. Phenolphthalein produces purgation in jaundice. It has no irritating action upon the kidneys; its depressant action upon the circulation is less than that of magnesium sulphate.—*Brit. Med. Jour.*

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#### THE CHOICE OF A UTERINE HEMOSTATIC.

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J. O. POLAK, of Brooklyn, discussing Carroll Chase's paper on "The Choice of a Uterine Hemostatic" (*Archives*, Oct., 1905), read before the Brooklyn Gynecological Society, remarked that the paper brought up a subject, which he believed we were too apt to neglect, that hemorrhages may be checked by other means than instrumentation, operation, and mechanical compress. Hydrastinine and stypticin were worthy of further emphasis, though the class of cases in which these were applicable is limited. He did not believe that cases of hemorrhage from retained secundines will stop by stypticin or hydrastinine, until the contents of the uterus are cast off. That may be done by time. A large number of these cases check themselves by time, and the effects of the hydrastinine and stypticin are coincident. There is, however, a class of cases where we do find these drugs to be of value, and that is in the class of hemorrhage which occurs in women with uteri that are out of proportion to the size of the woman, imperfectly involuted, and no drugs work better than hydrastinine and ergot. Occasionally you will find them of extreme value when combined with stypticin.

Again, the menorrhagia attending some menstrual epochs can be controlled with stypticin very nicely. The use of stypticin in

fibromata and fibromyoma has failed in his hands, as has also been the experience of the introducer of the drug in this country, Dr. Boldt. The hemorrhage is not due to the fibroid that is present, but to the hypertrophic endometritis that is coincident; and, consequently, many of these cases, even though they are treated locally by topical applications or drugs, do not improve, because of a lack of a thorough knowledge of the pathology.

Carroll Chase agreed with Dr. Polak that in these cases of hemorrhage following abortion there must have been either no material or little material left in the uterus. Nevertheless, some of these cases bled, and he did not know why. It is these cases in particular in which stypticin and hydrastinine will stop hemorrhage. He did not claim that hydrastinine or stypticin, given internally, will get rid of material in the uterus that is producing hemorrhage. He still believed that iron is a pretty good hemostatic, especially in carcinoma, and in a condition where you can thoroughly wash out the blood clots. He agreed with Dr. Polak that he would not use adrenalin for postpartum hemorrhage or for the treatment of fibroids. He thought the cases in which adrenalin would act well are those in which vasomotor constrictants would do the work, rather than drugs producing contractions of the uterus.—*Brooklyn Med. Jour.*, Sept., 1905.

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### THE RELEASE OF THE INFANT.

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THE Board of Education for Great Britain recently appointed five women to be Inspectors of Schools, and one result of this action has been a unanimous report by these ladies, which has secured in some measure the release of the infant from school duties. The report is written by the Hon. Maude Lawrence, Chief Woman Inspector to the Board of Education, and states that it has been found that children between the ages of three years and five years get practically no intellectual advantage from school instruction, as children admitted later can in six months or a year reach the same standard as those who have been in the school two years previously.

Thereupon the Board amended the Code of Education to allow local education authorities, at their discretion, to refuse to admit children under the years of age to school. It is felt by many that the Board of Education should have gone farther and not shirked the matter by leaving the real decision to local authorities.

On the other hand, among the poor, the exclusion of young children from school is much resented, and felt as a hardship, because in many cases the mothers are the bread-winners, and

must be away from home. It is proposed to remedy this by the establishment of a crèche, or school nursery, in connection with Board Schools, for the little children of the poor.

Everybody is quoting Japan nowadays, and it is interesting to know that Japanese children are not allowed to attend school until after six years of age, because the Japanese believe that science has completely proved that school education before six years of age is mentally and physically detrimental. Science is great and will prevail, but common sense is greater, and "God's own common sense," to quote someone who is not Poet Laureate, has long ago settled that children need not go to school before seven. There was a woman in the north of Scotland who was visited by the truant officer in regard to her little children's absence from school. She replied that "Meat and mirth are a' that a bairn needs till seven," and being threatened with the terrors of the law, replied majestically that she "kenned mair about bairns nor ony Parliament mon up in Lunnon." Blessed be the independence of the Scotch mother in her castle of home in the North Country. Different, indeed, is the sad case of the widow and the mother who must be breadwinner among the submerged of London. Such a one told an experienced district visitor that she must get work, for her husband had none, and she had left him sitting crying at the side of a fireless hearth. The visitor advised her to go home and sit down and cry on the other side of the hearth until her husband went out to find work, for if she found work, and supported the family, her husband's character would deteriorate, and he would never be a man again. There is, no doubt, much truth in this view, and the efforts made in Great Britain just now to feed hungry children and give a hand to the submerged are wiser than they used to be.

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### LINES ON A SKELETON.

BY WILFRED CAMPBELL.

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This was the mightiest house that God e'er made,  
 This roofless mansion of the incorruptible.  
 These joists and bastions once bore walls as fair  
 As Solomon's palace of white ivory.  
 Here majesty and love and beauty dwelt,  
 Shakespeare's wit from these lorn walls looked down.  
 Sadness like the autumn made it bare,  
 Passion like a tempest shook its base,  
 And joy filled all its halls with ecstasy.

This was the home wherein all dreams of earth  
And air and ocean, all supreme delights,  
Made mirth and madness: wisdom pored alone;  
And power dominion held: and splendid hope;  
And fancy like the delicate sunrise woke  
To burgeoning thought and form and melody.

Beneath its dome the agony of the Jew.  
The pride of Cæsar or the hate of Cain,  
The thought of Plato or the heart of Burns  
Once dwelt in some dim form of being's light.

Within these walls of wondrous structure, dread,  
A magic lute of elfin melody  
Made music immortal, such as never came  
From out those ancient halls of Orphean song.

Love dreamed of it, and like a joy it rose.  
Power shaped its firm foundations like the base  
Of mountain majesty: and o'er its towers  
Truth from fair windows made his light look down.

But came a weird and evil demon host,  
Besieged its walls, destroyed its marvellous front;  
Shattered its casements, dismantled all its dream,  
And hurled it down from out its sunward height;  
And now it lies bereft of all its joy  
And pride and power and godlike majesty;  
The sport of elements and hideous mimes,  
That blench its corridors, desecrate its rooms,  
Where once dwelt love and beauty, joy and hope,  
Now tenantless: save for the incurious wind,  
And ghostlike rains that beat its bastions bare,  
And evil things that creep its chambers through.

But whither thence is fled that tenant rare.  
That weird indweller of this wasted house?  
Back from the petalled bloom withdraws the dew,  
The melody from the shell, the day from heaven,  
To build afar earth's resurrection morn.  
And so, Love trusts, in some diviner air  
The lord of this lorn mansion dwells in light  
Of vaster beauty, vaster scope and dream;  
Where weariness and gladness satiate not,  
Where power and splendid being know no ruin,  
And evil greeds and envyings work no wrong.

## ABSTRACTS.

**History of Cerebrospinal Meningitis.**—A. Gottstein (*Deutsche medizinische Wochenschrift*, Berlin and Leipsic) says that the history of this disease can not be traced farther back than 1805; previously to that date it was probably confused with typhoid. He cites the older authorities and mentions that the exanthem was described even in the earliest epidemics.

**Use of Nitroglycerin.**—C. Binz, Bonn (*Therapie der Gegenwart* Berlin) showed long ago that nitrates may be converted in the system to nitrites. This action is the basis of the therapeutic efficiency of nitroglycerin. The results of various investigations concerning the toxic power and fatal dose of nitroglycerin have shown great differences of opinion among clinicians. Some regard it as a poison equal to prussic acid or nicotin, while others have found a tolerancé of doses much larger than those usually thought safe, and two cases have been observed in which large amounts were taken without harm. Binz found, by experiments on animals, that doses much larger than those used in medicine produced no toxic effect. Man may react more readily, and there may be great differences between individuals. Binz found that one set of tablets contained scarcely a trace of the drug, while another showed more than the required quantity. The dry form, therefore, should be discarded for an alcoholic 1 to 4 per cent. solution. Of these solutions, one drop should be used as the initial dose, which may be gradually increased. Each drop represents from  $\frac{1}{4}$  to 1 mg. of the nitroglycerin. This drug has the advantage over sodium nitrate that it is not decomposed in the stomach, while it is more gradual in its action and more lasting in its effects than amyl nitrite. It has no explosive action when dissolved in alcohol, and, he thinks, may well supersede the nitrites.

