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## Original Communications.

*A Résumé of the present state of our knowledge of Hæmophilia.* By F. J. AUSTIN, M.D., C.M., L.R.C.P.E., L.R.C.S.E. Read before the Medico-Chirurgical Society of Montreal, (on the 21st May, 1875.)

Hæmophilia is the name now generally employed to express that particular form of the hæmorrhagic Diathesis, which is distinctly congenital, nearly always hereditary, and frequently accompanied by a tendency to pain and swelling of the joints.

It is characterized by an exceedingly uncontrollable tendency to hæmorrhages, either spontaneous, or upon the slightest wound or abrasion of the skin, and the difficulty experienced in arresting the flow of blood. But this hæmorrhage must be not only obstinate and prolonged, but must be also Congenital in order to mark the case as one of Hæmophilia.

A Hæmorrhagic Diathesis or tendency to hæmorrhage, may develop itself in young and previously healthy persons, from exposure to defective Hygienic conditions, and disappear on a return to a state more favourable to health; or sometimes without any apparent hereditary taint this diathesis may show itself during adult life and remain during life.—

A hæmorrhagic tendency frequently does appear in the course of certain diseases, as Purpura, Scurvy, Cyanosis, Hepatic, Renal, Splenic, and some forms of Cardiac disease and in plethoric and anemic conditions of the system; this tendency may even last for years, but in Hæmophilia it is congenital or almost so, not necessarily attended with any organic disease, develops itself in infancy, and usually continues as a prominent symptom throughout the life of the unfortunate sufferer.

Our standard text books on medicine and surgery, do not devote much space to this subject, and with a few exceptions give rather an incomplete and cursory description of the disease, in some cases making statements which are not fully born out by the experience of those who have made a study of the disease, some of them doing little more than mention that the Hæmorrhagic Diathesis is sometimes said to be hereditary.

This summary disposal of the subject probably depends on the fact, that although numerous cases of uncontrollable hæmorrhage, both spontaneous and traumatic, have been recorded by English observers, their frequent hereditary origin was not noticed until comparatively recently. In Germany however, where the disease appears to be more frequent than

in other countries, possibly from the fact that having been first recognized and studied by the German physicians, it has been more prominently brought forward; its hereditary origin has been carefully traced through whole families for several generations.

The disease is by them called Hæmophilia, and those subject to it are commonly and expressively styled "Bleeders."

I much regret that my inability to read German has restricted my observations to the isolated cases, and short fragmentary articles on the subject to be found in the English Medical periodicals and text books, but chiefly to the admirable Treatise on Hæmophilia by Dr. Wickham Legg, Casualty Physician to St. Bartholomew's Hospital, from whose work I have largely drawn, in fact Dr. Legg is, as far as I know, the only English writer who has taken the pains to scientifically collect and classify the history and phenomena of the disease.

That the disease is, in nearly all cases hereditary, is now generally acknowledged.

That it may arise *de novo* is still undecided, cases are recorded in which no hereditary taint could be traced, but these cases are open to doubt, unless it can be proved that the predisposition had not previously existed in the family, because as we will see presently it may remain latent for many years.

Then again, we must have all found how difficult it is, especially amongst the poorer classes, to trace the family history of a case even as far back as the parents, to say nothing of the grand parents.

It has been thought by some, that the disease may arise from the intermarriage of relations, grounding their opinion on its prevalence among the Germans and Jews, amongst whom the marriage of cousins is not discountenanced.

There are several curious phenomena regarding the influence of sex in reproducing and propagating the disease. It was at one time supposed that the male members of "Bleeder" families only were affected, further research has shown this to be unfounded; but it appears that in females the phenomena of the disease are less marked, and of a lower degree of intensity, usually not making their appearance until the age of puberty; it then manifests itself, not as a rule by excessive and uncontrollable hæmorrhage when wounded, but by spontaneous hæmorrhages menorrhagic and post partem hæmorrhages and to ecchymoses on slight injury.

A most remarkable feature of the disease is, that although the hereditary taint may only exhibit itself very slightly, in a woman belonging to a "Bleeder"

family, or even be quite latent, so much so that she may appear healthy and marry a perfectly healthy husband, yet she possesses in a high degree the faculty of transmitting the disease to her male children, who are almost sure to inherit it from her; even more surely than when the predisposition is on the paternal side.

Tanner in his work on the Practice of Medicine, says, "this form of the hemorrhagic Diathesis is equally manifested in male and female children though in adult life men seem to suffer more than women." On this point, Grandidier, who has devoted much time and study to the subject, state that of boys and girls affected, the proportion was about eleven of the former to one of the latter; that in girls it is rarely well marked, and the danger to life is much less; that in fatal cases the bleeding was generally from the genital organs; one case is recorded of fatal hæmorrhage from rupture of the hymén.

The male children of a woman in whom the symptoms of Hæmophilia are well developed, do not appear to inherit the disease in a more marked degree, than those of a woman in whom the disease is latent.

In the article on the Hæmorrhagic Diathesis in Holmes' System of Surgery, the writer, referring to this subject, says: "Men having the hæmorrhagic tendency who may marry healthy wives, do not appear to convey the tendency to their offspring." This though true to a certain extent does not appear to be the rule. There are cases on record where the disease was transmitted direct from father to son, the father not being a Bleeder himself, but having brothers who were.

It is stated that both the male and female members of a Bleeder family, who are exempt from its manifestations enjoy good health.

Another well marked feature in the etiology of hæmophilia, in common with other constitutional diseases, is the occurrence of "atavism" or "alternate generation," where the predisposition to hæmorrhage, may cease or lie dormant for a generation, only to appear in a subsequent one; or, though manifesting itself in each generation, may pass to the subsequent one through an individual who has not during life manifested its symptoms. For instance the children of a Bleeder may not, and frequently do not, suffer from the disease, yet his grandsons, especially his daughters' sons, are almost sure to be affected.

When once grafted into a family it is impossible to say if it can ever be eradicated. There are authen-

tic accounts of families in whom the disease has existed for over one hundred years, and there is only one instance in which the disease has been reported to be disappearing in a family.

There does not appear to be any good reason why hæmophilia should be more prevalent in one country than another, still as a matter of fact by far the largest number of cases recorded, nearly 50 per cent., are German, less than 20 per cent. are English, including Scotch and Irish; France, the United States and Switzerland about 10 per cent. each, a few cases in Russia, Norway and Sweden. Other countries furnish no record of the disease except Sumatra, where it is stated a native Musselman family exist in whom the disposition to bleed can be traced back for three generations.

Excitement, anger, fear, and the use of alcoholic stimulants seem to aggravate the disease, and may even become exciting causes of hæmorrhages.

Hæmorrhages are said to occur more frequently in spring than autumn, during the night than the day, and the liability is increased after the first traumatic hæmorrhage.

The subjects of hæmophilia may be either of a dark or fair complexion, more often the latter; skin thin and transparent. When not suffering from the effects of loss of blood they look well and healthy, and do not appear to suffer from, or to be more than ordinarily predisposed to any disease—they are frequently bright and intelligent.

The predisposition exists from the birth of the child, but most frequently remains latent until the first year of childhood, or about the period of dentition, when being now old enough to crawl about they are liable to hurt themselves. The latest age at which it has deferred manifesting its presence was in one case at the age of 22 years.

There appear to be three degrees of intensity in this disease: in the first and typical degree the liability to hæmorrhages, both traumatic and spontaneous, interstitial and superficial, and to joint affections is well marked; women seldom suffer from this form.

The second degree is characterized by spontaneous hæmorrhages from the mucous membranes only, without traumatic bleedings or ecchymoses; joint affections absent, or only indicated by a species of rheumatic pain; this is the usual form of the disease as it appears in women.

The third degree is marked only by liability to spontaneous ecchymoses.

The symptoms of hæmophilia may thus be considered under four heads: the traumatic and

spontaneous hæmorrhages, the ecchymoses and the joint affections.

The tendency to traumatic hæmorrhages does not invariably exist even in those suffering from the first, and as above stated is unusual in the second and third degrees of intensity, and is rarely met with in women.

When it does exist, the liability may vary in the same person at different times; so that at one time a wound may not bleed more than natural, while at another time a similar wound may bleed profusely.

Some families are also much more liable to it than others: in one the lancet may be used or a tooth extracted without danger, but in another the least touch of a knife or the application of a blister, may entail death from uncontrollable hæmorrhage; two deaths are said to have occurred from the latter cause. Fatal hæmorrhage has followed such simple operations as snipping the frenum linguæ, scarification of the gums, and of the arm for vaccination, leech bites and the extraction of a tooth; the latter is frequently followed by exceedingly dangerous bleeding; but the most profuse bleeding is said to follow when a hæmatoma has been laid open.

These bleeding wounds generally take a long time to heal, often suppurate and sometimes slough. After suppuration the bleeding usually ceases, but may return at any time even after the wound has apparently healed.

Although I have mentioned that death has resulted from hæmorrhage after vaccination, the danger to be apprehended is slight; in only two cases was it followed by alarming bleeding, one of them fatally so. In all cases where this point is noticed it is stated the vaccination was successful, the vesicle running its normal course even when the bleeding was excessive. It has been suggested that the inoculation of a small bleeding wound might tend to arrest the hæmorrhage.

Occasionally the bleeding does not come on until some hours or days after the infliction of the wound.

Spontaneous hæmorrhages are sometimes ushered in by premonitory symptoms, the "Molimen Hæmorrhagicum" of the old writers, lasting three or four days, and frequently there are indications which point to the part which is about to be affected, as pain in the loins before hæmaturia, itching in the nose before epistaxis.

The hæmorrhage is commonly from the mucous membranes, sometimes from the skin, and rarely from the serous membranes or within the cranium.

Age has a good deal to do in determining the surface from which the blood shall come: in child-

hood from the mucous membranes of the nose and mouth, after puberty from that of the lungs, in adult life from the urinary organs, intestines and rectum. When the bleeding has once set in, it may be continuous, intermittent, or cease and reappear from some other part, or may alternate with swelling of the joints.

A rapid flow of blood, whether traumatic or spontaneous, by inducing syncope and cessation of the flow, is not so dangerous as a prolonged recurring smaller bleeding; either leave the patient in an extreme anæmic and prostrated condition, the blood becoming thin and watery, loses its power of coagulating, and is said to resemble colored serum, or water in which raw meat has been washed.

In favourable cases the patient becomes unconscious, the bleeding then ceases, and he falls into a deep sleep which may last for several days—months may elapse before he regains his strength; convalescence being as a rule slow.

Unless an artery happens to be cut or ruptured, the bleeding is always capillary, the blood as it were leaking or oozing forth as if pressed from a sponge, there being no apparent disposition to restrain the flow by contraction of the vessels.

The interstitial hæmorrhages, comprising ecchymoses and petechiæ, present the same appearance, and go through the same changes of colour as those the result of bruises; they may be either traumatic or spontaneous.

Spontaneous ecchymoses are sometimes ushered in by the usual premonitory symptoms of hæmorrhage; they usually take place into the subcutaneous cellular tissue. These ecchymoses are not always present, and on the other hand are sometimes the only indication of the disease; they may alternate with external bleedings or joint affections, or may be the forerunner of hæmorrhages. They vary in size from minute spots to places as large as a cent.

The traumatic ecchymoses are induced by injuries which would produce little or no effect in ordinary constitutions. There is almost no limit to their extent the amount of blood extravasated may be so large as to cause death. Sir Wm. Jenner mentions a case in which the fall of an India rubber air ball upon the thigh caused the connective tissue of the limb to be filled with blood from the knee to the trochanters.

The joint affections are frequently a marked feature in this disease, comparatively few bleeders escape without some articular complication; in some families no individual who exhibits the diathesis escapes. So much is this the case that a hereditary liability to

hæmorrhages, developing itself in early childhood, and accompanied by a painful swelling or pseudo-rheumatic pains of the joints is diagnostic of hæmophilia. Though not so dangerous as hæmorrhages these joint complications are far more distressing and dreaded by the sufferer.

