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EDITED BY
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"Je prends le bien où je le trouve."

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PART I.—ORIGINAL COMMUNICATIONS.

ARTICLE I.

Case of Tetanus, continuing thirty-four days—Recovery.—With Remarks. By J. P. Stevens, M. D., of Liberty County, Ga.

On the 6th April, I was called to see Fanny, a negro girl, about eight years of age, who, for about twelve hours previous to my visit, had been suffering from slight paroxysmal attacks of pain, and contraction of the muscles of her abdomen and back. Her eyes were natural and bright; respiration easy; no fever; tongue a little red at the edges, with a whitish fur in the centre; slight pain in her bowels, and a moderate contraction of the dorsal muscles; bowels torpid.

Prescription.—Apply sinapisms to her extremities, and to the whole length of her spine; 3 of castor oil.

April 7th. Fanny's condition this morning is evidently worse in every respect. The muscles of her back are rigidly and permanently contracted, causing her body to assume a semilunar form; deglutition is almost impossible; at intervals of fifteen minutes there is forcible contraction of all the muscles of her body; the angles of her mouth are violently retracted, causing that peculiar aspect of countenance indicated by the term risus sardonicus; her teeth are firmly set; the muscles of her abdomen are as hard and resisting as a board, and her extremities are firmly flexed. When interrogated with regard to pain, she refers us to the umbilical and epigastric regions. This state of things continues for about a minute or two,
when there is comparative relaxation of the muscles concerned in deglution, as well as those of the abdomen and extremities. During the paroxysms, a profuse perspiration bathes the cutaneous surface. Oil operated twice; skin of natural temperature; pulse 90; respiration 30.—Pres. Tinct. camphor, tinct. opii., aa 20 gtt.

4, P. M. No change.

R. Calomel,

Nitr. potass. aa 20 grs.

Opium, 2 "

M.

Divide into two parts, and give at an interval of two hours. Episapstic three inches wide, to be applied from the occiput to the sacrum.

April 8th. Powders operated copiously, bringing away one large lumbricus; blister drew well.—Pres. Tinct. camphor, 3 i.; tinct. opii. 3 ss. In the afternoon, 10 grs. calomel; and 25 gtt. laudanum, to be taken at night.

April 9th. No change in symptoms; bowels moved with assistance of an enema.—Pres. Turpentine enemata, at intervals of two hours; sponge the body with hot brandy and vinegar.

April 10th. Bowels evacuated of a very black offensive matter; blister upon the spine still continues sore; spasms recur much less frequently.—Pres. 3 i. castor oil, sinapisms to extremities; 10 grs. Dover’s powder, morning, noon, and evening.

April 11. Slept well during the whole night, spasmatic pains recur but seldom; skin moist; pulse 108; thirst moderate; abdomen soft, but bowels not moved by oil; lying upon her back.—Pres. Castor oil, 3 i.; oil terebin. 3 ss. Mustard poultice to abdomen.

April 12th. From this time, her master, Dr. Jos. Le Conte, visited her regularly with me. Since last report, Fanny has passed three worms.

There is still constant rigidity of the dorsal muscles, and general spasms occur four or five times during the morning, which are provoked by the slightest touch or mental emotion.—Pres. Decoction spigalia; blister to thighs.

April 13. Rigidity of muscles of lower jaw so great as to preclude the admission of any liquid. Spasms more frequent; pulse 108; skin natural.—Pres. Tinct. opii. 3 i.; frictions over the spine with turpentine and tinct. cantharides; 10 grs. calomel, to be divided into two parts—take them at an interval of two hours.

April 14. Bowels moved three times; the first very dark and offensive; voided two worms. Spasms frequent, but of transient duration.
April 15th. Countenance much better; indications more favorable.—Pres. 5 ss. turpentine, 3 ij castor oil; re-apply blister to spine.

As it is unnecessary for me to continue a narration of the symptoms and treatment of this protracted case, I will only remark, that anthelmintics, derivatives to the spine, and opiates, were continued with very decided advantage. Five worms were brought away simultaneously, soon after which, her countenance assumed a calm and natural aspect; all the secretory functions of the economy were discharged normally; the respiration and circulation perfectly natural, but spasmodic movements of the abdominal, dorsal, and the muscles employed in digestion, recurred at regular intervals, the attacks of each succeeding day diminishing in force and frequency, until they finally ceased entirely.