**Value of Formaldehyd in Internal Medicine.**—P. Rosenberg (*Therapie der Gegenwart*, Berlin) does not believe formaldehyd to be highly poisonous and corrosive. Hundreds of patients who came under his observation showed no toxic action, and in all cases in which the blood and urine were examined there was no evidence of toxic action, no casts, and no albumin or changes in the blood. Because of their different action, formol and formalin should be distinguished from formaldehyd. The toxic action previously attributed to formaldehyd is due to its irritating qualities, and even these depend on the manner of its use. The irritating quality can be removed by combining for-

maldehyd with another substance from which it may be gradually split off. Jacobson experimented with such a preparation and demonstrated that it is non-toxic. When properly administered, formaldehyd has never had any bad effect on the human organism, even in pathologic conditions, and usually proved beneficial. Rosenberg claims to have found a stable preparation of formaldehyd in a compound from which it is gradually split off in the organism. It is administered in tablet form; and he regards it as a great advance in medication. The pleasant-tasting tablet may be held in the mouth, chewed, or taken in solution, but should not be swallowed whole. He is convinced that its use might be successfully extended to typhoid. It has not yielded conclusive results in tuberculosis, but it has proved very effective in his practise in the last few months. He has used it exclusively in six cases of diphtheria, in seven of scarlet fever, two of erysipelas, one of pyemia, two of cystitis, and forty-five of tonsillitis. Each tablet contains 1 cg. of formaldehyd in a loose combination, with milk, sugar and menthol, with some ordinary sugar and a little pepsin, hydrochloric acid and an aromatic vehicle.

**Study of Suprarenal Functioning in Disease.**—F. Luksch (*Wiener klinische Wochenschrift*, Vienna) estimates the functional disturbance in the suprarenals by the lesser pressure-raising power of the extract. His research on various animals showed that the suprarenals are not materially affected by various pathologic conditions, starvation, fever, etc., but that others, such as uremia, phosphorus poisoning, diphtheria and various infectious processes, apparently arrested the suprarenal functioning. The extract of the organs under these conditions failed to display the normal pressure-raising property. This functional disturbance in the suprarenals is probably one of the injurious factors that co-operate in serious infectious processes.

**Treatment of Coryza in Infants.**—L. Ballir, Berlin (*Therapie der Gegenwart*, Berlin) believes that the treatment of coryza in infants is especially important because the local obstruction to breathing sometimes prevents nursing, thus necessitating artificial feeding and often resulting in marked loss of weight. It may cause sudden death from asphyxia or from complicating capillary bronchitis, which is due, he thinks, principally to aspiration of infectious secretions from the nose. The swelling and secretion in the nose must be reduced, and since cocain is too dangerous, he recommends soaking a small tampon of cotton in a 1 per cent. solution of adrenalin, and placing it in each nostril alternately, leaving it from two to three minutes. The mucous

membrane becomes anemic, the swelling is reduced, and a mass of secretions comes away from the nose. Since the effect of this swabbing only lasts from three to four hours, it is necessary to repeat it three or four times daily, or even before every feeding, and to continue as long as needed. In cases of weak infants, with an exceedingly stubborn, bloody, purulent secretion as the result of a marked rhinitis, he uses a .5 to 1 per cent. silver nitrate solution in addition to the adrenalin. A drop of this should be applied once a day after the application of the adrenalin until the secretion stops permanently. Of seventy-five children affected with coryza, forty-eight were treated with adrenalin and the others were not. Only 12.5 per cent. of those so treated had bronchitis, while 44.4 per cent. of those not so treated were affected with it. In syphilitic coryza it is not only locally beneficial, but prevents a large number of deaths which would otherwise occur from aspiration pneumonia.

**Extirpation of Tuberculous Hip Joint.**—A. Lorenz and M. Reiner (*Wiener klinische Wochenschrift*, Vienna) advocate operating far into sound tissue, removing the capsule entirely, and not opening into the joint until the capsule has been completely detached from all the soft parts. To do this it is necessary to make an incision both in front and at the back of the joint. The connection between the trochanter major and the femur is left undisturbed. By this technic the unopened joint with the intact sac of the capsule is extirpated *in toto*. The leg is not much shortened, as the entire length of the femur from the tip of the trochanter is retained. They assume that the period of greatest painfulness coincides with an intra-articular abscess, and that this is the best time for the operation. Their experience with this technic has been very favorable.

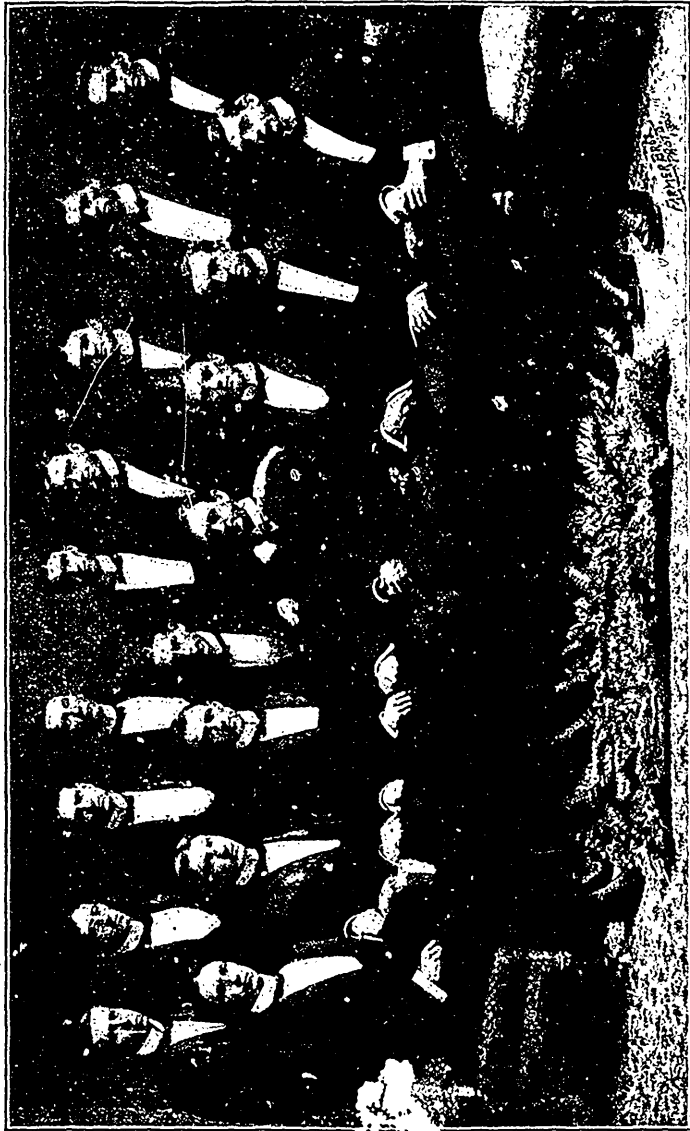
**Goat's Milk.**—A. J. Wood (*Intercolonial Medical Journal of Australia, Melbourne*, May) refers to the difficulty in all large cities of obtaining fresh milk for infants, and advises the use of goat's milk for bottle-fed infants. He states that a number of infants under his care have been fed through the whole summer on pure goat's milk, and have never had diarrhea. He says that the mother of one of the children reported that the child digested the milk without the least sign of flatulency when it was given warm from the goat, while the digestion was not so easy if the milk had stood for some hours. He says that most children can digest goat's milk undiluted, and that while taking it they gain in weight and development. He calls attention to the custom in Switzerland and in some parts in Italy of shaving the udders and allowing the babies to nurse directly from the goat.



**Atrophic Alopecia.**—L. Brocq, Lenglet and Ayrignac (*Annales de Dermatologie*, Paris, gives an illustrated description in this article of a new clinical form of atrophic alopecia, for which the term "pseudo-pelade" is adopted. It is a process of atrophy and sclerosis affecting the hair-covered regions of the body, especially the scalp, terminating in patches of baldness, smooth, of pseudo-cicatricial aspect. It seems to be closely allied to erythematous lupus and keratosis pilaris. The article is based on three cases.

**Reaction of Phenylhydrazin.**—P. J. Cammidge (*The Lancet*, London, July 1st) describes a modification of von Jaksch's phenylhydrazin test as follows: 0.5 gram of phenylhydrazin hydrochloride and 1.5 grams of sodium acetate should be dissolved by gentle heat in a few cubic centimetres of water in a test tube and then from 5 to 10 c.c. of the urine added. The mixture is brought to the boiling point and maintained there for three minutes with strong, and five minutes with weak, solutions of sugar. The test tube is then set aside to cool and the deposit examined for osazone crystals in five or ten minutes. A "knife point" of sodium acetate is added to 10 c.c. of the urine, then from 1 to 2 c.c. of 10 per cent. acetic acid, and 5 drops of pure phenylhydrazin are introduced. The mixture is heated in the water bath or over the free flame in the same way as when hydrochloride is employed. Cammidge also mentions Kowarski's modification of this test, which gives very satisfactory results and is more delicate. It consists in mixing five drops of pure phenylhydrazin in a test tube with ten drops of acetic acid, gently shaking and then adding about 1 c.c. of a saturated solution of sodium chloride. To the solid mass that forms are added from 3 to 5 c.c. of the urine, and the test tube is heated in the free flame for two minutes after its contents begin to boil. On cooling, the osazone crystals separate from urines containing 0.2 per cent of sugar in one minute, and from weaker solutions in about five minutes. In examining 100 normal urines Cammidge found that when heated in the water bath for an hour, four of them showed a crystalline deposit, while by boiling in a free flame for five minutes six specimens gave a positive result. Using the same methods, but shortening the period of heating to twenty minutes and two minutes respectively, exactly the same results were obtained, so that the mere time or method of applying the heat can not be relied on to differentiate glycuronic acid from the sugar. Cammidge describes in detail his further researches on this subject and concludes by saying that it is evident that in phenylhydrazin we possess a most useful reagent for enquiring into variations in the urine accompanying certain changes in the metabolism.