Two forms of this affection are noticed : a painful swelling of the large joints, generally the knee, and, secondly pain in the joints and limbs of a rheumatic character unaccompanied by swelling.

In the first variety the affected joint becomes enlarged, painful, and filled with fluid, the patient is feverish, the swelling is sometimes indistinctly fluctuating, and not attended with redness of the skin—or, as stated in Holmes' System of Surgery, "not unfrequently pain will come on in a joint, particularly in spring-time or harvest, and after passing irregularly from one joint to another will settle in the knee, and be followed by a painless enlargement of that joint, not unlike a white swelling."

This state of the joints may last a few days or months : frequently the swelling comes on suddenly, the joint becoming greatly enlarged, and occasionally almost as suddenly diminishes in size, in which case it not unfrequently reappears in another joint, or is succeeded by, or alternates with hæmorrhage. There is always great liability to relapse, so that sometimes the patient is never free from this unpleasant state of affairs. The affected joints may recover with or without permanent injury.

In the second variety, the pain may be very severe, may also alternate with or be premonitory of hemorrhages : this as well as the first variety are frequently effected and induced by exposure to cold and damp.

The post-mortem appearances found on examining the body of a bleeder are generally of a negative character, throwing little light on the pathology of the disease ; it is said the internal organs, the heart and vessels, are frequently found healthy, that the rigor mortis is strongly marked, and that putridity comes on quickly.

I am unable to find that any observer has recorded the pathological condition of the joints, though Dr. Legg in an Addendum to his work, mentions that some important observations on this point have appeared in a French Medical Journal.\* Unfortunately I have not been able to see the article referred to.

Although I have stated the heart and vessels are frequently found healthy, still abnormal conditions of these structures are occasionally found, and

when they do exist are said to have an appearance conveying the impression of imperfect or arrested development.

For instance, the heart is sometimes seen to have the rounded form of the foetal heart, its walls in part or in whole, thin and deficient in muscular fibre ; the septum between the auricles and ventricles, particularly the former, thin and membranous ; in one instance the foramen ovale was patent ; the coats of the arteries very elastic, thin, almost transparent and deficient in muscular fibres.

Of the numerous post-mortem examinations that are recorded, in only 21 is it stated that particular attention was directed to the heart and vessels, Of these 21 nothing abnormal was discovered in 8 ; in 5 there was marked thinness of the arterial coats ; of the remaining 8 the condition was severally as follows : in the first thinness of the pulmonary artery with hypertrophy of the heart. 2nd. Thinness of the pulmonary artery with a like condition of the ventricular septum. 3d. Hypertrophy of the heart. 4th. Hypertrophy of the heart with thinness of the walls of the right heart, and a cartilaginous condition of the valves of the left side. 5th. Hypertrophy of the left heart. 6th. Thinness of right heart. 7th. Thinness of auricular septum and patency of the foramen ovale. 8th. Fatty degeneration of heart and aorta. Verchow and Morel made microscopic examinations in two of the above cases, without finding any abnormal condition of the arteries or capillaries.

Of the five cases in which the arteries were found to be thin, their appearance is described as resembling veins more than arteries, their walls being thin, almost transparent, and deficient in muscular fibres.

The numerous theories which have been advanced, as to the nature and cause of the disease, may be embraced under the following heads : I. That hæmophilia is an anomalous form of some other disease, as gout or cyanosis. II. Some alteration of the composition of the blood. III. An abnormal condition of the vessels. IV. Disturbed innervation of the vessels, and, according to Grandidier, a combination of the 2nd and 3rd.\*

As to the first I have only to say it appears to me to be unsatisfactory, an attempt to get out of a difficulty, and in doing so get into another.

The second, that of some alteration of the blood, used to be a favourite one ; it was thought the blood was unnaturally fluid, this fluidity being variously

\* *Lyon Medical*, Dec. 21, 1874.

\*Grandidier, "Die Hämophilie."

stated to be caused by hyperoxidation, increased vitality, an increase of its alkaline salts or an imperfect or arrested development of the blood.

This theory would seem to depend upon the idea that there is a watery condition of the blood, a deficiency of fibrin, and an imperfect coagulating power, but careful chemical, physical and microscopic examinations fail to discover any such condition; the most recent observers on this point state, that until the patient becomes exhausted from hæmorrhage no alteration of its composition sufficient to account for the disease could be found.

The third theory, that of an abnormal condition of the vessels, depending on a congenital paralytic state of the small arteries and capillaries from imperfect development, rendering them unable to resist the flow of blood to a part, thus inducing effusion of blood with or without rupture of their walls, is founded on the occasional observance of the thinness and imperfect development of the arteries, and the foetal form of the heart. This is perhaps sufficient to account for particular cases, but will not explain the temporary disappearance of the liability to hæmorrhages, or for those cases where no such appearance of the vessels can be found. This is the theory to which Dr. Legg seems to incline, though he acknowledges it does not explain some of the phenomena of the disease.

The fourth theory, of disturbed innervation, or in other words, an enfeebled condition or defective functional activity of the vaso-motor system of the sympathetic.

Several writers hold this theory of the nervous origin of the disease, grounding their opinion on the influence of mental emotions in inducing hæmorrhages, and the occasional disappearance of the diathesis: this, with our present knowledge of the influence of the sympathetic system on the circulation, is to my mind the only rational explanation; but further research and observation are required to confirm it.

Having presumed to differ from such a high authority as Dr. Legg, it is but right I should state my reasons for so doing. Dr. Legg bases his opinion on the probability that in nearly all cases of hæmorrhage an alteration of the vessels precedes the effusion of blood—hæmorrhages in chronic diseases without previous disease of the vessels being very rare—hæmophilia is a chronic disease, and it is highly probable some change in the vessels is present, though so far none has been discovered—in any case of hæmophilia the heart and vessels

present an abnormal appearance, indicative of imperfect development; it is a congenital disease, and it may be that the foetal state of the vessels persists in extra uterine life—new formed vessels are very liable to bleed; the new born infant bleeds much more readily and persistently than the adult; the vessels of newly formed granulations and rapidly growing tumors bleed on slight provocation.—if the vessels in hæmophilia are in a foetal or newly developed state, hæmorrhages would be expected, even when the microscope detected no alteration in them. He himself says this theory can offer no explanation of the occasional temporary disappearance of the diathesis. It appears to me that what he considers the cause, is only the effect of a congenital predisposition to a perverted or impaired functional derangement of the vaso-motor system. The influence exerted by these nerves on the muscular fibres of the arterial walls is now too well understood to require any particular mention; however, in order to make my meaning plain, I will refer to a few points in connection with this subject.

The office of the muscular coat of the arteries is to regulate and adjust the amount of blood to be received by each part; to co-operate with the elastic coat in adapting the calibre of the vessels to the quantity of blood they contain; and to close the divided ends of wounded vessels.

They are naturally in a constant state of tonic contraction, this tonicity being due to influences derived from the vaso-motor system. This is proved by the fact that when the sympathetic nerve of the rabbit's neck is divided, the muscular fibres of the arterial walls in the part supplied by that nerve, are temporarily paralyzed, as shown by the vessels of the ear on the injured side becoming dilated and the parts congested. After a time this congestion passes away; but if the experiment is carried further, and the superior cervical ganglion be removed, thus cutting off all connection with the automatic vaso-motor center, the effect is permanent. On irritating the peripheral end of the divided nerve, the arteries contract and the congestion disappears.

If the medulla be divided near the base of the brain, the arteries of the whole body dilate.

Now if from any cause, congenital or otherwise, the sympathetic system, or that portion of it which constitutes the vaso-motor system, should be temporarily or permanently in an enfeebled or inactive condition, the result would be more or less local or

general plethora, depending on the extent, situation and continuance of the depressing influence.

Although in the experiments referred to, extravasations of blood did not take place unless the blood pressure was raised by ligaturing the aorta, still it must be granted that this condition is one ripe for hæmorrhage, only requiring an exciting cause or a fragile state of the vessels to bring it on.

By this hypothesis we can, I think, account for the occasional evanescent nature of the disease, its being in some cases of spontaneous hæmorrhages ushered in by symptoms of congestion, and for the uncontrollable nature of the bleeding from inability of the arteries to contract.

It is also strengthened by the effect ergot appears to have in controlling the hæmorrhage; and suggests that electricity would be a valuable agent in arresting these hæmorrhages.

Now, if we go a step further, and consider this enervated state of the vaso-motor system not only as congenital but also hereditary, I think it is not going too far to say, that the resulting paralytic condition of the vascular muscular tissue would tend to induce in these tissues a state of atony, followed by atrophy of their muscular fibre and thinness of their walls, and that it does not require a great stretch of imagination to suppose this condition of the vessels might also become more or less hereditary.

Until the pathology of hæmophilia is more fully investigated, the treatment must be grounded on the principles indicated and employed in treating hæmorrhages generally. It is obvious that the sooner means are taken to arrest the flow of blood the better will be the result.

To accomplish this end in traumatic hæmorrhages the local application of nitrate of silver, tannin, or the perchloride of iron, with compression and ice are the best.

If a bleeding artery is seen it ought to be ligatured, but any operation for ligaturing the artery supplying the bleeding part should be avoided as useless, only adding an additional source of hæmorrhage.

Searing the bleeding surface with a hot iron has been employed, often with only temporary benefit, as the bleeding usually returns when the slough separates.

The internal administration of the usual styptic remedies is called for; but cannot be relied on; they are even less effectual in traumatic than spon-

aneous bleedings; of the number the tr. ferri perchlor. and ergot, in large and repeated doses, seem to be the most efficacious.

As it is now generally believed that ergot owes its power of restraining hæmorrhages by virtue of its tonic action, on the unstriped muscular fibres of the arteries, the fact would go toward strengthening the theory of the nervous origin of the disease.

When spontaneous hæmorrhages are preceded by prodromata indicating vascular congestion, it is not considered advisable to arrest the bleeding too early. But when these premonitory symptoms are recognized in time it is possible to ward off the threatened hæmorrhage by low diet, an avoidance of stimulants and an occasional saline purgative, the sulphate of soda or magnesia being preferred.

If the hæmorrhage continues, and the patient becomes weak, a suitable and nourishing diet must be given; it was noticed in one case that the bleeding ceased for a time after meals.

Great care is necessary in using alcoholic stimulants, regulating its administration by the state of the pulse and effect induced, as it has been found that by their stimulating effects on the heart their exhibition has kept up, and even re-induced the hæmorrhage.

Transfusion, as a last resort, was successfully employed in one case.

The swollen and painful joints are to be treated on ordinary principles, using cold or warm applications followed by strapping and perfect rest.

The prophylactic treatment indicated is tonic, the tinct. ferri perchlor. and cod-liver oil being highly recommended by Dr. Legg, unless there are signs of plethora; cold, especially sea-bathing, a nutritious unstimulating diet, residence in a warm dry climate, flannel underclothing and care in avoiding cold and damp.

In a medico-legal point of view hæmophilia is of interest, and has in Germany been made the turning point in a law-case: A boy, after a whipping at school, went home with his back in a frightfully ecchymosed state, his indignant parents took proceedings against the school-master for undue violence towards their son, and the master only escaped punishment by proving that hæmophilia was hereditary in the boy's family, and that he was unaware of this fact or he would not have used the rod.

*Lecture read before the Medico-Chirurgical Society of Montreal, June 4th, 1875.* By A. H. KOLLMYER, M.A., M.D., professor of Materia Medica and Therapeutics, Bishop's University, Lecturer on Materia Medica and on Botany at the Montreal College of Pharmacy.