During the last two or three days of our visits, we prescribed 36 grs. sulp. quinine, divided into six parts, one of which was administered every fourth hour, but we did not observe any very marked benefit to follow its employment. The warm bath, which is always a valuable adjuvant in spasmodic diseases, could not be employed, save in the recumbent posture; and as the facilities for making use of such remedies are rather meagre upon a plantation, we were compelled to defer its trial until the patient could tolerate the erect posture.

On the 10th May, I see noted, that "Fanny is this morning sitting up alone; muscular contractions have ceased, with the exception of occasional twitches during the day." She is at this date, Aug 15th, perfectly well.

Remarks.—There is perhaps no disease to which the human frame is subjected more to be dreaded, not only from the excruciating agony which is endured by its victims, but the almost certain fatality which marks the progress of tetanus. It heedst not the tenderest sympathies of our nature, and has persisted invincible against the united power of the most gigantic intellects, from the time of Hipposocrates, down to the present day. Another feature which mantles it with horror, is the extremely trivial nature of the cause which often induces its attacks. Lacerated and punctured wounds, principally of the extremities, of tendons and ligaments, may be classed among the most ordinary causes of the disease. "Tetanus has been occasioned by a bite on the finger from a tame sparrow, the stroke of a whip-lash under the eye, although the skin was not
broken, a fish-bone sticking in the pharynx, a seton in the chest, the stroke of a cane on the neck and hand, flagellation, extraction of a tooth, cupping and venesection, &c., &c. It has also followed severe fractures, lacerations, contusions, punctures, amputations, excision of the mamma, tying arteries, gunshot wounds, castration, injection for hydrocele, &c., &c.—(J. H. Bennet. *Tweedie's Library of Pract. Medicine*, p. 71.)

The case which we have just reported, was doubtless occasioned by the irritation of worms in the alimentary canal. Although, during the whole course of the disease, there were but eleven worms discharged, still at every evacuation of these troublesome parasites, a manifest improvement in the general symptoms supervened. Many writers regard worms as almost the only cause of tetanus. How often it is, that almost incredible numbers of them have been voided without previously having excited little or any constitutional disturbance. I was informed, not long since, of an instance which occurred in this county, where a little negro passed, per rectum, upwards of seven hundred worms, in the course of two days, without having suffered any inconvenience, with the exception of a moderate pain in the bowels! Any irritating substances in the stomach and intestines, such as indigestible articles of diet, indurated fæces, &c., are not unfrequently exciting causes of tetanus. I recollect in the practice of Dr. B. B. King, six years since, of having seen a case terminate fatally, from intussusception. The subject was a negro boy, about 9 years of age, who was attacked in the morning while pursuing his usual routine of labor; and notwithstanding a most energetic and judicious course of treatment was vigorously pursued, he died in the course of twenty-four hours. Constipation of the bowels was an insuperable obstacle in the management of his case, and upon post-mortem examination, the doctor discovered an intussusception of about three inches of the ileum. There was no wound or external injury discovered upon any part of the body, save a superficial abrasion of the cuticle, of about three lines in length, which did not, at that time, or previously, excite any attention.

Vicissitudes of temperature are among the most common causes of the idiopathic form of this disease. Sudden alternations from heat to cold, exposure to rapid currents of air, while in a perspiration, have induced its attacks. A few weeks since, a gentleman informed me, that his father lost a negro woman who had aborted in about the sixth month of her pregnancy, and was doing very well, when
"she took cold," a tetanus supervened. The first case of tetanus which Dr. Dunglison ever observed, was caused by a suppression of perspiration. "A young man, when in a profuse perspiration, went into a river to bathe. He was immediately struck with tetanus, from which, however, he recovered."—(Dunglison's Pract. Physic, vol. 2, p. 329.) Dr. Chalmers gives an instance, where it was brought on by sudden change of weather, in a man who slept without his night-cap.