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# The Canadian Journal of Medicine and Surgery

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TORONTO, JANUARY, 1906.

NO. I.

## Editorials.

TO-MORROW.

We pause, as the book of nineteen hundred and five closes over, and, for the tenth time, we heartily wish our readers a Happy and Prosperous New Year.

Surely a decade is long enough to ensure a sincerity and security of feeling and good fellowship, and so the same old quill,

dipped in the same old ink-pot, in the same old office, grinds out, with a merry scratch, the words—"And many of them."

Coupled with our good wishes, may we again express our thanks to our subscribers, our advertisers; and so many do they both represent, that they have in a large measure enabled us to keep our first words of promise to the profession, and helped us to write indelibly "Success" as our banner word. As the old year is dying in the night, it seems a fitting time for remembrance, for rejoicing, and for resolution. As we contemplate the new paths of the new year, one persistent note seems to sing on, and re-echo, and our ears can only interpret in the sound the word—Work.

To make a medical journal interesting is not perhaps the easiest occupation in the world. Scientific fact must be set forth racy, often too much so, owing to lack of space. The truth must be frankly told, as it relates to the best ethical interests of the profession at large, no matter who feels the sharp edge of the lancet of justice. In emphasizing facts we often need severity and simplicity rather than efflorescence of language. We must be precise, often terse. In fact the medical journalist, like the village blacksmith of ancient poetic vintage, "must look the whole world in the face and fear not any man." We are proud of our Canadian physicians, and we look to 1906 to verify again their reputation, not only as knights of the scalpel, but in equal measure as Canadian knighthood in flower in the role of hosts to the members of the British Medical Association, which body is to grace Toronto with its august presence during the late summer. Let us one and all—

Varsity meds, Trinity meds,  
Meds of the old Rolph School;  
Toss up for beds,  
But say with bowed heads,  
"Messieurs, the whole house is yours."

Let us join in the hope that in 1906 the first sad will be turned for the foundation building of the new hospital, toward the completion of which the eyes of all our city physicians are turned with eagerness in their look. With much going on around us in the medical world, we pledge ourselves to try at least to chronicle the most interesting news, and be as up-to-date as possible. The mental strain of publishing even a medical journal is not a light,

easy task, not in the spirit of making much ado about nothing; but, realizing a certain aptness in their meaning, we take the liberty of quoting the celebrated Sir Henry Irving's words, pronounced at a press banquet: "I suppose there is no profession which makes such heavy calls upon the bodily and mental vigor of its servants as the profession of the journalist. Whoever he is, he must be always fresh and alert; whoever is content with the ideas of yesterday, the journalist must be equipped with the ideas of to-morrow."

W. A. Y.

### RAILWAY CASUALTIES IN THE UNITED STATES.\*

In studying the statistics of railways in the United States (Reports for 1903 and 1904 of the Interstate Commerce Commission) we have been particularly interested in the statistics of deaths and non-fatal injuries, attributable to railways, which occurred in the year ended June 30th, 1904, as compared with those occurring during the year ended June 30th, 1903.

The following table, compiled by the writer of this article from these statistics, shows the deaths and non-fatal injuries caused during the periods mentioned by railways in the United States, among passengers, employees and others, together with the increase or decrease of percentage under each head:

	1903	1904	Increase per cent.
Passengers carried.....	694,891,535	715,419,682	+ 3.
Number of employees....	1,312,537	1,296,121	- 1.26
Total killed.....	9,840	10,046	+ 2.09
Total injured.....	76,553	84,155	+ 9.93
Passengers killed.....	355	441	+24.22
Passengers injured....	8,231	9,111	+10.67
Employees killed.....	3,606	3,632	+ 0.72
Employees injured....	60,481	67,067	+10.88
Other persons killed....	5,879	5,973	+ 1.59
Other persons injured...	7,841	7,977	+ 1.73

Passengers killed in 1903 to passengers carried as 1 to 1,957,440 ;  
in 1904 as 1 to 1,622,267.

Passengers injured in 1903 to passengers carried as 1 to 84,423 ;  
in 1904 as 1 to 78,522.

An increased percentage in every item of the figures for 1904 will be noted, with one exception, the decrease of percentage being in the number of employees. The statistics show that 60 per

\* Report of the Interstate Commerce Commission, 1904, received through the courtesy of Surgeon-General Hyman, M. H. S., Washington, D. C. Accident Bulletin No. 12, through the courtesy of W. E. Burleigh, Esq., Asst. Statistician, Interstate Commerce Commission.

cent. of the fatal accidents and 58 per cent. of the injuries to passengers, in 1904, were caused by movements of trains, locomotives or cars, agencies over which the passengers had no control. Thus, of 441 passengers killed that year, 169 were killed by collisions, 93 by derailments, and 3 by parting of trains. Of 9,111 passengers injured, 3,521 were hurt by collisions, 1,457 by derailments, 129 by parting of trains, and 38 by locomotives or cars breaking down. Such deaths or injuries, to quote the words of Henry C. Adams, Statistician to the Interstate Commerce Commission, "stand as an indictment against the railways in the United States." The 176 deaths and 3,066 non-fatal injuries to passengers, caused by falling from trains, locomotives or cars; by jumping on or off trains, locomotives or cars; by being struck by trains, locomotives or cars at highway crossings, at stations, or at points along the track; or from other unspecified causes, would appear to be attributable, in many instances, at least, to the fault, negligence, or incapacity of the passengers killed or injured. With increased population and greater density of railway traffic, deaths and injuries from such causes, for which railways cannot be held responsible, must necessarily increase.

In estimating the responsibility for fatal and non-fatal injuries to the employees of railways, one cannot look at the question from a viewpoint, as if one were estimating loss of life or limb by railway passengers. While railway travellers are exposed to risks, different to and perhaps greater than those encountered in ordinary life, the employees of railways are necessarily exposed to still greater and more frequent risks. Then, "Familiarity breeds contempt," as occurred in the case of an experienced stationman at a Canadian depot, who, after setting the automatic coupler of a car, stooped down to investigate a fault in an air-brake attached to the car, and became so absorbed that he did not pay attention to the slow but gradual approach of the locomotive which he was to assist in coupling. When he finally sprang to an erect posture, he was caught between the jaws of the automatic coupler and fatally injured.

Of employees, 3,632 were killed and 67,067 injured. Of these, 1,206 fatalities and 2,260 non-fatal injuries occurred as the result of being struck by trains, locomotives or cars. Without a study of each case one could not apportion the blame for

such casualties. Trainmen, trackmen, switchmen, watchmen, stationmen, shopmen, telegraph employees, or other employees, may get in the way of moving trains, cars, or locomotives through no fault of the railway, and, in the exercise of their hazardous duties about the tracks, they often escape death or injury from this kind of accident by the merest chance. We notice that the greatest number of casualties of this kind (438 killed, 833 injured) occurred to employees in Group II. of railways, which comprises the States of New York, Pennsylvania, New Jersey, Delaware and Maryland. In this group the number of employees per 100 miles of line was 1,402, the most densely populated railway group in the United States. Have the railways, during the year covered by this report, been peculiarly unfortunate, or have they operated with greater disregard of life and limb than in the previous year? In the case of railway employees, the statistics for 1904 show 1 employee to have been killed for each 357 persons in the employ of the railways, and 1 employee injured for each 19 persons in the employ of the railways. The corresponding figures for 1903 were 364 employees for 1 killed and 22 employees for 1 injured.

Now, as shown in our table, there was, in 1904, a 1.26 per cent. reduction in employees, together with a 3 per cent. increase in passengers. There was, also, though it does not appear in the table, an increase of locomotives, amounting in the United States to 2,872. Of this increase, 682 were passenger locomotives, 1,585 were freight locomotives, 552 switch locomotives. There was, also, an increase of 1,612 cars in the passenger service, as compared with the previous year, and an increase of 38,412 freight cars. This summary of cars does not include cars owned by individuals and private companies, on which the railways pay no mileage. It is strange, therefore, that in spite of the increase in locomotives, passenger cars and freight cars in 1904 fewer enginemen, firemen and conductors were employed that year than in 1903. With increased work and risk, these employees deserved an increase of pay, and they received it. More money was paid to every class of railway employees in 1904, as compensation, than in 1903. The excess amounted to \$42,277,395. The pay was good; but it does not seem reasonable to think that 52,993 enginemen were required to drive 43,871 locomotives in 1903, if 52,451 enginemen sufficed to drive 46,743 locomotives in 1904.

The reductions in the numbers of firemen and conductors are equally remarkable. One would say, either that too many engine-men, firemen and conductors were kept in the employment of the railways in 1903, or else, that the employees of these classes, who worked for the railways in 1904, were overworked. Fatigued from overwork, and stupefied by loss of rest, employees were likely to do poor work. Thus in statistics of 1904, "Collision 17, Class B., passenger and freight train; 2 passengers killed and 25 injured." The cause was that the freight train, waiting on a side track, ordered to meet 3 trains, was started out after 2 trains had passed. Conductor, engineman and flagman, while waiting, had slept, and on waking, assumed that three trains had passed."