GUARANA is a remedial agent, which was introduced to the notice of European practitioners, many years since, by Dr. Gavelle, formerly physician to Don Pedro of Brazil, where he had first become acquainted with its virtues. And though its source, composition, and actions appear to have been well known at that time, for a good account of all these may be seen in an old edition of Hooper's Medical Dictionary, published in London, in 1848, yet it appears to have fallen into a state of undeserved neglect and disuse in Europe till but recently, when Messrs. Grimault and Co. of Paris have again drawn attention to its therapeutical powers, and have furnished the profession with this valuable remedy in a reliable and convenient form. As with most medicines of Parisian origin (if I may so term it,) this soon reached Montreal, where a Mr. Woods, a gentleman with whom I am unacquainted, but who appears to entertain a very favourable opinion of its virtues, as experienced on himself, communicated the impression which he had received concerning it to Samuel Wilkes, M.D., F.R.C.P. Physician, to Guy's Hospital of London, who tried it then on himself and also on several of his patients with variable success, and reported his experience through the columns of *The Lancet*, by which means the profession became more generally acquainted with its existence, and also with its reputed powers. Now, as our ordinary text-books contain no reliable information concerning this substance, I concluded to collect in this paper all that has been communicated regarding it, as well as to jot down my own observations on its actions, in the hope that it may induce those among us who have already employed it to state their opinions regarding it, and also that it may serve to stimulate those who have yet to experiment with it, and ascertain for themselves the truth or fallacy of its vaunted therapeutical value.

The term guarana is derived from the natives of Brazil, or rather from a tribe of aborigines, called Guaranis, from whom this remedy was formerly altogether obtained. These are said to have employed it from time immemorial as a corrigent of their vegetable diet, and also as a kind of panacea, more especially in diarrhoea and in dysentery, the two great scourges of that country. Indeed, it is asserted

that it is even yet prepared exclusively by these natives, and that its precise composition is most carefully kept secret among themselves.

So far as can be ascertained guarana is prepared from the resinous juice and the seeds of the *Paullinia Sorbilis*, a climbing plant, indigenous to Brazil, and also from another species, the *Paullinia cupana*, growing on the banks of the Oronoko river; both belong to the Sex. Syst. *Octandria trigynia*; and to the Nat. Syst.—*Sapindaceae*.—It may not be out of place to mention here that this plant was called after S. Pauli, professor of Botany at Copenhagen.

Concerning the resin or gum, no accurate or descriptive account has been given, nor are we informed whether it is a natural spontaneous exudation or otherwise. The seeds, however, are described as lenticular, and almost thorny, surrounded by a flesh-colored arillus, which is easily separated when dry, and all enclosed within a three-celled, three-valved, coriaceous capsule.

In commerce guarana is met with in three forms:—1stly. The *Cylindrical*, which resembles exactly in appearance a petrified Boulogna sausage, being dark, and almost black externally, and a fleshy-red within; they are usually packed up in leaves in boxes. 2ndly, *Guarana in powder*, of which there are many different specimens, varying from dark to light greyish-brown—this kind is supposed to consist of the former variety pulverized. The chief objection to the employment of this form is that it can be too readily or conveniently adulterated. Much that is sold is worth less. 3rdly *Grimault's*, done up in Paris in small boxes containing twelve powders of thirty grains each:—these are of a flesh-colour, and resemble closely in appearance Pulv. Rhei. Co. of the British Pharmacopœia. These, the manufacturers inform us, are composed of the resinous juice, and the seeds reduced to a fine and impalpable powder, without any other additional admixture.

The cylinder or roll variety is reported to be prepared as follows:—The seeds are carefully collected, dried, cleansed, and pounded in a mortar, or upon a chocolate-stone previously heated, (some say they are now mixed with cacao and with cassava, others deny this part of the process;) a little water is now added, and the mass is exposed, some time to the dew, then it is kneaded into a paste, at the same time some of the seeds, either whole or bruised, are incorporated with the mass, and finally it is rolled into cylindrical or globular forms which are dried and hardened in the sun, or by the smoke of a fire. Occasionally, however, it is made up into fantastic and grotesque



figures by the natives, for I found the following remarks in Harper's Magazine of Sept. 1869, written by Thomas C. Evans, who has there given us a very interesting account of the manners and customs of the Brazilians; he says, when describing the inhabitants of Para:—

"The Paranes or natives derive their origin from an odd assemblance of races. The aboriginal and negro elements appear to predominate, though their traits are intermingled with those of Lusitania and Catalonia, and in a lesser degree with those of every people under heaven. The native Amazonian Indians have adopted urbano habits, and adjusted themselves to the restraints and industries of civilized life. They are shop-keepers and artisans, water-carriers, porters, gamblers, loafers, and what-not. Not a few retain the primitive Indian aspect. They have the long straight, coarse hair, and the expression of mingled cunning, fear and ferocity which distinguish their brethren of the woods. One involuntarily feels for his scalp while buying little articles of these harmless descendants of the warlike Purupurus and Tupinambos, and almost expects his bargaining to be interrupted by the war-cry and the whiz of arrows. In general, however, they are mixed with other races. Abyssinia and Nubia have contributed kinks to the straightness of the Amazonian hair, impressed additional flatness upon noses too flat already, and elongated heels which needed no such supererogatory extenuation. Portugal has aided in this transformation, so that the result is something compounded of the Portuguese, and the Brave.

"They are quite ingenious in some branches of manufacture. They make hats out of fibres of the palm, pipes from the red clay of the river, stems from long hollow reeds, which they paint and decorate with gilding after a rude but highly ornamental fashion. I was interested in examining some specimens of their more ambitious artistic efforts. The vehicle of these attempts was "guarana," a dark, resinous gum, which exudes from a tree, and is said to be a medicine as potent as quinine, though I believe it always kills, while quinine sometimes cures. They fashion this gum into various forms:—snakes, lizards, birds, ant-eaters, monkeys, jugs, cups, pitchers; and the more aspiring and ambitious adventure upon the imitation of the human figure. The results are more like the clumsy hideous idols of India and Egypt than like the sculptures of Canova or Angelo; but their arms and legs are very distinct, and there is no mistaking their heads; and though they are a little uncertain as to toes and noses, their import is discernible without verbal or written elucidation."

The masses of guarana are of a reddish brown colour, rough on the surface, and marbled or mottled internally; the taste is bitterish and astringent, but it is odorless; it swells up, softens, and but partially dissolves in water; ether does not extract the whole of its active agent. Deschastelus ascertained that alcohol alone exhausts it of its medicinal virtues.

On chemical examination Martius discovered in it a crystallizable principle, which he called *guaranin*; this was proved, by MM. Berthénot and Deschastelus, to be identical with caffeine and thein. It exists in the seeds in combination with tannic acid, with which it appears to form two compounds: one, crystallizable and soluble in water, the other, resinoid and insoluble; the seeds also contain free tannic acid, gum, albumen, starch, and a greenish fixed oil. A more recent analysis has been made by M. Fournier, and the following appears as the result:—Tannate of guaranin, free tannin, gum, starch, an acrid green fixed oil, a concrete volatile oil, an aromatic liquid volatile oil soluble in water with a little alcohol, another liquid volatile oil scarcely soluble in water, a peculiar principle not yet determined. Peckolt's analysis, quoted in the proceedings of the American Pharmaceutical Association of 1868, is as follows:—Caffein, yellow fixed oil, resin, nitrogenous extractive, red colouring matter, amorphous bitter principle, guaranic acid, saponin, gallic acid, tannic acid (iron greenening,) albumen, starch, glucose, dextrine, pectin, mucilage, malic acid and cellulose.

*Guaranin* is composed of  $C_8H_{10}N_2O_2 + QH_2O$ ; it is isomeric and said to be identical with *caffeine* obtained from the *Coffea Arabica*; with *thein* derived from the *Thea Chinensis*; and also with *psoralein*, the active principle of the *Psoralea glandulosa* or Paraguay tea. This is an interesting fact, that the same principle should be found to exist in four different plants belonging to as many distinct natural families.

Coffee contains from  $\frac{1}{4}$ —1 per cent.; gunpowder tea from 1—3 per cent., black contains more than green tea; Paraguay tea from 1—2 per cent., and guarana 5.07 per cent., or twice as much as the best tea, according to Dr. Stenhouse.

This alkaloid may be prepared by precipitating the tannic acid from a hot infusion of tea, coffee, &c., with a solution of subacetate of lead, boiling the mixture, filtering, removing the excess of lead by hydrosulphuric or sulphuric acid, evaporating the clear liquor, and re-crystallizing the product.

A. Vogel's, jun., method is as follows: powdered coffee is extracted by commercial benzol, this is distilled off, and leaves an oil and caffeine behind; the oil

is removed by a little ether or by water, from which latter liquid the alkaloid crystallizes on cooling.

This principle crystallizes in needles, losing two molecules of water of crystallization at 302° F; it melts at 352°, and sublimes at 725° without decomposition: it is soluble in ether, alcohol, chloroform, and in hot water; cold water dissolves but little. If boiled with nitric acid, the yellow liquid assumes a purple color.

Its salts and double salts are well defined and crystallizable, some are decomposed by water. It produces a crystalline precipitate with silver nitrate; and with tannic acid a white tannate is thrown down which is soluble in boiling water.

When this alkaloid is distilled with caustic baryta, the distillate contains ammonia and methyloamine, and there remains in the retort a new base, *caffeidina*, C<sub>7</sub>H<sub>12</sub>N<sub>4</sub>O<sub>2</sub>, which is not precipitated by solutions of ammonia or potash, but is separated in oily drops by solid potassa.

This vegetable alkaloid, guaranin or caffain, is not alimentary but *tonic*, and in large doses proves *poisonous*. Thus in dogs and in rabbits  $\frac{3}{4}$ ths of a grain caused purging, vomiting, followed by tonic and clonic spasms and terminating in death; it paralyzes the nervous system, and is said to act chiefly upon the ganglionic or sympathetic, and but slightly on the brain. It has been occasionally employed, however, as a medicine; thus Thompson has used it in doses of one to five grains in the low stages of *typhoid fever* with marked success, he also recommends it in *hemisrania*, *neuralgia*, and in *relapsing fever*. Its solution in citric acid has been administered with great advantage in the treatment of *sick-headache*. (This solution is often regarded as containing the citrate, the existence of which, however, is denied by Hager.) In the form of arseniate it has also been employed by Dr. Gastriel of Cairo, in Egypt, as a substitute for quinia in *intermittents*; these comprise all the diseases in which it has been reported to have been employed.

Guarana itself is recommended medicinally as a *tonic*, *astringent*, *antispasmodic*, and a *nervine anodyne*. It has long been used in Brazil, as I had occasion to mention before, for the prevention and cure of *diarrhoea* and *dysentery*, whether *acute* or *chronic*. Dr. Gavrelle employed it also in the *diarrhoea of phthisis*, in *paralysis*, *chlorosis*, *tedious convalescence*, generally as a tonic; and Dr. Ritchie, a surgeon in the Royal Navy, recommended it highly in irritation of the *urinary passages* and *bladder*, attributing to it powers analogous to those appertaining to *buchu*, *uva ursi*, and *pareira brava*. That it

possesses astringent or diuretic properties superior to those of our ordinary pharmacopœial remedies; however, remains yet to be proved.

But it is not on account of its tonic or astringent actions that it is now brought under our notice, but in consequence of its influence in preventing attacks of sick and nervous headaches. That it does so very often, we have abundant proof; thus in the report of the Amer. Pharm. Assoc. for 1873 we meet with the following:—"The efficacy of guarana in relieving incipient headache is well established; and again, in 1874, in the report of the Committee on the Drug market, we find it says:—"This article is now meeting with much demand, as it has proved very efficacious in various forms of headache; and in the *Lancet*, in a letter from Dr. Wilkes to which I alluded before, who says,—“I wish to draw the attention of the profession to guarana as a remedy for sick headache, and at the same time to ask for the experience of those who may already have some acquaintance with the drug. My own knowledge of it dates about two years back, when, after the appearance of a lecture of mine upon sick headache, I received a letter from Mr. Helmcken, of British Columbia, enclosing two powders, which he recommended to me with much confidence, as able to cure the complaint. He said that, having heard much of the remedy, ‘I resolved to try the medicine upon one of my patients, who was always coming to me with sick headache; and sure enough it acted like a charm, and in place of suffering for twenty hours or so, the headache had disappeared in a couple. This accords with what others have told me.’ Upon my first headache after the receipt of Mr. Helmcken’s letter, I took the powder, but with only doubtful effect. I therefore did no more than casually mention the medicine to my friends, but did not recommend it. A few weeks ago, after the appearance of a second communication of mine in the *Journal* upon the same complaint, I received a letter from Dr. Wood,\* of Montreal, in which he also recommended guarana as a remedy for headache, and gave a history of his own personal sufferings, and the relief which he had obtained. He says: ‘By taking one of these powders, and remaining quiet when I have felt premonitory symptoms by beginning of pain always in the right temple, (headache on the other side, or in any other part of the head, I never mind), I have carried off the attack, and, with the first box, absolutely put it off for two months—something which never occurred in my life before.’ Upon so good an authority, I determined to

\* Should read Mr. Wood.—ED. RECORD.

try the remedy in a more systematic manner, and requested my chemist to procure me a packet of the powders. These I have recommended to several patients and friends; and the result is so encouraging, that I have hastened to suggest their trial to my professional brethren. One lady speaks most enthusiastically of their power, as she has now, on two separate occasions, had her headache arrested by their use. The drug has long been known, for mention is made of it in English, and French pharmacologies, but appears never to have come into general use."