A high degree of temperature is said to predispose to this disease; hence the extreme liability of the system to its attacks, when a very hot season is followed by much cold and wet weather. "Thus it is stated, that after the battle of Muskow, in the midst of great heats, very few of the French troops were attacked with tetanus: whereas, those who were wounded in the battle of Dresden, when the weather was cold and wet, just after a very hot season, were decimated by that complaint."—(Watson's Pract. of Physic, p. 311.) I think we may venture the opinion, that negroes are much more liable to this complaint than whites. This fact may, in a measure, be attributed to the frequent exposures to which they are subjected, not only to changes in the weather, but irregularities in diet, and bodily wounds which are accidentally received.

The pathology of tetanus is involved in some obscurity, although, from searching into the results of the post-mortem observations of others, I am inclined to the belief, that the spinal marrow and its afferent nerves may be regarded as the seat of this disease. Inflammation of the spinal chord, and its nerves, is not discovered in every case, but the phenomena observed during life, refer to derangement of the excito-motory division of the nervous system. The intellect is unclouded during the whole progress of this malady. Consciousness of danger, and a perfect knowledge of surrounding objects and circumstances, render the condition of the patient peculiarly deplorable. He feels the omnipotent grasp of the monster, and is fully aware of his almost inevitable dissolution.

Dr. Marshall Hall, in his work upon the nerves, p. 57, declares his belief, that the whole order of spasmodic and convulsive diseases belongs to this, the true spinal, or excito-motory division of the nervous system, and that they cannot be understood without a previous accurate knowledge of this system. His experiments, showing the independent action of the spinal marrow and its nerves, in the production of certain phenomena, are highly interesting. After decapitation,
and otherwise removing the influence of the brain, certain muscular movements were provoked by the application of appropriate irritants, which he found impossible to accomplish, when the spinal medulla was destroyed. Upon severing the head of a turtle, and exposing the spinal nerves, and pinching one of them with the forceps, violent contraction of the muscles ensued, not only of the parts supplied by the irritated nerves, but of those situated above and below this point of junction with the chord.—He proposes to divide tetanus into centric and eccentric. When the irritating cause affects the parts within the spinal canal, he denominates it centric; a punctured nerve, lacerated wound, or other injury, produces eccentric tetanus. When we observe the spinal marrow inflamed, with the co-existence of tetanic spasms, we refer the phenomena to centric irritation; when intestinal irritation, and injuries of any kind, are followed by spasmodic contractions, even though upon post-mortem examination no decided evidence of pre-existing inflammation can be discovered, we fairly ascribe the symptoms to eccentric irritation.

Dr. Gerhard declares, that he has examined "the brain and spinal marrow of ten or twelve subjects dead of tetanus, and could not discover any traces of organic lesion; no softening of the spine, or inflammatory congestion, beyond what is discovered in bodies where no spinal symptoms evinced themselves before death." But admitting the accuracy of his observations does not disprove the previous existence of a high grade of irritation. How often do post-mortem researches reveal the entire absence of any morbid lesion of structure, where, during the life of the patient, we were certain of a high degree of abnormal action. But let us refer to the testimony of others. "The spinal chord usually evinces manifest congestion, both in itself and its membranes; more especially at the origin of the nerves, and the amount of the serum is preternaturally and considerably increased. In the traumatic form, it is in the nerves of the part that inflammatory change is to be looked for—not in the spinal chord; for the disease is to be regarded as an extreme example of irritation in the whole spinal system, induced by inflammatory products in some portion of its system.—(Miller's Principles of Surgery, p. 474.) Alterations in the spinal chord and its membranes, are by far the most common appearances found in tetanus, and in such cases there have generally been traces of spinal meningitis. These instances are too numerous to be spoken of individually. Several have been recorded by Reid, Kennedy, Brayne, and others, in Britain; Larrey,
Broussais, Magendie, Recamier, Ollivier, and others, in France; Bergamaschi, Brera, Bellingeri, Uralli, Poggi, in Italy; and Frank, Funk, &c., in Germany. In some cases, the inflammatory appearances were more or less diffused over the spinal chord; and in others, recorded by Ollivier, Pelletier and Curling, they were limited to particular portions of it.—(J. H. Bennet.) Tetanus is evidently dependent upon a state of undue excitability of the whole spinal system, and this may be produced by different causes. That which is termed the idio-pathic form of the disease, has its origin in the centres; it may result in man from the operation of various predisposing and exciting causes, and may be produced in animals by the operation of strychnine.—(Carpenter's Human Physiology, p. 217.) In an interesting case of tetanus, given by Dr. Reid, in the Transactions of the Association of Physicians in Ireland, vol. 1, p. 113, great vascularity, and an effusion of blood, were found around the spinal marrow. In another case, detailed by Mr. Brayne, of Banbury, in the London Medical Repository, vol. 14, p. 1, two or three inches of the inferior dorsal portion of the spinal marrow were suffused by a continuous blush of inflammation, and three small, white, hard laminae were seen between the aracnoid and pia mater.—(Hall, on the Nerves, p. 214.) Here then we have the evidence of some of the most distinguished pathologists and physiologists in confirmation of the pathological views which we entertain. If they be correct, the indications of treatment are obvious. It was the opinion of Hippocrates, that tetanus supervening upon a wound is mortal, and statistical records of the present day lead us to infer, that the number of those who die from its attacks is incomparably greater than those who survive. Of two hundred cases of tetanus which came under the observation of Dr. O'Beirne, not one recovered. Sir J. McGregor saw several hundred cases, and but very few recoveries. Sir G. Blane mentions that three out of twenty recovered that occurred in the West Indies, after the battle of April, 1782. Of thirteen cases witnessed by Mr. Dickinson, Surgeon at Grenada, four were cured. (J. H. Bennet.)