It is clear that these employees were overworked. Enginemen, firemen and conductors were overworked in 1904 owing to the demands of the railway service. As passenger trains are scheduled to run at a fixed time, the trainmen who take them do not usually suffer from delays. Freight trains keep dodging in and out at sidings, endeavoring to supply the requirements of manufacturers and merchants, and their trainmen suffer long delays. Now, trainmen are paid by the 80 miles, the 100 miles, or the 120 miles, and not by the day. The engineman and fireman, of a freight train just returned after a long run, may be called on to take out another freight train; and, just to make good mileage, or to please the railway company, these hardy poor fellows try to perform their onerous duties, when they are physically unfit to do good work.

Would it not be a safer and a more humane practice, if the trainmen of freight trains were paid by the day, whether on duty or off, the railway companies being responsible for the physical and mental fitness of the trainmen?

Common laborers in 1904 suffered a decrease in numbers of 7,865; trackmen, exclusive of foremen, of 11,670; switchmen, crossing-tenders and watchmen, of 3,699. Now, laborers and trackmen help to keep railway tracks in good condition, repairing defects and removing obstructions, thereby preventing derailments due to defect of roadway, to unforeseen obstructions, malicious obstruction of track, etc.

The statistics show that, in 1904, there were in the United States 4,855 derailments, as compared with 4,476 in 1903, an



increase of 8.46 per cent. Of these 4,855 derailments, 866 were due to defects of roadway, 336 to unforeseen obstructions, 110 to malicious obstructions of track. The numbers of derailments for 1903 under these heads are: Derailments due to defective roadway 821, to unforeseen obstruction 277, to malicious obstruction of track 71. Evidently a full force of laborers and trackmen would have helped to prevent some of the derailments which occurred in 1904. Therefore, the railway companies who reduced the numbers of their laborers and trackmen in 1904 must be held responsible for many of the fatal and non-fatal casualties attributed to derailments during that year.

Of the 5,973 fatal casualties sustained by other persons, 5,105 were reported to be trespassers. Of the 7,693 injured persons in this category, 5,194 were trespassers. Railways are not legally responsible for the deaths or injuries of trespassers. By far the largest number of trespassers who were killed, 3,557, lost their lives: by being struck by trains, locomotives or cars, at points along the tracks other than stations or highway crossings, so that it is probable that many of these unfortunates were members of the great army of tramps, who wander along the tracks and secure railway transportation without paying for it.

In our next number an editorial giving statistics of railway casualties in Canada for the year ended June 30, 1903, and for the year ended June 30, 1904, will appear. J. J. C.

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#### A PURE MILK SUPPLY.

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THERE is no doubt that, if raw milk could be had fresh and unadulterated, and as often as it was wanted, it would require no boiling. The value of sterilization, as a means of reducing the risk of infective diseases, is undoubted, and, for this reason, it is used by private companies, and even by municipal authorities, in the preparation of modified milk for the infants of the poor. As is well known, however, sterilized milk may produce scurvy in hand-fed infants, and one such result from the municipal sterilized milk has been reported by H. Ashby (*B. M. J.*, Feb. 27th, 1904). It has been suggested, also, that the so-called "sterilization" of milk is apt to give a false sense of security, for actual freedom from bacteria is not always attained by it. Robertson and Moir

(*B. M. J.*, May 14th, 1904) examined a large number of bottles of supposed sterilized milk, supplied for infants by the municipal authorities of Leith, and found that only 15 per cent. of the bottles contained really sterile milk. According to Lesperance, whose article on the soluble ferments of cow's milk appeared in this journal in May, 1904, milk that has not been treated beyond a natural temperature is more easily digested, and gives greater vitality to the system, whereas milk which has been heated to a high temperature (176 deg. F.) produces "soft muscles, a generally irregular development, and a weakened resistance to infectious diseases." The difference, he thinks, is due largely to the destruction of the soluble ferments of cow's milk, which takes place when it is heated to a high temperature.

In endeavoring to secure a perfect milk supply, a municipal sanitary authority has to choose between the devil of infectious disease and the deep sea of impaired or arrested nutrition in infants. As long as cows are tuberculous, or scarlet fever and diphtheria are met with in the houses, about the clothing, and on the hands of the dairyman, and as long as typhoid stools are mixed with the water which is used for washing dairy utensils, so long will strong suspicion attach to the use of raw milk.

But it may be urged, that an annual inspection of dairies would cause the removal of the more flagrant sources of disease from milk, and secure a good supply. An annual, or even a quarterly inspection might answer in the cases of scrupulous dairymen; but would be insufficient in the cases of careless or unscrupulous dairymen.

For instance, the following appears in the Bulletin of the Chicago Health Department, for the week ended November 4th, 1905: "A total of 233 dairies, shipping 8,944 gallons of milk daily to the city, from 4,515 milch cows, were inspected during October. In 199 dairies the milking was done under proper sanitary conditions of cleanliness; in 231 the milk was properly strained; in 225 it was properly cooled; 207 herds were in good condition; 24 in fair condition, and 2 bad. On only one farm was 'wet malt' being fed, and 230 gallons of this milk was destroyed." If the inspection were merely an annual affair, many of the excellent conditions mentioned in this excerpt would cease to exist.

Then, even if the milk supplied by a dairyman is good, it may be sophisticated after it passes into the possession of the milk dealer. Thus, in Chicago, owing to the destruction or injury of apparatus used in milk analysis by the laboratory officials of Chicago, milk inspection was cut down 40 per cent. after September 2nd; from a monthly average of 1,506 samples during the previous eight months to an average of 894. "The unscrupulous milk dealer took advantage of the neglect of analysis, with the following results: Of 375 samples analysed, 5.08 per cent. were below grade; one sample contained 18.8 per cent. of water, or a gallon and a half of water to the eight-gallon can of milk. Three samples contained formalin in poisonous quantities. Of 127 samples, brought to the laboratory by private individuals, 7.7 per cent. were below grade. Six weeks ago the per cent. of samples below grade was 2.08. No wonder the babies' death-rate is increasing."

All the defects and impurities found in milk, however, are not traceable to dairymen who neglect the ordinary rules of hygiene, or to unscrupulous milk dealers. Many honest dairymen resent interference with their antiquated technic, and hold that the requirements of dairy inspectors are rather finical than wise. The following analysis of milk taken from cows kept in ordinary barns, the conditions as to cleanliness being about what obtains on the average farm, is taken from an article by W. H. Park (*Journal of Hygiene*, July, 1901, p. 391):

	Bacteria	
	Winter	Summer
Milk, shortly after milking.....	16,650	30,366
Milk, after 24 hours.....	31,000	48,000
Milk, after 48 hours.....	210,000	680,000

Such growths of bacteria in milk intended for human consumption can in no way improve the milk, but must seriously affect its wholesomeness. To avoid them the means are simple: cleanliness everywhere and low temperatures; cleanliness of the cow's exterior, of the stable, of the milkers and their clothing; of all vessels employed, milk pans, bottles, etc., and of the places where the milk is stored—in fact, as someone has epigrammatically expressed it, "sterilization of the cow and pasteurization of the dairy." Such methods of retarding the growth of bacteria in milk are superior to the use of boric acid, borax, salicylic acid,

carbonate of sodium, chromates and formalin. These substances are by no means wholly innocent in their action on the human system, even in very small quantities; and, moreover, it is impossible to control the amount added by a single individual, or to be sure that successive handlers have not contributed additional doses.

Raw milk, obtained by proper methods, is superior in nutritive value to a pasteurized milk. It may be added that, incidentally, the inspection of dairies would help to eliminate unsuspected sources of infectious disease in dairy farms, which would be helpful to the owners of these farms.

J. J. C.

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#### PROFESSOR MACALLUM'S LECTURE ON AFRICA.

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THE at-home given by the Dean and the Faculty of Medicine on Saturday, December 9th, in the Medical Building of the University of Toronto, was a very satisfying affair. After a few introductory remarks by the Dean, Dr. Reeve, Professor A. B. Macallum proceeded to give his lecture, "With the Camera from the Cape to the Zambezi Falls." The lecturer premised by stating that, as a member of the British Association, he had partaken of the hospitality of the Cape Colony Government last summer, and that during a five weeks' trip he had enjoyed better opportunities for studying the physical conditions of the land and the social status of the native inhabitants than falls to the lot of the average tourist during a twelve months' visit.

Having taken over 300 films, subsequently developed by himself en route, he was well provided with material, which was described to the audience in an interesting and instructive manner.

Perhaps the most attractive bits of African scenery shown were the views of the Zambezi Falls. Photographs of Bushmen, Zulus, male and female, Matabeles, and other natives of Africa, were shown. Some of the natives were pretty tall, but an ostrich, the photo of which had been taken at a station in Darkest Africa, topped them all. The lecture had all the freshness of first-hand observation, made by a trained observer. Professor Macallum evidently does not think that morality depends on a redundancy of clothes, for he gave high praise to the purity of the Zulu women,

whose fine figures, in keeping with the custom of the country, were almost nude.