The first person for whom I prescribed this remedy was a professional singer who had been subject to frequent and agonizing attacks of sick headache, which nothing had ever relieved but time; he took one powder, and was enabled to fulfil his engagement and appear the same evening, which was of importance to him financially, as it was his benefit-night. He has ever since kept a supply on hand. The success following its use in this case induced me to prescribe it frequently since, and the result has almost invariably been as favourable, though it occasionally fails, but why, we cannot say. The remedy perhaps has not been sufficiently persisted in, as the following case would appear to suggest: Mr. C., a druggist of this city, received a severe shock to the nervous system, from hearing of the sudden death of his partner. For eighteen months afterwards scarcely a day passed without his experiencing a heavy dull pain in the occipital region, causing confusion of ideas, and a feeling of dullness, stupidity, and general *malaise*; he tried the ordinary commercial guarana in thirty grain doses, and experienced relief; he persisted in the remedy for upwards of three months, taking it twice and thrice daily and is now perfectly recovered. This is the only case where I have known the remedy to have been taken continuously for any long time. He states that after having swallowed the powder but a short time, he felt as if a weight had been removed from his head, and an exhilarating effect, much as if produced by a glass of wine.

Its influence over the nervous system is thought by many to resemble that of tea or coffee; and, indeed, it is regarded by some as a powerful rival of these, while others scout the idea of its ever supplanting these favourites for the purpose of a beverage; (Amer. Pharm. Ass. Report, 1873.) Yet in answer to this we find Savory and More, of London, have just brought out a preparation called guarana chocolate, which is certain of a sale when introduced by such a respectable firm of pharmacutists; besides which,

there must have been the demand, or they would never have embarked in the enterprise.

With regard to its action on the nervous system as compared with tea and coffee, I might mention that Mr. Henry R. Gray, president of the Montreal College of Pharmacy, who has been in the habit of using this remedy frequently for a couple of years has furnished me with the following memoranda, respecting its effects upon himself.

1st. That he considers in its physiological effects it is undoubtedly more closely allied to tea than to coffee; for coffee always produces in his case headache, while tea relieves it, and guarana nearly always cures it, particularly if taken early, as when the headache is coming on. He also states that he has met with several persons, whose experience agree with his on this point.

2dly. That the guarana of commerce, as ordinarily met with, does not appear to produce the same degree of effect as Grimault's, who makes this remedy a speciality.

3rdly. That ordinary commercial guarana frequently produces griping pain in the bowels, which though slight, and not severe, is nevertheless noticeable, while with Grimault's this peculiarity is not observable.

4thly. On examining different samples, in order to ascertain, if possible, the cause of this difference in action, he found in all, more or less abundantly, with the exception of Grimault's, a substance resembling magnetic iron ore at all events it was iron in some mineral form.

One of my patients remarking the similarity in action between guarana and tea, conceived the idea that there must be some principle insoluble in water which necessitated the swallowing of the powder, as the infusion of paullinia alone did not produce the relief procured from the powder; and, wishing to see whether tea under the same circumstances would produce similar results, he pulverized some and took about twenty grains, and says, he experienced the same soothing effect as from guarana, but in a less marked degree, perhaps in consequence of the dose being so much smaller.

It stimulates the cerebral functions and exhilarates generally, it invigorates the intellect, and is followed by no corresponding depression, as with ordinary narcotics. On the pulse it appears to act as a sedative; and no apparent change is noticeable in the urine. The headache usually disappears in from twenty minutes to an hour and a half. Dr. Leconte, of Paris, says that this remedy never fails unless improperly prepared, adulterated, or injudiciously administered.

Without entering into a description of the many forms of headache, hemicrania, and neuralgia with which we meet, and without dwelling upon the various speculations and theories that have been advanced as to the actual seat and condition of the tissues wherein the pain is experienced subjects of great importance and interest it is true, but which could not be sufficiently contracted or condensed to be embraced within the limits of an ordinary lecture—I must content myself with merely mentioning those forms where it has actually proved successful or where it is likely to be of service. These will be found to be comprised of those that have been called *bilious* and *nervous* headaches, the latter often taking on a hemicranial, neuralgic, or rheumatic character. In those forms due to intracranial *organic disease*, to *plethora*, and to *syphilis* other remedies will be more appropriate, and guarana will be of little or of no use. But in those arising from stomach derangements want of tone, debility, indigestion, sluggish liver, exhaustion, over lactation, leucorrhœa, hysteria, mental excitement, worry, anxiety, and overwork of the brain, it will very often prove beneficial if not curative. Proper hygienic measures must be also adopted; the exciting cause removed, if practicable; the diet regulated, and any morbid condition of the blood, or organs corrected by appropriate remedies before a cure can be effected. Latterly it has been highly spoken of in cases of lumbago, often removing that troublesome complaint as rapidly, as it does headache; but here again it does not always succeed. It has also proved serviceable in some cases of chronic rheumatism, and a medical friend assures me that he frequently prescribes it in that affection. It is said to have cured cholera morbus after opium and astringents had been employed without making any impression on the disease. There is no doubt but that the better we become acquainted with it, the more virtues we will discover it to possess; and perhaps we may yet be able to discern the reasons why it sometimes fails, in the same subject that it often cures; but if we can only postpone an attack of headache or lumbago to a more convenient time, we will, to say the least, by this remedy, have gained a point of some consideration.

The powder may be administered in doses of from 30 to 120 grains with sweetened water an hour or less before a meal, or two hours after, and should no relief follow, this dose is to be repeated in two hours. In cases of headache it should be taken as early in the attack as possible; as its effect is more marked the sooner it is employed. Some infuse it in warm water and add milk and sugar, and

drink as they would an ordinary cup of tea, yet it is preferable to take the powder in substance or to drink the grounds left in the tea-cup. When taken in a cup of chocolate the taste (though not disagreeable) is not perceptible. Beasley gives the following recipe for the preparation of *chocolate with paullinia*: Take of paullinia 1 oz., chocolate 16oz., mix and form into a paste. This is used as a restorative in cases of debility, chlorosis, &c.

Deschatalus recommended an alcoholic extract because he considers that fluid the only solvent of its virtues, which he ordered to be prepared as follows: Take of powdered paullinia, at will; of alcohol, a sufficiency. Introduce the powder into a displacement apparatus, and allow alcohol to pass through till the powder is exhausted, then distill off the spirit, and evaporate the residue to a proper consistence. The dose is 8—10 grs. during the day. From this extract the following preparations have been compounded in France, and used in cases of diarrhœa, dysentery, &c. *Gavrelle's Paullinia Lozenges*:—Take of alcoholic extract of paullinia, 21 grains, of vanilla sugar, 500 grains; of mucilage of tragacanth, a sufficiency to form a mass, and divide into 10 grain lozenges. Dose, 16 to 20 grains during the day. *Dorvault's Syrups of Paullinia*:—Take of the extract, one part, of simple syrup, one hundred parts, and dissolve. Dose, half an ounce. *Gavrelle's pills of Paullinia*:—Powdered paullinia, a sufficiency; of mucilage of tragacanth, enough to form a mass, and divide into pills of  $\frac{1}{2}$  grains—5-10 to be taken when required.

Much of what I have reported in this paper has been gleaned from the observations of non-scientists; yet such evidence I consider exceedingly valuable, as they are untrammelled with conservative prejudices, with which the members of our profession are apt to be more or less tinctured, the result no doubt of repeated disappointments in using new and frequently extolled remedies. Yet when we find that the statements of the laity are not at variance with the facts that are recorded regarding the substance under discussion, we are perfectly justified, I believe, in drawing our own conclusions from such statements; and though much of what is asserted may be erroneous, yet there cannot be any great difficulty in winnowing the wheat from the chaff by the scientific.

*Case of Ptyalism—in a Dentist—from absorption of material used in filling teeth.* By MR. CASEY A. WOOD, Medical Student of Ottawa, Ont.

G. H., dentist of this city, æt. 29, was attacked on the 20th of April last by a severe headache.

As he had for a number of years past been subject to this very troublesome affection, (attributed to biliousness) nothing was thought of it, and in the expectation that it would, as usual, run its course within 24 hours, he was given pil. colocynth co. gr. viij., and a seidlitz powder. However, on the following day, (Wednesday) the headache had not decreased, and the patient had, in addition, a few rigors, accompanied by a pain in the back. The compound colocynth pill, instead of producing purgation, induced active emesis with violent vomituration.

Towards evening his mouth became slightly sore, and the gums somewhat swollen. Two powders of guarana, (Grimault & Cie., Paris,) given at an interval of two hours, had but little effect in lessening the headache.

*Thursday*—Headache still continued. Gums became tenderer.

*Friday*—Towards the afternoon the pain in back and head disappeared, but the extreme sensibility of gums and soreness of the mouth increased.

*Saturday*—All the mouth symptoms much aggravated. The tongue became coated with a thick yellowish-white fur. About noon, noticed an increased flow of saliva, which during the afternoon ceased for an hour or two, but again commenced in the evening.

*Sunday*—No change, except that the salivation had slightly increased and the tongue became so swollen as to make articulation difficult. The patient had, up to noon to-day, very little sleep, but, under the influence of morph. mur. gr.  $\frac{1}{4}$ , obtained several hours rest, being obliged to hold in his mouth a glass tube through which the saliva flowed into a dish placed for its reception.

*Monday*—To-day the ptyalism reached its maximum of intensity, and by evening had sensibly decreased.

*Tuesday*—Patient commenced to improve from this day. During the afternoon several small fissures were discovered at the anterior portion of the tongue, rendering attempts to speak both painful and difficult.

The salivation continued until the following Saturday, when it entirely ceased. The teeth did not become loose, but a dull pain was felt in them for several days.

It will be sufficient to say with regard to treatment, that it was the usual one on such occasions.

Carbolic acid was chosen as a wash for the mouth, proving, in the strength of one part to forty, very

serviceable in allaying the irritation and removing the metallic fetor and taste, so characteristic of mercurialization.

With regard to the cause of the ptyalism, the constant habit of rubbing on the palms of the naked hands the amalgams of silver and mercury used in "plugging" teeth furnishes a true solution of the question.

Great numbers of teeth are filled with compositions of mercury with gold and silver, and when a dentist has a good practice, it is not difficult to imagine the absorption, at each time of rubbing the mercury with the silver or gold, of a portion of the first mentioned metal, infinitesimal though it be, and that it should continue to accumulate, producing, as in this case, mercurial salivation.

If dentists would place in the palm of the hand at each time of using mercury a small piece of oiled silk or gold beater's skin, the majority of the indolent ulcers and non-healing sores, not uncommon among dentists, would find a ready cure.

J. F. W. A. May 9th, 1875.

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### Correspondence:

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To the Editor of the Record:—

SHERBROOKE, May 24th, 1875.

DEAR SIR,—I saw an article in your last issue on hypodermic injection, in which that method of treatment in many cases was very justly lauded; but to some of the suggestions I beg to take exception, and particularly to the dose recommended, which is in my opinion—particularly if administered to a female—absolutely poisonous.