In prescribing the treatment, it is unnecessary to notice the effects of every remedy which has been employed by physicians, but merely to refer to those which seem to be most imperiously demanded. In conformity with the benevolent principle inculcated by Prof. Ford, that the mitigation of pain, is the first consideration which ought to engage the attention of the practitioner, the differ-
ent preparations of opium may be considered as indispensable adjuvants. But, I apprehend, that injury has been incurred rather than benefit, from the inordinately large quantities of opium which have often been forced into the stomachs of patients. It is affirmed, that Mr. Abernethy found thirty drachms of undissolved opium in the stomach of a man who died of tetanus; and that four pounds, seven ounces, and six drachms of laudanum, and six ounces, four drachms and forty-five grains of solid opium were administered to a patient in ten days. Such a course of treatment may in a measure account for that degree of constipation of the bowels which is so often deplored. When called to a case of tetanus, we should examine first into its cause. If the symptoms be dependent upon centric irritation, induced by a sudden check of perspiration, sudorifics should be perseveringly employed. Much vascular excitement should be met with general and local blood-letting, more especially, if there be evidence of spinal engorgement. Blood should be abstracted from the arm until an impression be made upon the pulse, to be succeeded by the abstraction of twelve ounces from the spine, if practicable, by cupping; if not, by leeches. We are told that in one case which recovered, M. Lisfranc bled 8 times, and applied 792 leeches to the spine. Sixty gtt. of laudanum every hour, to be gradually increased in quantity, until some appreciable influence is exerted upon the system, will tend to assuage the agonizing pains of the sufferer. Calomel, in combination with opium, given in sufficiently large quantities to purge freely, may act beneficially, not only by dislodging any irritating substances, in the form of vitiated secretions, or accumulation of worms, but by its revulsive influence. A vesicatory three inches wide, extending from the occiput to the sacrum, should be applied immediately after the acute symptoms have subsided in a measure, and repeated sufficiently often to keep up a sufficient irritation. The warm bath should not by any means be forgotten, for its effects are sometimes astonishing in relaxing the cutaneous emunctories, and overcoming spasmody rigidity. Should eccentric tetanus be caused by the presence of worms in the intestines, 1/2i. turpentine, and the same quantity of castor oil, should be given at once, to be repeated in two hours, if necessary, and assisted by enemata. In case of the failure of this prescription, two drops of croton oil, with one drachm of turpentine, will generally prove effectual. We are amazed at the great quantities of drastric purgatives which are sometimes endured by the constitution. "Dr. Briggs has
Case of Tetanus.