The passion of the African for sweet sounds was illustrated by a picture showing a native contrivance made of beer bottles arranged horizontally and covered with a sounding board, which, when struck with little sticks, gave forth musical sounds, as in the performance on musical glasses. Another photo showed a brass band, composed of natives, who had been taught by the Jesuit Fathers at the Zambezi mission. The lecturer stated, that these native musicians had given some very creditable performances in presence of the visitors.

Professor Macallum's lecture contains the nucleus of a very readable book.

After the lecture refreshments were served to the guests, the Dean and Faculty of Medicine showing themselves to be very capable hosts.

J. J. C.

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#### EDITORIAL NOTES.

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**Esperanto, a Universal Language.**—The study of Esperanto, an auxiliary language, composed in 1887 by Mr. Zamenhof, of Warsaw, has made considerable progress, and now bids fair to be employed in future international congresses. It is said to be a masterpiece of simplicity and clearness. Its grammar contains only sixteen rules, to which there are no exceptions, and is easily learned. In a few hours its mechanism can be mastered so that one can read it with the assistance of a dictionary. It is even said that with three or four months' practice one can understand, speak and write Esperanto. Differences of pronunciation peculiar to different languages will not prevent people from understanding each other when speaking Esperanto. Owing to the selections made of the roots of words, to the composition of the alphabet, from which letters difficult of pronunciation for certain nations have been eliminated, and owing to an absolutely phonetic method of spelling, Esperanto is pronounced by everyone in the same way, the only differences observed relating to the quantity (length or shortness) of some vowels. Quite a number of European scientists have devoted thought and energy to the propagation of the new language, and already a considerable library is at the disposal of

the Esperantists. The works of Homer, Virgil, Shakespeare, von Leibnitz, Molière, Goethe, de Maistre, Pouchkine, Tolstoi, and others, have been translated into Esperanto. Every month several reviews, published in different European countries, are written entirely in the new language. A scientific review in Esperanto, called *Internacia Sciencia Revue*, in which medical articles appear, is published by Hachette, Paris, and a medical periodical in the same language is announced in Russia. At a congress of Esperantists, held in October, 1905, at Boulogne-sur-mer, over fifteen hundred persons, French, English, Russians, Germans, Swedes, Norwegians, Italians, Spaniards, Poles, Hungarians, Turks, Japanese, Chinese, Portuguese, and others, took part in the business of the meeting, interchanging ideas and conversing familiarly together without the services of interpreters. At one of the evening meetings, Molière's "Marriage Forcé" was given in Esperanto by a troop composed of the following: Sganarelle and Geronimo, French; Dorimene, Italian; Alcantes, Belgian; Alcidas, German; Licaste, Norwegian; Pancrace, English; Marphurius, French-Canadian; one of the gypsies a Swede and the other a Russian. G. V., who gives this interesting account in *La Presse Médicale*, states that all the fine points of the comedy were brought out in Esperanto before an audience of Esperantists, thus giving a convincing proof that the study of this auxiliary language is of the greatest interest to civilized people the world over.

**Potassium Permanganate in the Prevention of Infection of Dust-laden Wounds by Tetanus.**—Leonard Rogers, M.D., I.M.S. (*British Medical Journal*, November 11th, 1905), mentions the applicability of permanganate of potash, as a powerful oxidizing agent to overcome the infection of tetanus in dust-laden wounds. He infected rats with the dust of Calcutta streets, which some previous experiments of Major Drury's had shown will usually produce tetanus in four or five out of every six rats. Experiment 1.—Twelve rats were chloroformed, and a good pinch of dust, taken up with the finger and thumb, inserted under the skin of the back. In six of them, a few crystals of permanganate of potash were inserted at the same time, the remaining six serving as controls. Five out of these six died of tetanus, the organism being found in the wounds, but the sixth remained well. Of the six with the permanganate in addition, five remained well, and one

died of tetanus. This was a very severe test, as the amount of dust inserted was very large for so small an animal, and the results were highly encouraging. Experiment 2.—Twelve rats were chloroformed, and a number of abrasions and cuts down to the muscles were made in one thigh, and street dust freely rubbed in. Six untreated rats served as controls. In three more the wounds were washed with a strong solution of permanganate half an hour after the dust had been applied, and the other three were similarly treated after one hour had elapsed. These six treated animals all recovered, and the wounds healed rapidly, without sloughing or other trouble. Of the six controls, four died of tetanus, the bacilli being found in the wounds, and one of staphylococcus septicemia. These results, as far as they go, show that permanganate of potash exerts a powerfully preventive effect against the tetanus infection in dust-laden wounds, and indicate, that this drug may be safely and profitably used in this class of cases in the absence of immediate medical assistance. Even in the hands of physicians, the difficulty of preventing tetanus with certainty, by careful antiseptic cleansing of dust-infected wounds, is very great. The propriety of applying crystals of permanganate, or a strong solution of the salt, to the recesses of a suspected wound, will therefore appeal to any surgeon, owing to the fact that the oxidizing effect of the drug would antagonize a bacillus, so markedly anaerobic as is the bacillus of Nicolaier.

**The Filtration of Public Water Supplies.**—Bacteriological and chemical analysis of public water supplies, pursued at the laboratory of the Ontario Health Board, frequently reveal pollution by animal excrements. This discovery emphasizes the necessity of improving the conditions surrounding these water supplies before they are distributed. If a water supply could be protected at its source, subsequent filtration would seem to be unnecessary. But, even when the gathering grounds of a water supply are protected: by the purchase of adjoining fields from private owners, and the removal of barns, dwellings, etc., from the neighborhood of the supply: by keeping fences surrounding the supply in good repair, pollution may creep in by animal excreta. Harrington sums up the case very neatly, saying, "The ideal course is protection at the source, followed by filtration before distribution. This is the method now adopted by the authorities of a number of

cities in Europe." There is every reason to believe that, with the growth of the system of preventive medicine, similar methods will prevail in Canada. As, however, in many instances, adequate protection of a water supply derived from a lake or large river cannot be accomplished, at the source of the supply or along its course, the only alternative is to purify the polluted supply by filtration before it is distributed. The object of all filtration of water is purification. This purification, wherever necessary, should be carried out by the municipal authorities. In reference to methods of water filtration, a committee of the American Public Health Association reported as follows: "There are two general methods of filtration, which have shown their practicability, namely, the English method of slow sand filtration, and the American method, employing rapid mechanical filters. Each of these methods has its distinct advantages for particular cases, as well as its distinct disadvantages for others. For those waters which never possess more than a slight or moderate amount of turbidity, or dissolved vegetable color, the English method of sand filtration is somewhat more efficient, and, as a rule, it is slightly cheaper for such waters. For those waters which for long periods of time contain excessive quantities of either finely-divided clay or of dissolved vegetable matter, there is now no practicable method of purification without the use of coagulant and subsiding basins. In such cases the American method, as a rule, yields somewhat more efficient and economical results. In Ontario there is no filtration plant modelled after the English method. At St. Thomas, Ont., mechanical sand filtration of the water supply, through Hyatt filters, has been employed for many years, with excellent results, the polluted water of Kettle Creek being transformed, after filtration, into wholesome, potable water.

**Is Christianity Inferior to Islamism in the Matter of Temperance?**—Dr. Emin Farady Khan published at Lyons, in 1904, a thesis entitled "Hygiene and Islamism," which he dedicated to H.I.M. Mouzaffer el Dine, the Shah of Persia. He shows the close relations which exist in the East, and particularly in Persia, between the laws of the Koran and the hygienic customs of the Mussulmans. He proves that fermented liquors, which are extensively used in Europe, where they injure health and pocket, are absolutely forbidden by the Koran. Whosoever breaks the



rule of obligatory abstinence, or has simply had contact with a vessel containing alcohol, is considered unclean by a Moslem. The author relates that persons who have disobeyed this law dare not kiss their own children until they have purified themselves by liberal ablutions. Besides, a Persian who wants to get wine or arrack, has to contend with enormous difficulties. For, as none of his countrymen will subject themselves to the "disgrace" of selling it, the Persian is removed from all temptation to buy it. A man who wishes to drink alcohol in Persia is therefore obliged to obtain a supply in a clandestine way by night; besides, if caught he is liable to lose his reputation and even to fall into the hands of the police. Alcohol, prescribed by a physician, is tolerated in Persia; but it often happens that the patients themselves request their physicians not to order alcoholic drinks for them. Among the nobility the use of alcoholics is increasing. In Turkey, and particularly in Algeria, Mussulmans who do not obey the laws of the Koran are relatively numerous, especially in the wealthy classes. Prohibition is better observed in Egypt. Emir Khan shows the incontestable superiority of Mussulmans over Christians in the matter of abstinence from alcohol, and he attributes this distinction especially to the difference of their religions.