I intended noticing the communication when I read it, but was so busy I could not spare the time, and I am sorry to say I have mislaid the number, so that I write from memory only.

The gist of the article appeared to be the recommendation of a concentrated solution of morphine with a view to avoid the soreness sometimes induced by the injection of a larger quantity. I have used the hypodermic mode of medication, perhaps as much as almost any practitioner since its introduction, and, though using frequently from twenty to forty minims, have never produced an abscess, and my experience would lead me to suggest in all cases a much weaker solution than the one indicated in your article; in fact I would never inject less than twenty minims of solution of morphine, by which

means there is far less fear of giving an over-dose than when three or four minims only are used, as, of course, in this case one minim more than intended, and which may very readily be injected through any difficulty in the action of the syringe, would administer one-third or one-fourth more than intended, whereas, if one-twentieth more than intended be accidentally given, it would be of little or no consequence.

The dose, however, of half a grain of the hydrochlorate of morphine, as recommended in the article, is very far too large, and I have no hesitation in declaring it in many cases absolutely poisonous; my experience being that the action of morphine, when given hypodermically, is nearly or quite twice as powerful as when administered by the stomach. The preparations of morphine moreover are not always uniform, and in consequence of this, and in my experience the safer and pleasanter action of Battley's Sedative, I have for several years confined myself to this with the addition occasionally of one seventieth part of a grain of atropine.

I trust you will excuse my writing as strongly as I have done, as I feared the article might be acted on by some young or inexperienced practitioner, in which case there would, I am sure, be great danger of poisoning.

I remain,

Yours truly,

F. D. GILBERT, M.R.C.S.L.

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### Progress of Medical Science.

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#### REMARKS ON THE ACTION OF CROTON-CHLORAL ON MEGRIM.

By SYDNEY RINGER, M.D., Professor of Materia Medica in University College, and Physician to University College Hospital.

It is hardly necessary to observe that under the term megrim I include those affections commonly called sick headache, bilious headache, nervous sick headache, and hemicrania. The most characteristic and commonest symptoms of megrim are headache and sickness; but, in a typical case, these symptoms are preceded by other significant and interesting phenomena. At the onset of an attack, a peculiar affection of the sight first occurs, soon to be followed by perversion of the sense of touch and of the muscular sense in the arms and legs; by disordered speech and defective ideation; the headache then comes on, and, as it becomes intensified, nausea gradually sets in.

The affection of the sight may consist of mere absence of vision, beginning at the centre or circumference of the field of sight. When at the circumference, the defect is generally situate to the right or

left of the axis of vision. From the centre of the visual field, the blind spot gradually expands, and as it enlarges it then clears up in the centre, and so gradually disappears to the circumference. As the blind spot expands, its margin is often lighted up with spectra variously described as glimmering, dazzling, bright zig-zag lines, coruscations, etc.

In ten minutes to half an hour, on one or both sides of the body, numbness and loss of sensibility occur, followed by tingling, formication, "pins and needles," felt most distinctly in the hands, tongue, and lips. Speech is commonly disordered, the aberration in some cases being simply memorial, in others simply motorial; in others, again, these two derangements of speech are more or less combined. In other words, one patient forgets his words, another forgets how to utter them, whilst a third manifests a combination of these two defects. There is, too, loss of memory, confusion of ideas, and a bewildering feeling, as if the patient were going out of his mind. In half an hour or a little longer, these phenomena are followed by headache, which is generally felt on waking in the morning; it is at first slight, but intensifies till it may become most severe, indeed, almost unbearable. It affects one or both brows, and beginning at one spot, gradually extends, till it may involve the greater part of the head. The throbbing, stabbing, cutting, boring pain is increased by movement, noise, light, smells, or food. When the area of pain is very limited, the complaint is termed *clavus*. As the pain subsides, or even during the whole attack, the patient may suffer dull or shooting pains in the eye of the affected side. There is much tenderness of the scalp during and after an attack.

Throughout the attack, the patient complains of nausea, which may be slight, but usually increases, and, when the pain is at its worst, ends in vomiting, which may be severe and prolonged, causing much prostration; yet occasionally vomiting affords relief.

Lasting a few hours, the whole day, or even two or three days, the attack generally ends in calm refreshing sleep, but sometimes it gradually subsides or ends abruptly in vomiting, perspiration, or, more rarely, a copious flow of tears. The attack may be preceded and followed by very obstinate constipation or by diarrhoea, the liquid motions being in some instances pale, in others of a deep brown, mahogany colour. Before and after the attack, there is often much dusky discoloration around the eyes.

It is now almost universally held that megrim is an affection of some part of the nervous centre. Dr. Liveing, to whose exhaustive work I am considerably indebted, considers that, in a typical case, the disturbance takes place first in the optic thalamus, and passes backwards and downwards, reaching to the nucleus of the vagus below; for, as he observes, in a typical seizure, the visual disorder is always the initial symptom, the headache the middle, and the vomiting last. Where morbid intellectual phenomena and disorder of speech occur, the affection radiates from the thalamus to the hemispheric ganglia, and, where emotional phenomena occur, to the mesocephale.

Though the affection is seated in the nervous centres, yet it must be recollected that the frequency and severity of the attacks both depend on peripheral exciting causes, due to the stomach, intestines, liver, womb, etc. Even when the affection is strongly developed and the periodic attack recurs apparently spontaneously, the seizures may be rendered more frequent and severe by remote exciting causes; nay, in many cases, the affection may remain so slight, that it lies dormant till roused into activity by some near or distant irritation, on removing which the seizures altogether cease.

The successful treatment of megrim depends less on change to be effected in the disordered nervous centres than on removal of the exciting cause. The treatment of megrim, therefore, falls under three heads:

1. The treatment of the central nervous affection;
2. The removal or prevention of exciting causes;
3. The treatment of the paroxysm.

Many remedies act in a twofold or even threefold way. Thus bromide of potassium is often extremely serviceable in two ways. It is very useful in those cases where the seizure is due to uterine disturbance, as in menorrhagia and dysmenorrhœa. Sometimes the attacks are more severe and frequent, arising from the exhausted state of the nervous system. Perhaps, from overlong town residence, or from mental troubles, the patient becomes irritable, depressed, nervous, excitable, with broken sleep, harassed by dreams. The ensuing general depression increases the headache. Now, bromide of potassium soothes the patient, and, by promoting refreshing sleep, strengthens the nervous system, and thus lessens the frequency and severity of the headaches. Bromide of potassium, moreover, is serviceable in the paroxysm itself, for it may produce several hours' sleep, from which the patient awakes free from headache.

The pain of megrim is situated in the fifth nerve; and, remembering how closely megrim is allied to neuralgia, and how useful hydrate of croton-chloral is in facial neuralgia, I have been induced to try this remedy for the seizures of megrim, and have found it useful in cases of which the following may be taken as a type.

A woman has been subject for years to nervous sick-headache; then, owing to some great trouble, or to excitement, fatigue, or flooding, or prolonged suckling, or most frequently at the change of life, the headache becomes much more severe. The headache is continuous for weeks, perhaps months, but is intensified greatly by fatigue, excitement, or at the catamenial period. If not actually continuous, the headache comes on daily, lasting, perhaps, for many hours, or several attacks may each day occur. The pain is often intense, and whereas, previously to the worst form of headache, the pain was probably limited to one bone, it now affects both, and perhaps the greater part of the head. The skin is generally very tender. There is also a sensation of bewilderment, or, as some term it, a stupid headache, and the patient often says she feels as if she should "go out of her mind". The sight may be dim, especially during the exacerbations of pain. Some patients of this

class are very excitable and irritable, and are upset with the slightest noise. Nausea and even severe vomiting may occur with each exacerbation of the pain. Five grains of croton-chloral every three hours, or even oftener, will give in most cases considerable relief. I need hardly say, that the drug does not entirely free the patient from her attacks; but, in one or two days, the pain ceases to be continuous, then the attacks recur, but only once or twice a week, the interval gradually extending till an onset occurs only every week, then about every fortnight, or even longer, till the illness assumes its old type and periodicity. In some cases, a week's treatment suffices to bring back the headache to its original type of an attack once in three or four weeks. Then the croton-chloral appears to be far less serviceable, manifesting but slight effect on the periodical attacks. In many cases of ordinary periodical headache, the patients say that, in the milder forms, the drug distinctly lessens the severity and duration, but in the severer forms it is without effect, even when sickness is absent. In those cases accompanied by severe vomiting and retching, croton-chloral is useless, being speedily rejected.

Croton-chloral, I have found, will relieve the slight attacks experienced by some delicate and nervous women after any slight fatigue or excitement.

In the continuous sick headache just described, as the pain grows better so the cutaneous tenderness disappears. It seems to me that, in many instances, two kinds of headache coexist, one sometimes predominating, sometimes the other. One appears due to affection of the cutaneous nerves, and is generally accompanied by tenderness. Patients describe the other as a "stupid headache", "a feeling of bewilderment", "a bewildering headache". After the dispersion of the first form by croton-chloral, this stupid headache often continues, but may ordinarily be relieved by bromide of potassium. Indeed, in many cases, I have found it useful to combine these remedies.

#### TREATMENT OF BURNS AND SCALDS.

The following observations by Dr. John Morris, of Baltimore, in *The Sanitarian*, may be read with benefit:

The first step is to remove the clothing from the patient. As rest is all important, this should not be done by the old plan of taking it off piece by piece, but by removing it by a few skilful cuts with a knife or scissors. The patient should then be instantly wrapped in a blanket, or blankets, or large masses of cotton, if at hand, so as to create heat, and thus re-establish the circulation.

Patients frequently exhaust themselves by their outcries, and to guard against the depression of nervous force, brought about by this cause, anaesthetics should at once be employed. Chloroform or ether should be administered in sufficient quantity to induce partial, or, if necessary, complete unconsciousness. If these agents are not at hand, large doses of opium should be given. This is all important, as the patient

must not be allowed to suffer if we wish to conserve the powers of life. The dressing should be made while the patient is in this state.

Carron oil is utterly useless, if not injurious. Of all the oils, linseed, in our opinion, is the worst, as it is the soonest to be absorbed by the atmosphere, and become dry. In cases of bad scalds of children, in which a large part of the body is involved, we know no dressing so good as a bran bed, that is, a bed of bran, in which the patient may lie, and be entirely covered with a thick investment of the same. This dressing has the advantage of not requiring change, for each day, as the moist particles fall off they can be replaced with fresh bran, without disturbing the patient. One of the severest cases of scald we ever met recovered by this treatment.

A great deal of harm is done to patients by frequent dressings, and any method that obviates this is most desirable. Patients frequently are exposed for hours to the action of the air, suffering unnecessary pain, by the old and tedious process of dressing. The air itself does no injury, but the extreme hyperæsthesia of the skin produces a state of nervous tremor which leads to exhaustion. Any one who has seen a case of hydrophobia can readily understand this condition of skin hyperæsthesia.

In burns of the extremities there is no immediate application so serviceable to relieve pain as hot or cold water, and, strange to say, they act equally well. If the appliances are at hand, the cold bath as practiced by Hebra is the best. Those who have visited his wards in Vienna, and seen his treatment of burns by a bed made of straps, in a cold bath, can bear witness to the successful and scientific character of this procedure. For small burns, warm water acts admirably.

We have said before, that anæsthetics should be employed in all burns of an extensive character, but, before their effect is allowed to pass off, applications should be made to produce anæsthesia of the parts affected. We have heretofore used for this purpose a solution of Labarquet's chloride of soda, of the strength of an ounce to a pint of water, adding two or three grains of morphia to the solution. This has generally given great relief to the patient—indeed, in a short time, destroying all the extreme sensibility. Carbolic acid has been highly recommended as a local anæsthetic, and it may be possible that a solution of it in water, in combination with morphia, might act still better.

After a free application of either of these solutions, the parts may be thickly covered with cotton batting. This helps to counterbalance the chilliness, and gives a comparative degree of comfort.