recorded an almost incredible case (Edin. Med. and Surg. Journ., vol. 5, p. 141,) in which, in forty-eight hours, the patient took 210 grains scammony, 80 grains gamboge, one ounce and four scruples of jalap, two pounds and a half of infusion of sena, and 8 grains of calomel, with decided benefit!" The nature of the wound in traumatic tetanus, should be carefully observed. If a foreign substance exists, it should be immediately removed. It is frequently necessary in cases of punctured and lacerated wounds, to dilate the orifice by deep crucial incisions, for the purpose of encouraging hæmorrhage from the part, and relieving the excessively painful distension. Complete section of a partially divided nerve has been practiced by some, but with little success. With regard to amputation of the wounded limb, I am impressed with the conviction, that when tetanic symptoms have fairly supervened, the records of surgery will scarcely warrant such cruel interference. The disease having fairly commenced, is very rarely influenced by any local treatment to the offending part. "Tetanus is one of those diseases which renders null the axiom"—' sublata causa, tollitur effectus.' "It would be as vain to hope to cure rabies by amputating the bitten finger; constitutional cancer, or syphilis, by removing the local disease, as to expect to cure tetanus, after it had set in, by removing the limb."—(Dupuytren's Surgery, p. 548.) It becomes a constitutional disorder, and our remedies must be directed accordingly. The use of mercury carried to salivation has been extolled by many, as possessing peculiar charms in controlling this disease.

Should deglutition be impossible in the use of medicines, we must inject large quantities into the rectum, and employ inunction upon a vesicated surface.

It would require a volume to enter into a narrative of the effects produced by the different powders, pills and tinctures, which have been employed by different medical men. Suffice it to say, that antimony, prussic acid, tobacco, brandy, musk, quinine, phosphorus, electricity, strychnine, ether, stramonium, colchicum, the preparations of iron, digitalis, &c., have been employed to an unlimited extent, and neither one, nor all combined, have exerted any very remarkable curative influence. The vapor bath and cold affusion have borne no better testimony to the curability of this disease. We have already remarked, that the Ancients regarded an attack of tetanus as necessarily mortal; and as at the present day we do hear of occasional recoveries, we are encouraged with the hope, that ere long, the
unprecedented advances which are now being made in the Sciences of pathology, physiology, and chemistry, in elucidating the hidden mysteries of organism, will place even tetanus in subjection to the magic influence of the "Divine Art."

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ARTICLE II.

Thoughts on Syphilitic Ulcers—their treatment, &c. By Robert Edmonds Little, M. D., of Quincy, Middle Florida.

Opinions in regard to the origin, nature, and progress of diseases arising from impure coition, are not more numerous and directly opposite in character, than those maintained by the profession in relation to their treatment: opinions which not unfrequently yield to the scrutiny of experiment—not, however, without first entailing much difficulty on those who have been so unfortunate as to place too great a reliance on any specific mode of cure, modified by peculiarity of constitution. Notwithstanding the partiality of many for the antiphlogistic treatment of syphilis, and the general concession that mercury is a specific against its ravages, our principles want stability, for neither the non-mercurialists, nor their opponents, are guided by any fixed or definite standard. As a consequence, cases are daily met with which being thought amenable to mercury alone, have been rendered truly deplorable by a too free use of the article—while others are immolated at the altar of fear, from a supposition that the remedy inflicts on the system evils, scarcely less to be dreaded than the disease for which it was given. We do not propose at this time to present any thing like an elaborate notice of syphilitic ulcers, or their peculiar treatment;—for this, our means of observation have been too limited, removed as we are from an extensive field for a thorough investigation of the subject. We design to produce observations not presented in the illimitable field of speculation, but the result of cases seen. In our conclusions, we have been uninfluenced by preconceived opinions, or ex cathedra assertions, well knowing how little reliance there is to be placed in assertions and theories, when not backed by facts. All, however, are not destined to look through the same medium—hence, in a great measure, the conflicting evidence of different individuals, not only in
regard to medical, but all other subjects, plain and intelligible though they be to the unprejudiced.