**To Obtain a Good Supply of Milk.**—Until the dairies, which supply milk are placed in hygienic conditions, sterilization and pasteurization of milk are quite proper, and should be rigidly carried out. Sterilization of the cow and listerization of the dairy would, of course, be preferable; but, in the absence of adequate inspection and regulation of the milk trade, both of which should be attended to every month by the local Board of Health, or the Board of Health of the municipality in which the products of the dairy are merchandized, these desiderata are very rarely attained. If milk is adulterated, it can only be guarded against: by the local Board of Health taking care to have the milk supplies of the neighborhood regularly analyzed. This would imply that a Medical Health Officer should be able to analyze milk, or that a special officer should be employed as an analyst of milk and other foods. Milk may be obtained from a diseased animal, or, being a favorable medium for the growth of micro-organisms, it may contain the germs of disease. The duty of guarding against these two sources of danger should rest with the

local Board of Health or the health officials of the municipality where the milk is merchandized. It should be the duty of these officials to supervise the milk trade of the district from which their supply is drawn, and to see that regulations like the following, which are almost identical with the regulations prescribed by the Local Government Board of England, are carried out: (1) All persons carrying on the trade of dairyman or purveyor of milk must be registered. (2) No building may be occupied as a cow-shed or dairy unless the lighting and ventilation—including air space—and the cleaning, drainage and water supply are such as are necessary and proper (*a*) for the health and good condition of the cattle; (*b*) for the cleanliness of milk vessels used therein; (*c*) for the protection of milk therein against infection and contamination. (3) No person suffering from an infectious disease, or having recently been in contact with a person so suffering, may take part in the production, distribution or storage of milk. (4) No water-closet, earth-closet, privy, cess-pool or urinal may be within, communicate directly with, or ventilate into any dairy or any room used as a milk-store or milk-shop. (5) It is not lawful to use a milk-store or a milk-shop for a sleeping apartment. (6) It is not lawful to keep swine in any premises used as a milk-store or for keeping cows. (7) The milk from cows suffering from cattle plague, pleuro-pneumonia, or foot and mouth disease, must not be sold or used for human food. (This last rule might be amended so as to include garget and tuberculosis.) (8) It shall not be lawful to feed "wet malt" to dairy cattle.

**Are Eggs Poisonous?**—Dr. Gustave Loisel shows (*La Presse Médicale*, 8 Novembre, 1905, p. 797), by repeated experiments, that the yolks of the eggs of hens, ducks and tortoises contain substances which, injected into the veins, under the skin, or into the general cavity of the body, cause death, more or less quickly, as the result of an acute intoxication of the central nervous system. Thus, powdered yolk of duck's egg, mixed with a 1 per cent. solution of table salt, and injected into the veins, killed 1 kilogram of rabbit with a dose 7 to 8 grammes, and when injected into the celoma (body cavity) 20 to 30 grammes. The yolk of the hen's egg is a little less toxic than that of the duck; on the contrary, that of the tortoise is much more poisonous, since, to kill 1 kilo-

gram of rabbit, it suffices to inject into the cœloma 5 or 6 cubic centimetres of the yolk of this egg. Dr. Loisel also shows, that the albumen of the egg of the tortoise is very toxic.

**Advantage of a Diet Free from Chlorine in Ulcer of the Leg.**— Paul Olivier Thèse, Paris, 1905 (*La Presse Médicale*, 8 Novembre, 1905, p. 728), contends that renal, cardiac or phlebitic edema, accompanying ulcer of the leg, is favorably modified by a diet free from chlorine, which thus permits a more rapid cicatrization of the ulcer. He studied the results of this treatment in five patients with varicose ulcers, who were under the care of M. Thibierge. All other things being equal, he showed that one week of the chlorine-free diet sufficed to cause the disappearance of the edema, and, under these conditions, cicatrization of the ulcers was about complete in twenty days, which is a shorter time than surgeons observe after the greater number of the treatments tried in these cases. Although the number of the cases observed is small (five), the conclusion drawn from the facts is that the chlorine-free diet acts on varicose edema, but only influences the edema. Edema which accompanies the ulcer being evidently a cause of delay in cicatrization, a diet free from chlorine ought to be considered as an important adjunct of other methods of treatment, particularly compression and rest.

J. J. C.

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#### PERSONALS.

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DR. W. J. FLETCHER, of Euclid Avenue, has moved to his new house at the corner of Euclid Avenue and College Street.

DR. J. T. FOTHERINGHAM has moved from Carlton Street to 20 Wellesley Street, the handsome house he recently built for himself.

DR. R. J. WILSON, of Bloor St. West, has been appointed by the Whitney Government one of the License Commissioners for the City of Toronto. Congratulations, Bob, from your many college chums of nearly twenty years ago.

WE were pleased to hear recently, by letter, from our confrere, Dr. Charles O'Reilly who, on November 5th, was resting in Brighton, England. Dr. Brefney has just returned from a delightful trip to South Africa, and was doing some special work in London prior to sailing for India. Dr. and Mrs. O'Reilly expect to be back in Toronto this month.

# Obituary

## DEATH OF DR. JUKES.

AUGUSTUS JUKES, late Surgeon-General of the Royal North-West Mounted Police, who died on December 3rd last, in Vancouver, was known in Toronto many years ago. His eldest son, Lieut. Wm. Jukes, of the Royal Navy, who distinguished himself in the Zulu war, was drowned at Gibraltar while trying to save a comrade. Dr. A. J. Johnson is a nephew of deceased.

## DEATH OF DR. WILLIAM GEDDES STARK.

ON December 12th, at his residence, Secome, Pa., U.S.A., after a short illness, from pneumonia, William Geddes Stark, M.D., M.O.C.P. & S., aged 63. Son of the late Rev. M. G. Stark, A.M., Dundas, Canada, and beloved brother of Mr. Robert Stark and Miss M. A. Stark, of Toronto, and Mrs. Middlemiss, of Ingersoll.

## DEATH OF DR. ARNOTT.

THE death of Dr. Wm. J. Arnott, one of Berlin's leading physicians and best known citizens, took place on December 12th, after a brief illness. He suffered an attack of cerebral meningitis on the Monday previous, and became unconscious during the night, and remained in that condition. The deceased was born in Simcoe county in 1862, and at an early age commenced to teach school. In 1889 he entered Trinity College, Toronto, and graduated in 1893. He then came to Berlin, and built up a large practice. Three years ago he opened the Arnott Institute for Stammerers in Berlin. At the time of his death he was a public-school trustee, President of the Berlin Musical Society, and President of the Berlin Conservative Association. Deceased is survived by his widow, the daughter of Mr. F. Krug, Tavistock, and two small children. The funeral took place on the 14th ult.

## *News of the Month.*

### INTERNATIONAL MEDICAL CONGRESS.

THE Fifteenth International Medical Congress will assemble at Lisbon, Portugal, during the week from the 19th to the 26th of April, 1906. The official language of the Congress will be French, but in the general sessions as well as in the meeting of sections in addition to French, English and German will be made use of. There will be in all seventeen sections.

The President is Conz Costa Alemao, and the Secretary-General is Professor Miguel Lombarda, of Lisbon, to whom all general communications regarding the reading of papers may be addressed.

Most of the countries will be fully represented at the Congress through the National Committees. For the United States, Dr. Jno. H. Musser, of Philadelphia, is President, and Dr. Raymon Guiteras is Secretary.

The Executive Committee of the Canadian Medical Association has appointed Dr. A. McPhedran as President and Dr. W. H. B. Aikins as Secretary for Canada, to act in conjunction with the International Committees of the Congress.

It is desirable that the Canadians who propose to attend this Congress should put themselves in communication as soon as possible with either of the above named, and it is hoped that Canada will have a large representation at this meeting as it will be the first International Congress at which Canada will have national representation.

### RECEPTION AND AT-HOME AT THE WOMEN'S MEDICAL COLLEGE, TORONTO.

AT the Normal School, on November 23rd, the At Home of the Medico-Literary Society of the Ontario Medical College for Women proved quite a brilliant affair. The corridors and galleries of the old place, when well lighted and decorated, as they were for this occasion, makes a spacious setting for such a goodly crowd as was present that evening.

At the concert which took place first in the theatre, Dr. Nevitt, Dean of the College, presided, and a fine musical programme was

given, in which Miss M. Evans, Miss D. Blair, and Miss E. Robinson took part, special appreciation being shown for the playing of the violincello. Mayor Urquhart, Dr. Nevitt and Dr. Wishart gave short addresses.

Later on the guests were welcomed in the upper galleries by a reception committee which included Dr. Stowe-Gullen, Dr. Jennie Gray, Dr. Ida Lynd, Mrs. Sweetman, Mrs. (Dr.) Gebo Wishart, Mrs. R. Barrington Nevitt, Mrs. Cleland, Mrs. T. F. MacMahon, and Mrs. G. Chambers. In the moving crowd of well-dressed people the students of the Women's Medical College in their black students' suits, made a very distinguished appearance, and very becoming the gowns were. An excellent programme of music, rendered by an orchestra in one of the galleries, was an additional attraction to the young people.

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#### DR. WM OSLER'S MOTHER REACHES THE WONDERFUL AGE OF ONE HUNDRED YEARS.