In superficial burns, of a limited extent, nothing is required but simple cold-water dressing.

Brandy should not be administered whenever opium or ether can be obtained, as it remotely exercises a depressing influence. Strong hot coffee is the best drink that can possibly be given to counteract nervous exhaustion, or remedy the effects of shock. If brandy is given at all, it should be given with coffee. All earthy applications, such as chalk, calaminaria, etc., should be avoided, as they are not only

therapeutically inert, but may interfere with the process of restoration.

Local stimulation, such as the application of turpentine, or a solution of nitrate of silver, as practiced at St. Bartholomew Hospital, is no doubt proper treatment in the second stage of burns, but as this belongs more especially to the domain of surgery, we forbear to discuss it, as well as the treatment of the after consequences of burns, such as ulceration of the bowels, particularly of Peyer's glands, congestion of the lungs, cicatricial contraction, etc.

In conclusion, we will briefly sum up the recommendations before suggested:

1. Remove the clothing by cutting it from the body.

2. Wrap the patient in blankets.

3. If pain be excessive administer chloroform, ether or large doses of opium, and let the necessary dressing be made while the patient is in a state of partial or total insensibility.

4. Produce anæsthesia of the burned or scalded parts by the application of a solution of carbolic acid and morphia. (This solution can be made in almond or olive oil.)

5. After this, wrap the patient in masses of cotton batting.

6. Avoid brandy, and give coffee as a stimulant.

If these simple rules be followed much suffering may be alleviated, and many a life saved, which otherwise would be lost by the ignorance and mismanagement of attendants.—*Medical and Surgical Reporter.*

#### CLINICAL LECTURE ON PARACENTESIS ABDOMINIS, IN CASES OF CIRRHOSIS OF THE LIVER.

By THOMAS HAYDEN, F.C.P.,

Physician to the Mater Misericordiarum Hospital  
From Notes taken by Mr. DAVIS, Resident Clinical Clerk.

GENTLEMEN—Two cases of cirrhosis of the liver in which tapping has been repeatedly performed with satisfactory results, have been recently under your notice. These cases may be profitably contrasted, not only in regard to the symptoms exhibited, but also with reference to the effect of paracentesis upon the progress of the disease.

The first case I shall direct your attention to is that of Michael B—, a discharged soldier, of intemperate habits, who was admitted under my care on the 8th of last October. He had been subject to epistaxis, had hæmatemesis, and bleeding from the bowels. At the date of admittance he was much wasted, the abdomen was distended with liquid, and the superficial abdominal and inferior thoracic veins were enlarged and turgid. The skin and conjunctiva were slightly jaundiced; the bowels were constipated, and the urine was defective in quantity, of low specific gravity, and contained albumen. He suffered much from dyspnoea, owing to the pressure of the abdominal fluid upon the diaphragm; when he assumed the recumbent posture, his face and neck immediately became congested, and he was forced to sit up. The pulse was small and quick, and the heart was displaced upwards,



its apex pulsating at the level of the nipple, but in the normal vertical line. From this latter circumstance I was led to diagnose old adhesions of the pericardium at the base.

On the 16th, twenty pints of serum of sp. gr. 1.009, and containing a large quantity of albumen, were taken from the abdomen by means of a large trocar and cannula. The patient, who was constitutionally nervous, exhibited great alarm at the prospect of the operation; nevertheless he bore it well, and experienced great relief from it.

The object which I hoped to attain by tapping was twofold; namely, to relieve embarrassment of breathing, and to induce a more copious secretion of urine, by moving liquid pressure from the diaphragm and the renal veins.

The former of these objects was completely accomplished, and the latter partially; the man was enabled to breathe, even in the recumbent posture, with ease, and, for a week after the operation, there was a notable increase in the secretion of urine.

The relief, however, was only temporary. The operation was repeated on the 6th of November, when sixteen pints of liquid, highly albuminous, of acid reaction, and 1.009 sp. gr., were removed. On this occasion there was complete suppression of urine for forty-eight hours after the operation. A diuretic was now administered, consisting of spirit of juniper,  $\xi$  ii; spirit of nitrous ether,  $\xi$  i; nitrate of potass,  $\xi$  i; and water, to  $\xi$  viii. An ounce to be taken every third hour. The kidneys again acted; but on the 14th, owing to a partial suppression of urine, it was deemed necessary to prescribe gr. v. of blue pill twice daily. This had the desired effect, but on the 21st, it was found necessary to suspend the use of mercury, slight salivation having appeared. The urine secreted during the previous twenty-four hours amounted to two pints.

On the 27th, there was again a large accumulation of liquid in the peritoneum; the feet were now œdematous, and purpuric mottling appeared over the surface. On the 29th, there was copious epistaxis.

Paracentesis was performed for the third time on the 6th, of December. Twenty-four pints of pale fluid, of acid reaction, sp. gr. 1.011, and highly albuminous, were removed. There was again on the 9th, a large accumulation of liquid in the abdomen, and the secretion of urine was in defect. The man now rapidly sank, and on the 20th he died.

Thus, fifty pints of fluid were removed by tapping, within a period of seventy-three days; the interval between the first and second operations having been twenty-one, and that between the second and third, thirty days.

On examination of the body, the liver was found to be reduced in volume, nodular on the surface, and pale in colour; the fibrous tissue was in excess, and the hepatic cells exhibited a large proproportion of oil. The peritoneum was distended with serum, and the intestines were, in several places, firmly agglutinated by old adhesions. The kidneys were likewise reduced in volume, and cirrhused. The spleen was enlarged

and adherent to the diaphragm, and its capsule was thick and opaque.

The case presents a typical example of cirrhosis of the liver and kidneys; and further, it shows, not only the relief from urgent symptoms which paracentesis is capable of affording, but also the safety of the operation, even though repeatedly performed.

The next case is exceptional in many respects; there is no history of intemperance, there has not been hæmatemesis or melæna; enlargement of the spleen cannot be detected; and lastly, the patient's health improved, and there had been no return of ascites for a period of eight weeks after the first effectual tapping.

The history of the case is shortly as follows. The patient, Catherine M —, a poor, industrious woman, unmarried, aged 50 years, was admitted into Hospital under my care on the 12th of September last. Her health had been good up to six weeks previous to that date; she then complained of a feeling of uneasiness—rather than of pain—in the abdomen, constipation, loss of appetite, and progressive debility.

When admitted she was sallow and emaciated, the feet were slightly swollen; there was ascites, and the superficial veins of the abdomen were enlarged. In the recumbent posture respiration was much embarrassed, owing to the extreme distension of the abdomen; the veins of the neck, forehead and temples being remarkably turgid. The operation of paracentesis having been decided upon, the pneumatic aspirator was used on the 15th, and again on the 16th of September. By means of this instrument about seven pints and a-half of liquid were removed on each of these occasions, with comparatively little pain or disturbance to the patient. The process was, however, too tedious and exhausting to the sufferer; and therefore, on the 19th, the trocar and cannula were used, and eighteen pints of liquid were removed. After the operation I made a careful examination of the abdomen by palpation, and failed to detect enlargement of any of the viscera. The patient now rapidly improved; under treatment with mild tonics and diuretics she gained flesh, and the œdema of the feet disappeared; there was no return of the ascites, and she was discharged on the 11th of November in comparatively good health.

She was again admitted on the 8th January, 1875, all her former symptoms having reappeared. A few days subsequently eighteen pints of liquid were removed by paracentesis, on the 8th of February, seventeen pints more were taken, and on the 23rd twelve pints, the fluid on both the latter occasions being slightly tinged with blood. Thus, the total quantity of serum removed by paracentesis amounted to eighty pints, or ten gallons.

Notwithstanding the ultimate issue to be looked forward to, and within a period not very remote from the present, this case is worthy of being recorded as showing, not only the safety of paracentesis, but also the temporary benefit by relief from, urgent symptoms, and postponement of the fatal issue which it is capable of affording.

### CONCLUSIONS FROM THE STUDY OF FOUR HUNDRED AND FIFTEEN CASES OF TETANUS.

Dr. D. W. Yandell (*American Practitioner*) reaches the following conclusions from the study of four hundred and fifteen cases of tetanus:

(1) Tetanus occurs in males in the proportion of four to one, and tends to recovery oftenest in females.

(2) It is most fatal in persons under ten years of age—is least fatal between ten and twenty.

(3) Traumatic tetanus usually supervenes between four and nine days after the injury, and these cases represent the largest mortality.

(4) Recoveries have been usual in cases in which the disease occurs subsequent to nine days after the injury.

(5) When the symptoms last fourteen days recovery is the rule and death the exception—*apparently independent of treatment*.

(6) Tetanus appearing in the puerperal state is most fatal.

(7) Chloroform, up to this time, has yielded the largest percentage of cures.

### ITCH IN PRIVATE AND IN PUBLIC PRACTICE AND ITS TREATMENT.

BY TILBURY FOX, M.D., F.R.C.P.

Physician to the Department for Skin-Diseases of University College, Hospital.

GENTLEMEN,—There are certain differences in the cases of itch that come under our treatment in public and in private practice respectively, to which I wish particularly to direct your attention. By public practice, I mean such as hospital, infirmary, and Poor-law practice, amongst the poorer classes. The matter is one of practical importance to you. You know that, in describing scabies to you, I do not follow the usual method of books, and divide the disease into papular, vesicular, and pustular scabies, and so forth; but I speak of the disease as consisting in an *essential* element or lesion, the acarus in and with its furrow, and certain *accidental* concomitants, which result as consequences of the irritation set up, and the scratching practised for the relief of the latter; of, in fact, the acarian furrow and imbedded acarus, and the results of irritation. These latter vary in kind, and include hyperæmic papillæ and follicles, vesicles, pustules, and excoriations, etc. Now, in private practice amongst the better classes, the differences in cases of scabies, as compared with those observed in hospital practice, are those of *degree*, not kind, and have reference chiefly to the *accidental* concomitants, and only slightly to the *essential* lesion of scabies.

In private practice, cases are occasionally met with equal in severity to any that are seen in public practice; but, on the other hand, as the rule, they are not so severe, and the disease is not so extensive, and *very frequently in private practice instances come under observation in which the accidentals of*

*scabies are scarcely if at all marked.* There are certain amount of itching, and an acarus or two here and there, and nothing more; and such cases are often erroneously diagnosed. There are many instances of scabies only a slight shade worse; a few acarian furrows, with a few papulations.

The variations are due to several causes, chiefly to the observance of greater cleanliness, the seeking of medical advice earlier (so that the disease has not time to put on the aspect of severity), and to the better nutrition, amongst the better to do, as compared with the poor classes. Cleanliness has greatest influence, because it is a great check to the development, and migration from part to part, of the acari; and malnutrition amongst the poor favours the development of the pustular concomitants; and, lastly, the longer the disease lasts, the greater of course, is the scratching. When want of cleanliness, much scratching, and malnutrition go together, the worst cases of scabies occur, and they may now and then, as I have said, be met with in private practice. But, inasmuch as private patients are more cleanly than public ones, seek advice earlier, and are well fed, scabies amongst them occurs in its least expressed form. But even when the disease has existed some time, it is surprising how slightly marked the disease is in some cases, on account of the extreme cleanliness observed and the repeated washings practised by private patients.

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

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

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

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

Turning to scabies in public practice, I have only to observe, on this occasion, that the diagnosis of scabies, as ordinarily seen, is, as the rule, very easy. But, in rarer instances, the disease is so general, and so intermingled with excoriations and

pruriginous papules, etc., that it presents the aspect rather of a pruriginous eczema, or phthiriasis mixed with eczema, than a scabies; since the eruption is not confined to the usual seats of itch-rash, but attacks the parts about the shoulders, the back, the lower part of the legs, and back of the forearm, as well. But there is one very safe guide in these cases; and that is, the history of the eruption, which shows that the latter began as scabies usually does, whilst acarian furrows will be detected, although most of them may be obscured by the free suppuration about them.

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

But I will suppose that a well marked case of

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

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

I have one word to say, in conclusion, about bad cases in private and public practice, and the use of sulphur vapour-baths. In these bad cases, no doubt the acari are disseminated widely, and active treatment is needed. One remedy in common use is the sulphur-bath. I think a caution is needed as regards its use. I believe that it is abused. Though I much prefer a good soaking in a sulphuret of potassium bath, and the prescription of a mild parasiticide ointment, yet sulphur vapour-baths may be employed; but I think a single one properly administered—at most two—sufficient. I would have the patients well washed, first of all, with soap and water, and then put into the sulphur-bath. If the effect be that the pruritus at night is destroyed, I do not think it needful to repeat the bath, especially where the skin is much inflamed. You have seen, yourselves, many cases in which these baths have cured the actual scabies, but have set up a severe inflammation and pruritus in the skin that are most difficult to subdue. I have seen sulphur vapour-baths in itch, on that account, except where the disease is of the severest kind, because I believe all the acari can be destroyed by simpler and less irritating applications. In these cases the same rule holds good, I think, as in the simpler cases. It is easy to overtreat these cases. If, at the end of a few rubbings with mild sulphur or storax ointment the skin be less inflamed, less irritable, the

vesicles and pustules drying up, and the patient get a good night. I consider that the itch itself is practically well, and I then treat by parasiticide the usual haunts of the acari and soothe other parts. But there is another very important matter in these cases. It is to keep the same linen on next the skin during the use of the parasiticides, and when a change of linen is made, to disinfect all the clothes by heat. I cannot now go into the question whether the acari dwell temporarily in the clothes. They can, no doubt, live long enough off the body in the clothes to be conveyed by clothes from one person to another, and, if so, then it is important to prevent these clothes from serving as the media of re-propagating the disease, or transmitting it from the infected to the healthy.

#### A MOTIVE TO DRUNKENNESS.

What we deem a very weighty suggestion, is made by Dr. Milner Fothergill, in the *West Riding Asylum Report*. He states that a chronic state of anæmia of the brain is the most common cause of dipsomania, especially in women. Alcohol, by increasing the force of the pulse and dilating the small arteries, removes for the time the feeling of weakness and utter wretchedness, which is one of the most prominent and distressing symptoms in all cases of defective cerebral nutrition. Dr. Fothergill has treated successfully cases of dipsomania by measures having for their object the filling of the vessels of the brain. The means employed for this purpose must, of course, depend on the cause of the anæmia, whether it is part of a general state, or due to cardiac weakness, or to valvular disease, etc.; iron digitalis, strychnia and belladonna are the most useful remedies, and, in bad cases, opium, in frequently repeated small doses, is of great service; it not only allays the restlessness and irritability which are generally present, but, by promoting dilatation of the small arteries of the brain, directly favors the nutrition of that organ.

Apropos of this subject, a writer in *Land and Water* recommends from Dr. Ringer, the use of capsicum, "given in doses of the tincture (ten drops), or the powder, twenty grains, to be taken before meals, or whenever depression or craving for alcohol arises." It also induces sleep in early stages of delirium tremens. It obviates the morning vomiting, removes the sinking at the pit of the stomach, the intense craving for stimulants, and promotes appetite and digestion. He adds:—"This treatment I have tried with great success in several cases, and in one in particular, that of a young man, whom no one, by any means in their power, could possibly keep from tipping. Shut up the spirits, he had a key made on the quiet, while his wife was away for a day—of course he sent her. Take away money he would 'tipple' on credit. He came under my care for bronchitis. I soon heard of his propensity, and tried Dr. Ringer's treatment. I began by giving him five drops of the tincture in a little syrup of orange-peel, and some orange bitters, and increased the dose of capsicum to twelve drops. He rapidly improved, and at the end of a month he was quite another man."

# THE CANADA MEDICAL RECORD

*A Monthly Journal of Medicine and Surgery.*

EDITOR:

FRANCIS W. CAMPBELL, M.A., M.D. L.R.C.P., LOND

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MONTREAL, JUNE, 1875.

## PHYSICIANS' FEES.

Sir George Burrows, in his Presidential Address at the Royal College of Physicians, called attention to the fact that the fee which was deemed a sufficient honorarium a century ago by no means adequately compensates the modern physician for the additional time and skill devoted to patients residing in distant parts of this vast town. In former times, Sir George said, "it was seldom that a Physician's practice extended beyond a circle of which the radius was a mile, the centre being his own home, and if patients resided beyond that circle the physician was almost sure to receive an extra fee. Now it is well known, that from the enormous distance to which the town has extended in all directions, the London physician may be called to patients residing in fashionable regions, at a distance of two miles or more from his home centre, and yet, unless some previous arrangement has been made, no extra fee is offered by patients, and can rarely be asked for, without giving rise to unpleasant explanations. All who have given any attentive thought to this subject must be aware that it is not only the greater distances which the physician is compelled to traverse, but also the diminished value of money, which renders the long-established conventional fee a much smaller remuneration to physicians of the present day than that always obtained by physicians of one or two generations before our own."

"The greatly advanced rent of houses in suitable localities, the increased expense of carriage and horses, the rise in the wages of servants, and the augmentation in the other expenses of living, place physician of the present day at a great pecuniary disadvantage compared with his predecessors of a past generation. While the price of nearly all that is required in the establishment of a metropolitan physician has steadily and greatly advanced, his services are still estimated by the same fee that was offered him when that money was worth far beyond its present value. How is this anomaly and socia-

hardship to be remedied? I have long and frequently thought over this perplexing question, but I confess have not been able to lay down any principle which can be strictly carried out in the solution of the difficulty."

"The long-established customary fee to the physician is an honorarium, and long may it continue to be so. The College have never laid down any fixed regulations as to the amount of honorarium to be expected by the consulting physician; and I would not presume to advise the Fellows to deviate from that principle. But I think I have brought under your consideration many reasons why the senior and leading members of our order should endeavour to impress upon the community the reasonable expectations of physicians to be more liberally treated in the recognition of their professional services, when distance or other circumstances cause an extra demand on their time. It has appeared to me right in the interests of our order that this delicate question should be ventilated, although I cannot presume to indicate the best course to be pursued to remedy this increasing injustice." These remarks of Sir George apply with equal force to practitioners in the large cities of our Dominion.

## AMERICAN MEDICAL ASSOCIATION.

The annual meeting of this association, was held at Louisville, Kentucky, on the 4th, 5th and 6th of May. There was a very large attendance of members, about six hundred of them being present. Dr. LeBaron Botsford of St. John, New Brunswick, President of the Canadian Medical Association, was present and received a most cordial welcome, being accorded a seat on the platform without the formality of a resolution. After the President had delivered his address the following letter was read from the Canada Medical Association:

MONTREAL, APRIL 19, 1875.

*W. B. Atkinson, Esq., M.D. Secretary American Medical Association:*

DEAR SIR,—As the time is approaching for the meeting of the American Medical Association, I have much pleasure in forwarding a copy of a resolution unanimously adopted at the last meeting of the Canada Medical Association, held at Niagara Falls on the 5th and 6th of August, 1874, and request that you will kindly bring it to the notice of your association. The Canada Medical Association will meet this year at Halifax, Nova Scotia, on the first Wednesday in August, and would be much pleased

at seeing, as heretofore, delegates from your association, and I think it more than probable that our association will be represented at your meeting by at least two of our members, one of whom will be our president, Dr. Botsford, of St. John's, New Brunswick.

I am, dear sir, yours very truly,

A. H. DAVID, M.D., D.C.L.,  
General Secretary Canadian Medical Association.

#### THE RESOLUTION.

The following is the substance of the resolution adopted by the Canada Medical Association :

*Whereas*, In consideration of the best interests of medical science, it is desirable that a medical conference should take place between the American and Canada Medical Associations, at some central point to be determined upon.

*Resolved*, That the American Medical Association be advised as to the desirability of thus becoming more intimately acquainted, and affording an opportunity for the discussion of medical and surgical subjects on a common basis.

*Resolved*, That in the event of such conference being determined upon, it would be desirable that the secretary of the Canada Medical Association notify the various local medical societies, so that our Dominion may take part in a manner worthy of the occasion, and in keeping with the interests of medical science.

The proposition contained in this letter was referred to the committee on nominations.

On the third day of the meeting the committee to whom the above resolutions had been referred, brought in the following, which were adopted.

*WHEREAS*, The Canada Medical Association has adopted and forwarded to this Association the above resolution, be it

*Resolved*, That a committee of thirteen be appointed by this Association, whose duty it shall be to confer with a like committee of the Canada Medical Association, at such time and place as agreed upon by the joint committee of the Association.

The following gentlemen were appointed a committee : Dr. S. D. Gross, Pennsylvania ; Dr. John T. Hodgkin, Missouri ; Dr. Austin Flint, New York ; Dr. Willoughby Walling, Kentucky ; Dr. T. C. Lane, California ; Dr. Wirt Johnson, Mississippi ; Dr. Wm. Brodie, Michigan ; Dr. J. M. Toner, Washington ; Dr. T. D. Cunningham, Virginia ; Dr. E. Andrews, Illinois ; Dr. Wm. A. Atkinson, Pennsylvania ; Dr. H. I. Bowditch, Massachusetts ; Dr. Robert Bartholow, Ohio.

The object of this conference is the consultation upon medical subjects and mutual exchange of views in regard to scientific topics, and the establishment of closer relations between the two national associations.

The following gentlemen were delegated to attend the next meeting of the Canada Medical Association, at Halifax, in August next to represent the American Medical Association :

Dr. S. D. Gross, Pennsylvania ; Dr. Turner Anderson, Kentucky ; Dr. Willoughby Walling, Kentucky ; Dr. William B. Atkinson, Pennsylvania ; Dr. William Brodie, Michigan ; Dr. E. T. Easley, Texas.

#### VACCINATION IN MONTREAL.

In 1862 the City Council of Montreal appointed three medical men to be vaccinators for the City of Montreal, under a statute framed a short time previously. This trio were gradually increased till last year some twenty medical men constituted the board of vaccinators. Multiplicity to such an extent was not needed, and resulted in an utter want of concerted action and we believe we may add a failure of the object intended. Vaccination was performed somewhat erratically—in some sections very imperfectly—and the health officers not having any supervising control over this ponderous board, really never knew, and do not now know the extent of success which attended the vaccinators' work. This year the health committee have not nominated any board of vaccinators but have delegated the powers of vaccination to the two health officers, Drs. Dugdale and Larocque, giving one charge of the Eastern Section and the other the charge of the Western Section of the City. We believe they will zealously do their duty, but we think them insufficient for the work to be done. If last year the health committee appointed too many on its vaccination board, they have this year named too few. The error of this year is however, the best one to make—for what little will be done we are sure will be well done.

#### THE PHARMACEUTICAL ASSOCIATION OF THE PROVINCE OF QUEBEC.

This Association held a *Conversazione*, in the rooms of the Natural History Society, on the evening of the 8th instant to which were invited all the principal medical men of the City, with their ladies—also a large number of the friends of the association. The attendance was numerous, and we have to con-

gratulate the druggists upon the marked success which has attended their first entertainment. In the absence of the president, Henry Lyman, Esq., owing to illness, Henry R. Gray, Esq., the Vice President, occupied the chair, supported by Nathan Mercer Esq., (Evans, Mercer & Co.) John Kerry Esq., (Kerry, Watson, & Co.) and Ebenezer Muir Esq., the registrar. The Chairman opened the meeting by reading the address which the President intended to have made had he been present, and was followed by Nathan Mercer, Esq., who spoke most effectively and eloquently, showing the steps the druggists had taken to secure the control of their own matters, and the struggle which they had to make before success crowned their efforts. Addresses were also delivered by His Worship the Mayor Dr. Hingston; Dr. Bibaud of Victoria College; Dr. Edwards, and Dr. Francis W. Campbell, of Bishop's College. A letter of apology was read from Dr. Howard, of McGill College. A number of microscopes were in operation, and the guests were regaled with refreshments during the evening.