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Mrs. OSLER, of Wellesley Street, widow of the late Canon Featherstone Osler, has just entered on the 100th year of her life. Rev. Mr. Osler and Mrs. Osler came to Canada three-quarters of a century ago. Mrs. Osler is in good health and in the possession of all her faculties.

Four of her sons have won great distinction in different walks of life. Dr. Wm. Osler, Regius Professor of Medicine at Oxford University, is the recognized leader of the English and American medical profession. Mr. E. B. Osler, M.P., Mr. Justice Featherstone Osler, of the Court of Appeal, are the two prominent remaining sons. The late B. B. Osler, one of the foremost men of the Canadian bar, was also a son, and the late Mrs. Williamson, President for Toronto Diocese of the Woman's Auxiliary, was a daughter.

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#### MEDICAL STUDENTS ASK GOVERNMENT TO ENDORSE THE DOMINION REGISTRATION BILL.

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A DEPUTATION of medical students, representative of McGill, London, Queen's and Toronto Medical Colleges, interviewed the Ontario Government on November 25th with regard to the Dominion Registration Bill, as introduced by Dr. Reddick. Petitions had been circulated within the various years, which were largely signed, with a view to showing the Government the general interest in the subject among the student bodies.

The Roddick Bill, as is now well known, proposes that fully qualified physicians in any Province shall be allowed to practice in any other Province as well. The medical students endorse this measure, and ask the Government and Legislature for their support and ratification.

The members of the deputation consisted of Mr. Munro, McGill; Dr. Etherington, Queen's; Mr. Reid, London; and Messrs. Kendall and McMillan, Toronto.

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#### ITEMS OF INTEREST.

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**Bailliere, Tindall & Cox's Books.**—The firm of J. A. Carveth Co., Ltd., 434 Yonge Street, Toronto, has been appointed sole agents for the Dominion of Canada for all of the medical books published by Bailliere, Tindall & Cox, of Covent Garden, London, England. This is an exceedingly business-like step on the part of the English house, as it will mean that physicians in Canada can secure on a day's notice any book published by them. Orders can be placed through any bookseller in Canada, and they will be promptly filled.

**Digitalis in Renal Disorder.**—Digitalin (German, Merck) has been shown repeatedly by Henry Beates to be of marked superiority to all others. He long ago taught me to have confidence in its use even in chronic kidney disease, and I have used it, often in desperate conditions, with much satisfaction. The effects of digitalis can be safely measured and regulated, and at least ten years of experience in its use justifies the writer's confidence in this agent in threatening renal disorders.—J. MADISON TAYLOR, in *Med. Mirror*, September, 1905.

**Assistant or Accomplice?**—The designation "assistant" is distasteful to many men in the medical profession, who probably feel that one man is as good as another, and would be "a good deal better" but for the lack of opportunity. Benevolent, and it may be not altogether disinterested, diplomacy on the part of the principal sometimes seeks to avoid the parasitic stigma of "assistant" by the substitution of "colleague"; we have even heard the episcopal-sounding term "coadjutor" employed by courteous lay folk. It may be hoped, however, that the old lady of quality, quoted by Sir Mount-Stuart Grant Duff, did not quite mean what she said when, on being asked whether she had seen the doctor, replied: "No; but he has promised to send his accomplice."—*British Medical Journal*.

**Messrs. H. K. Wampole & Co.'s Removal to Perth, Ont.—** On the 15th of December last, Messrs. H. K. Wampole & Co. removed their main offices and laboratories to Perth, Ontario. The firm have erected there a splendidly and modernly equipped factory, where they will in future take care of their entire business for Canada and Newfoundland. The new factory is more than double the size of the one just vacated on Lombard Street, and with new facilities Dr. H. W. Buck, the genial manager, tells us that they will be able to look after their rapidly growing business with redoubled energy. For the convenience of their Toronto customers, the firm have opened a branch in the Jessop Building, No. 80 Bay Street, where telephone messages will receive prompt attention.

**Saunders' New Catalogue.**—We have just received from W. B. Saunders & Company, of Philadelphia, the widely known medical publishers, an attractive illustrated catalogue of their complete list of publications. It seems to us, in glancing through this catalogue, that a list of the Saunders' authors is a census of the leading American and foreign authorities in almost every branch and specialty of medical science. And new books are being added and new editions issued with a rapidity that speaks well for the success and progressiveness of the house. While comparisons are always odious, still we feel it but justice to say that, in the presentation of facts about the books listed that a probable buyer wishes to know, and also for beauty and durability of mechanical get-up, this catalogue is a credit to the house who publish it. We understand a copy will be sent free upon request.

**Basedow's Disease Treated with Anti-Thyroidin.**—In view of the many favorable results reported, there can be no longer any doubt that antithyroidin, first recommended by Moebius, is of real value in Basedow's disease. A. Alexander relates in detail the history of several cases relieved by him with the aid of this drug. The most evident objective symptom of improvement is gain in weight, but the nervous and cardiac signs, the exophthalmos, and the thyroid tumor were also affected favorably. Large doses should be given carefully, since a condition suggesting myxedema may result.—*Muench. Med. Woch.*, 1905, No. 29. Two cases of Basedow's disease have come to the observation of Dr. Morre that have been very much benefited by the use of antithyroidin Moebius. In one, 70 Cc. (2 1-3 oz.) were given in daily doses of 5 Cc. (75 min.), with the result that many of the prominent symptoms of Basedow's disease were on the wane after fourteen days of treatment. In the second case, the exophthalmos and the thyroid tumor disappeared altogether after the administration of a total amount of 80 Cc. (2 2-3 oz.) of antithyroidin.—*Reichs Med. Anzeig.*, 1905, No. 18.



# The Physician's Library.

## BOOK REVIEWS.

*The Historical Relations of Medicine and Surgery to the End of the 16th Century.* An address delivered at the St. Louis Congress in 1904. By T. CLIFFORD ALLBUTT, M.A., M.D., Hon. M.D. (Dublin), Hon. LL.D. (Glasgow), Hon. D.S.C. (Oxford and Victoria), F.R.C.P., F.R.S., F.L.S., F.S.A., Regius Professor of Physics in the University of Cambridge, Fellow of Gonville and Caius College, Hon. Fellow Royal College of Physicians of Ireland, and of the New York Academy of Medicine. London: Macmillan & Co., Limited. New York: The Macmillan Co. 1905.

This interesting work of 125 pages, comprising an address by so distinguished an author as T. Clifford Allbutt, will not fail to attract the attention of those interested in the early history of medicine and surgery. We found it a very interesting narrative, and, despite the many forgotten names, numerous footnotes and Greek quotations, we were forced to pursue the narrative to the end. It is beautifully written and worthy of a place in any medical library.

W. J. W.

*A Treatise on the Nervous Diseases of Children.* For Physicians and Students. By B. SACHS, M.D. Second edition, revised. New York: William Wood & Co. 1905

Sachs' book on "Nervous Diseases of Children" (first edition), issued ten years ago, has always been a favorite with the writer. During this time the work has appeared in German and Italian and is soon to appear in French. Writers of textbooks on medicine and pediatrics have shown their estimate of the work by quoting largely from it.

The book has been revised in every chapter and much new matter added, bringing it well abreast with the important advances made in neurology and the allied sciences.

The author's style is generally clear, but at times it lacks in perspicuity; it must be admitted that his accounts of the less common affections are often verbose and tedious. One is surprised to find the author tripping in the use of a term which is mixed English and Latin—"tendon Achillis" (page 269). Such slips of the pen, however, are not common.

It is surprising to note how much neurologists in general have to say of drugs and the electrical treatment of nervous affections, which really accomplish so little good, and how little regarding the orthopedic treatment, which opens in many cases the only door of hope for improvement. Sachs, however, has shown a much more fair and just appreciation of the facts and conditions as they exist in both particulars; for example, in describing the treatment of infantile spinal paralysis he gives a very fair and succinct account of what may be done by surgical measures and of the good results that so frequently follow, and on page 268 he admits that the use of electricity is at best of doubtful efficacy.

The publishers have done their work well. The book may, with the utmost confidence, be recommended as a leader in its own field.

B. E. M.

*A Manual of Diseases of the Nose and Throat.* By CORNELIUS GODFREY COAKLEY, A.M., M.D., Professor of Laryngology in the University and Bellevue Hospital Medical College, New York. Third edition. New York and Philadelphia: Lea Brothers & Co. 1905.

On former occasions we have spoken favorably of this work, of which a revised and enlarged edition now appears. As was to be expected from the personal interest taken by the author in diseases of the accessory sinuses, the article on that subject is perhaps the most interesting and the most instructive, but that is no disparagement to the rest of the book.

J. M.

*Physical Diagnosis; Including Diseases of the Thoracic and Abdominal Organs.* A Manual for Students and Physicians. By EGBERT LE FEVRE, M.D., Professor of Clinical Medicine and Associate Professor of Therapeutics in the University and Bellevue Hospital Medical College; Attending Physician to Bellevue and St. Luke's Hospitals; Consulting Physician to Beth-Israel Hospital; Member of the New York Academy of Medicine, etc. Second edition, thoroughly revised and enlarged. Illustrated with 102 engravings and 16 plates. Philadelphia and New York: Lea Bros. & Co. 1905.