#### COLLEGE OF PHYSICIANS AND SURGEONS OF LOWER CANADA.

The semi-annual meeting of the Governors of the College was held on the 12th of May, in one of the halls of the Jacques Cartier Normal School, (Old Government House), Notre Dame Street, Montreal. The President, Dr. R. H. Russell, (Quebec), occupied the Chair, being supported by Dr. R. P. Howard and Dr. Marmette, the Vice-Presidents. There was also present Drs. Peltier and A. G. Belleau, Secretaries; Dr. Robillard, Treasurer and Registrar, and the following Governors: Drs. Jackson, G. E. Fenwick, Michaud, Tetu, Desjardins, Brigham, R. F. Rinfret, St. George, R. Landry, A. W. Hamilton, Gilbert, Gibson, Duchesneau, Tessier, Scott, Hingston, Rottot, Church, Weillbrenner, Chamberlain and Perrault.

The following gentlemen, graduates in medicine of Universities, upon presentation of their diplomas, received the license of the College to practice their profession.

*McGill University.*—W. Moffat, M.D., C.M., G. H. Monk, M.D., C.M., G. C. Duncan, M.D., C.M., B. Wales, M.D., C.M., W. J. Kearney, M.D., C.M., J. E. Christie, M.D., C.M., J. B. McConnell, M.D., C.M., J. J. E. Woods, M.D., C.M., S. A. Hickey, M.D., C.M., M. O. Ward, M.D., C.M., R. Howard, M.D., C.M., J. D. Clyne, M.D., C.M., B. J. Brassard, M.D., C.M.

*Victoria University.*—P. Gosseiln, M.D., J.

Chevalier, M.D., T. Bélanger, M.D., J. P. Leduc, M.D., J. M. Boileau, M.D., J. A. S. Brunelle, M.D., J. Manseau, M.D., A. Alexander, M.D., Z. Comtois, M.D., A. Piché, M.D., J. A. C. Lafranchiseur, M.D., A. Nadeau, M.D., E. Brun, M.D., C. Esnouf, M.D., A. Champagne, M.D., F. Filiatrault, M.D., O. P. Hétu, M.D., D. A. Letourneau, M.D., J. Charbonneau, M.D., E. Larocque, M.D., M. Desrosiers Lafrenière, M.D., F. Trudel, M.D., E. Paquet, M.D., A. P. Lassisserraye, M.D., P. F. Casgrain, M.D., E. A. Guillemot, M.D., P. A. Allard, M.D., P. Privé, M.D., J. B. A. Lamarche, M.D., E. E. Fauteux, M.D.

*Laval University.*—J. N. Fraser, M.L., O. Lauriault, M.L., N. C. Beauchemin, M.L., J. E. Turcot, M.L., F. C. T. Lamoureux, M.L., G. Bolduc, M.L., J. L. L. Hamelin, M.L.

*Bishop's University.*—I. MacKay, C.M., M.D., W. M. Hunter, C.M., M.D., G. Dubuc, C.M., M.D.

*Toronto University.*—O. C. Brown, B.M.

*Kingston University.*—E. Chaffey, M.D.

Dr. A. G. Fenwick, late of Three Rivers, one of the Governors of the College, having removed his residence to the town of London, Ont., his resignation was received, and Dr. R. M. C. Mignault, of Yamaska, elected to replace him. Dr. Edmond Robillard placed his resignation of the office of Treasurer and Registrar in the hands of the College, and Dr. George E. Fenwick was elected to fill the vacancy thus created.

The Governors of the College were, at the conclusion of their session, entertained to luncheon at the City Club by the members of the College resident in Montreal.

#### UNIVERSITY OF LAVAL, QUEBEC.

The following gentlemen, after a severe examination by the Medical Faculty of Laval University, Quebec, have received the degree of M.D.: J. E. Turcot, St. Hyacinthe; J. Lamoureux, L'Assomption; A. E. Baudry, Pointe aux Trembles; G. Bolduc, St. Joseph, and L. Hamelin, of St. Barthelemi.

#### CLOSE OF OUR THIRD VOLUME.

With the issue of our next number, the third volume of the *Canada Medical Record* will be brought to a close. How far we have fulfilled the expectations of our friends is for them alone to say—we may however state that we have endeavoured to so arrange

our selections, that as far as possible it should be thoroughly practical in its character, and we feel that to a very large extent we have carried out this idea; indeed were we so inclined we could extract from the letters of many of our subscribers numerous compliments upon the large amount of valuable practical information which they have been able to glean from our pages. As we have conducted the *Record* for the past three years, so will it be conducted in the future, and we ask the cordial assistance of our friends to extend our circulation. We have but few subscribers, who have it not in their power to induce a brother practitioner to take our *Record*. We ask them to do it. Let us hear from you, in time that new subscribers may commence with volume four.

#### ZIEMSEN'S CYCLOPEDIA OF THE PRACTICE OF MEDICINE.

We have received Volume three of this most interesting and valuable work from its American publishers, Messrs W. Wood & Co of New York. We will notice it in our next issue.

We inclose receipts in this number to all who have remitted to us since the issue of our May number.

#### TO CONTRIBUTORS.

Our third volume will soon be completed, and as we look over the names of those who have placed us, during the past year, under obligations for the contribution of original communications, we find that they have nearly all been residents of Montreal. While we feel proud that those who know us best, should have selected the *Record* as the means of reaching the profession, and thankful for the assistance which they have thus afforded us, yet we cannot help the conviction forcing itself upon us that very valuable contributions to practical medicine are being lost by the absolute lethargy of the mass of our country practitioners. This should not be. They owe it to the profession at large; they owe it to themselves—that interesting cases, and clinical facts occurring in their experience should be recorded. The reporting of cases causes closer observation on the part of the physician, and this largely increases his keenness of perception. Let our Country subscribers waken up, forward their communications, and we will be glad to lay them before the profession.

#### TO OUR SUBSCRIBERS.

In our last issue, we inclosed accounts to a large proportion of our subscribers. Those who did not receive them with that number of the *Record* will find them inclosed in the present one. As the amount to each is very small, and yet in the aggregate to us a very large sum, we respectfully ask a *prompt* remittance.

A few will find that their accounts extend from the first issue of the *Record*, and for them we have a few special words. We have continued to send the *Record* to these delinquent subscribers because in nearly every instance we either personally knew the parties or had reason to believe that it was purely neglect that the subscription was not paid. We have now come to a point when we must clearly understand one another. We have supplied them with the *Record* for the past three years, and paid thirty-six cents postage for each subscriber. We cannot continue to do it any longer. We therefore respectfully intimate that all subscribers who owe for the three volumes of *Record* will have their names erased from our list, unless they remit previous to the issue of the first number of volume four. After that date all unpaid, three years accounts will be placed in the proper quarter to secure prompt payment.

#### THE MONTREAL WATER SUPPLY.

The water which has been furnished the citizens of Montreal during the past few months has been filthy in the extreme. That such fluid, dark with dirt, should be supplied by any Civic Government to its people, is a disgrace to our boasted civilization. The remedy—filtration—is not expensive, and should be adopted without delay. Settling ponds, which have been spoken about, will not, in our opinion, answer the purpose, and higher authority than ours we know holds similar views.

#### OUR DUSTY CITY.

Montreal people are in dry weather almost smothered with dust, and in rainy weather they can hardly travel the streets for the mud. Two extremes, these are indeed—and neither are at all satisfactory. Of the two, perhaps the latter is the best able to be borne—for in a carriage you can bid it defiance; but the dust penetrates everywhere, and is so thick on the streets as to look like we had at some time had a fall of dust from the clouds. Moreover it is unhealthy. We have seen, this spring, a large number of sore eyes—simple conjunctivitis—caused by it, principally among those compelled to drive much; also several



cases of bronchial irritation resulting from its inhalation. Montreal is truly the dustiest city, and we are informed on good authority it is also one of the dirtiest cities to be found any where.

#### DIARRHŒA OF TYPHOID FEVER.

Dr. George Johnson (*Practitioner*) says he has lately given up the use of all astringents in the treatment of diarrhœa in typhoid fever. Typhoid fever requires careful nursing and feeding, but no medicine of active nature. He feeds his patients mainly with milk, beef-tea, and two raw eggs in twenty-four hours, and gives wine or brandy in certain cases. He has abandoned the use of mineral acids. When the food disagrees it is better to keep patients to milk alone for several days. Out of fifteen cases of typhoid lately in his wards, all recovered under this treatment.

#### HYDROCELE FLUID AS A PRESERVATIVE.

Dr. Robert McDonnell, of Dublin, recommends, hydrocele fluid as a preservative of anatomical and pathological specimens. It neither contracts nor hardens the tissues, nor does it enlarge them. He adds a little bichromate of potash to it, and prefers it to any other menstruum.

#### MEDICINE IN JAPAN.

The Island of Yesso (says the *London Lancet*) is becoming more and more prosperous. An American physician has founded as many as five hospitals for the natives. He has established a regular clinique and gives lectures to the students. These lectures, are published, with illustrations, in a monthly periodical written in the Japanese language.

#### PERSONAL.

Dr. W. R. Cluness, of San Francisco, California, reports in *Pacific Medical and Surgical Journal*, the successful removal of a polycystic proliferous ovarian tumor weighing thirty-seven pounds.

Dr. G.F. Slack, (M.D. Bishop's College) M.R.C.S. Eng., and for three years House Surgeon at Charing Cross Hospital, London, has been appointed Lecturer on Minor Surgery in the Medical Faculty of Bishop's College.

Dr. Wallace Clark (M.D. McGill 1871) has left Marquette, Michigan, where, since his graduation, he has been in practice. We hear he has several excellent openings at his command, but has not yet determined his location.

Dr. Shee, of Quebec, (C.M., M.D. Bishops College 1874) was lately in Montreal, as acting Surgeon to the Allan S.S. *Peruvian*.

Dr. W. J. Kearny, of Montreal, a graduate of the present session of McGill University, has been presented by his friends with a valuable case of surgical instruments, accompanied by a flattering address.

Dr. A. G. Belleau, Quebec, (M.D. McGill College, 1868,) has been appointed Deputy-Coroner for the District of Quebec.

Dr. Deguise has been appointed Physician to the port of Quebec, in place of Dr. Roy, deceased.

The end of May, Dr. Hingston Mayor of Montreal, removed the tongue of an old man for cancer. Lower jaw was sawed through at the symphysis and the tongue removed clean at the os hyoides. The ecraseur was used, and the operation was almost bloodless.

#### BIRTHS.

At Gentilly., Que., on the 26th May, the wife of Joseph E. A. Lanouette, C.M., M.D., of a daughter.

In Montreal, on the 27th May, the wife of Dr. Francis Wayland Campbell, of a son.

In Montreal, on the 3rd June, the wife of Dr. William E. Bessey, of a son.

#### MARRIED.

At the residence of the bride's father, by the Rev J Patterson, brother-in-law of the bride, assisted by the Rev. J. Watson, M.A., Huntington, on the 2nd June, John Morrison M.A., M.D., son of Rev. J. Morrison, Waddington, N.Y., to Anna Markland Sherriff, third daughter of Francis Sherriff Esq., M.D., Dremisle, Huntington.

At Richmond, Que., on the 3rd June, by the Rev. Henry Roe, assisted by the Rev Isaac Thompson, Archibald George, on of the late Archibald Hall, Esq., M.D., of Montreal, to Catherine Louisa, third daughter of the late Dr. Fowler of Melbourne.

At St. Johns, Que., on the 1st June, by the Rev F.J.B. Allnatt, W. de M. Marler, of Montreal, to Josephine C. Howard second daughter of Dr. Henry Howard, Medical Superintendent St. Johns Lunatic Asylum.

#### DIED.

In Montreal on the 22nd of May, Sarah O'Leary, wife of J. P. Rottot, M.D.

At Simcoe, Ont., at the residence of Dr. Covernton, on the 31st May, Robert M. Wilson, M.D., of Niagara, in the 46th year of his age.

In Montreal, on the 4th June, Frederick Payne, infant son of Dr. W. E. Bessey.

In Quebec, on the 3rd inst, Louis Joseph Roy, M.D., Physician to the Port of Quebec, aged 55 years and 5 months.