The author gives us a work on physical diagnosis, dealing in Part I. with topographical and relational anatomy; in Part II. with the respiratory system; in Part III. with the circulatory system; in Part IV. with the abdominal organs; and in Part V. he gives illustrations showing examinations with X-ray.

There is no doubt that a study of the normal physical conditions of the thorax and abdomen through inspection, palpation, auscultation and percussion, is a necessary preliminary to the study of disease in the viscera of these regions by the same methods

of examination. The medical student should be trained to exercise his special senses of sight, hearing, touch, and smell, in estimating differences in objects, normal as well as abnormal.

Dr. Le Fevre gives a clear statement of the various rules applied in the diagnosis of the diseases of the regions mentioned above. The text is well written, but occasional errors in spelling are noticeable, *e.g.*, "valleux," "quadratus lumbarum," "tactus eruditus," "transversalis abdominus." Careful proof-reading should eliminate such blots from an otherwise irreproachable book. The printing and binding are excellent. J. J. C.

*Neurotic Disorders of Childhood.* Including a Study of Auto and Intestinal Intoxications, Chronic Anemia, Fever, Eclampsia, Epilepsy, Migraine, Chorea, Hystoria, Asthma, etc. By B. K. RACIFORD, M.D., Professor of Diseases of Children, Medical College of Ohio, University of Cincinnati; Pediatricist to the Cincinnati Good Samaritan and Jewish Hospitals; Member of American Pediatric Society, Association of American Physicians, etc. New York: E. B. Treat & Co., publishers, 241-243 West 23rd Street.

The above volume we have reviewed with great pleasure and profit. The subject is exceedingly interesting and the present treatise on it is fresh and fascinating.

It is logical to a degree and continually fortifies its positions by anatomical and physiological data. It is written in pleasing style, is well systematized, and is an exceedingly valuable addition to medical literature on the subject.

Part II. of the volume, in dealing with specific neuroses, mentioned above, is very good. In treatment it is particularly so, being based upon logical conclusions and clinical experience.

A. R. G.

*Practice of Medicine.* A Manual for Students and Practitioners.

By HUGHES DAYTON, M.D., Principal to the Class in Medicine, New York Hospital, Out-patient Department; Clinical Assistant in Medicine, Vanderbilt Clinic, College of Physicians and Surgeons, Columbia University. Series edited by VICTOR COX PEDERSON, A.M., M.D., Instructor in Surgery and Anesthetist and Instructor in Anesthesia at the New York Polyclinic Medical School and Hospital; Genito-Urinary Surgeon to the Out-patient Department of the New York and Hudson Street Hospitals; Anesthetist to the Roosevelt Hospital. New York and Philadelphia: Lea Bros. & Co.

This is another of the medical epitome series and is quite up to, and in many instances above, the average. The author has endeavored to give a complete history of each disease treated in

as concise a manner as possible, and he has succeeded remarkably well. In many diseases this would be quite impossible, and in these cases he has very wisely avoided any attempt to epitomize such subjects, for instance, as typhoid, tuberculosis, etc. The arrangement of the subjects is good, the classification being simple and easily followed, and altogether this little volume should be of the greatest possible value to a great many practitioners, particularly those who have not the opportunities of having a very large library. It will be found of universal value to the busy general practitioner.

A. J. J.

*Manual of Pathology.* By N. M. SOLE COPLIN, M.D. Fourth edition, rewritten and enlarged. Philadelphia: P. Blakiston's Son & Co.

The fact that this work has been out of print for about a year is evidence of its popularity. Dr. Coplin is a practical pathologist, well known for the fineness of his technical methods, and it is to be expected that this character should shine out in his book. Where he discusses methods, as in the earlier chapter and the appendix, there is nothing superfluous, but every point bears the imprint of practical experience. The matter is thoroughly up-to-date, and when we find that Schaudinn and Hoffmann's spirochaeti pallidu is fully described and illustrated we realize that the book must have been very recently rewritten.

The references to literature are carefully chosen, and such that they will be of value to those workers who have not a large reference library to consult.

J. J. M.

*The Medical Record Visiting List or Physicians' Diary for 1906.* New revised edition. New York: The William Wood Co., medical publishers.

Beginning with a calendar of half of 1905, all of 1906, and half of 1907, this handy little pocket visiting list gives us perhaps the best form of obstetric calendar, and one that has been in our hands for many years, and to which many of us owe our reputation for being able to fix definitely the date of approaching delivery. The maximum dose of all drugs as given by the mouth, both in the apothecary's and metric measure, takes up five or six pages, and is followed by solutions for subcutaneous injection and solutions in water for atomization and inhalation, with a few remarks as to the administration of medicine in different ways. Poisons and their antidotes, and what to do in emergency, with a description of artificial respiration, signs of death, hints on the writing of wills, etc., are all thoroughly and concisely worked out.

The daily list proper is so well and favorably known that it hardly requires any mention here. The charge for the week's

work, with a column for the page in the ledger, and special memoranda, fill up the table page. Besides special memoranda there is a place arranged in this book to suit those doing consultation practice which must serve a very good purpose. The records of vaccination and obstetric practice, winding up with a cash account, complete a volume which is well arranged, nicely printed, and well put together, and one that will be found of the greatest possible value to every medical practitioner.

A. J. J.

THE ALKALOIDAL CLINIC HAS CHANGED ITS NAME TO THE  
AMERICAN JOURNAL OF CLINICAL MEDICINE.

Drs. Abbott and Waugh, of Chicago, editors and proprietors of *The Alkaloidal Clinic*, send out the following announcement:

"With the January issue, in preparation, we change the name of *The Alkaloidal Clinic*, to one which more fully embodies the scope of our propaganda, namely, *The American Journal of Clinical Medicine*.

"We have added to our present strong editorial force (all of which is retained, and with no change in management, or any financial change whatever), Dr. Wm. J. Robinson, of New York City, who will conduct a department of 'Dermatology and Genito-urinary Diseases;' Dr. Emory Lanphear, of St. Louis, who will conduct a department of 'Surgery, Obstetrics and Gynecology;' and other departments will be added as arrangements can be made therefor.

"With this additional force, the make-up of the journal will be improved in many ways. The best minds in this country and Europe will contribute articles which will be of inestimable value to the general practitioner who is willing to learn and anxious to keep up with the times. Our platform is as broad as the world. We believe the physician should pluck the health-giving fruit, it matters not from what garden. Active principle therapy, surgery, synthetic chemistry, massage, electricity, serum therapy, hydro-therapy, radio-therapy, etc., etc., all of these offer us mighty weapons for our battle with the enemies of the human race, disease and death, and the new, enlarged, rejuvenated, and strengthened *Clinic* now called (as better indicating its scope), *The American Journal of Clinical Medicine*, will include all these weapons in its armamentarium. It will give its readers all that is best in medicine, all that is best in the literature of the world, all that is most helpful, most practical.

"The underlying principle of our great work is to safeguard the medical profession, to help them to higher planes of practice, to greater personal success, to bettered conditions in every possible way.

"We are opposed to quackery, however and wherever it appears. We are opposed to proprietary advertising to the laity against the medical profession, to the detriment of the people.

"We are opposed to the secret nostrum and the rum remedy, decriing their exploitation to the profession, and more especially to the people, as a body-wrecking, soul-destroying crime that should be suppressed.

"We believe in and stand for the honest doctor and the honest pharmacist; their interests are mutual, and we decrie all attempts to estrange them.

"We are fully alive to the great awakening of the public conscience now going on, proposing to stand on the very firing line of the movement for professional betterment and the public good, never taking a back step till a complete victory is won, and there we'll stick, too. We shall appreciate your co-operation."

*Surgical Aspects of Digestive Disorders.* By JAMES G. MUMFORD and A. K. STONE. New York: Macmillan & Co. Toronto: Morang & Co. 1905. \$2.50 net.

This is a good book. Like certain other good ones, such as Ashby and Wright on children, and Fowler and Godlee on the chest, it is the result of the joint labors of a physician and a surgeon.

Experimental surgery, in the new and splendidly equipped Medical Department of Harvard University, is receiving its fair share of attention, and in some degree this book is the outcome of good work being done there. The technique of a number of operative procedures has been notably improved, and some original expedients are presented for our trial and judgment. That patients by the thousand, suffering from intestinal indigestion and chronic appendicitis, are being cured of both conditions by epityphlectomy is known to every practical surgeon. We do not need to spend time in attempting to discover which diseased condition stands in a causative relationship to the other; it is sufficient that by an operation, the safest in abdominal surgery, both can be cured.

A defining of the limits of useful medical treatment in various diseases of the digestive organs, and an attempt to determine what surgery has to offer when such treatment fails, may be said to be in large part the object of the work before us. In it many new lines of thought and of investigation are opened up. The authors at times follow trails beyond when they have been blazed out, but, in the judgment of this reviewer, they never lose their way, and whether they are off or on the beaten track, we can ill afford to ignore the work they are doing.

N. A. P.