In the July number of the Western Lancet, Dr. E. L. Dudley devotes several pages to a consideration of diseases resembling syphilis. Dr. D. seems to have been a close observer of the treatment pursued by the Professor of Surgery in Transylvania University, in the numerous cases presented for cure; and the conclusions to which he has come—if we do not misapprehend his meaning—are, that all ulcers on the genital organs, save the true Hunterian chancre, are to be regarded as not syphilitic, and consequently not requiring mercury for their removal: conclusions which we apprehend will not be adopted by a very large number of the profession. To differ upon subjects purely speculative, is allowable among men; but for a difference to exist between those who are capable of observing with regard to facts, is contrary to reason, and can be accounted for upon no other principle, than that of one or both parties at issue, are led astray by a partiality for opinions adopted without a sufficient examination, and maintained on account of the ancient relationship existing between these opinions and their supporters. It has been, and still continues to be too much the fault of medical men to receive the dogmas of those who rank high in the profession, without taking upon themselves the trouble of investigating them, and relieving themselves from the errors into which they have been led by their sacred authority. From the time that John Hunter's work on the Venereal Disease first appeared, his authority has generally been deemed supreme, and his followers blinded by his errors. Following in his footsteps, they regard the ulcer so well described by him, as the only one legitimately venereal; thus lessening the number of cases of pox so greatly, as to cause one to imagine that the disease had almost disappeared from the long list of those to which flesh is heir, were it not for the deformed faces and altered voices so often encountered.

From the opinion of Dr. D. we beg leave to dissent. No one form of ulcer is exclusively to be taken as an index of syphilis—they are as numerous almost as the hues of the chameleon, and he who undertakes to diagnosticate the disease, or the reverse, as the ulcer may, or not, present the characteristics of the Hunterian chancre, will, in a majority of cases, fail, and suffer the mortification of having patients return to him after a few months afflicted with secondary symptoms in all their virulence. Syphilitic ulcers appear isolated and in clusters, with and without indurated bases, and present all the
numerous varieties from a healthy to a sphacelated ulcer, whether they be seated on the genitals or in the throat. Like Dr. D., we were taught to regard a majority of these as the result of irritation, requiring for their removal a simple antiphlogistic treatment. Fully impressed with the truth of this doctrine, we acted upon it, and gave it up only when convinced of its futility, and of the injurious consequences attendant upon it. Ulcers on the glans penis, and other parts of the genitals, were, in the beginning of our practice, treated by us as pseudo syphilitic, by mild aperients, and absence from all general and local stimuli, but without in the least benefitting the patient. When suffered to remain untouched, for the purpose of having our "doubts enlightened," we were not unfrequently mortified by the appearance of syphilitic psoriasis and lepra, symptoms similar, we presume, to those attributed by Dr. D. to the use of corrosive sublimate. From his statement, it is to be inferred that secondary symptoms never supervene upon any other, than the true Hunterian chancre. Here we are at issue. We have been more unfortunate than he has—our success less signal than his. How to reconcile these conflicting statements we know not, both being made in good faith.

Dr. Dudley says, "the enquiry may be made, does a syphilitic chancre ever secrete pus—and is not the fact of a chancre having commenced to form purulent matter to be considered evidence that the disease is mastered, and that healthy granulation is about to take place?" We unhesitatingly affirm that it does not unfrequently secrete pus. Several months ago, a young man consulted us, in relation to an ulcer on his glans penis with an elevated border, concave, and discharging a considerable amount of uniformly consistent cream-colored pus. Our advice was not adopted, as we recommended a mercurial course. Three months afterwards he returned, and placed himself under our care for the removal of a long train of secondary symptoms. We have every reason to believe that they would not have manifested themselves if our advice had been adopted. Similar cases might be multiplied almost ad infinitum.

Dr. D. considers the Hunterian sore the only index of the existence of primary syphilis—hence the diagnosis between true and bastard syphilis is easy. Ricord says, "no affection is so ill defined, and no diagnosis so uncertain" as that of syphilis. But doctors as well as philosophers will disagree. With a majority, the matter remains in doubt—and until the diagnosis is understood—safety can
only be ensured by a judicious use of mercury; yet in avoiding Scilla, let us not run on Charybdis.

The case of the medical student reported, is defective in description—the ulcer is described as being "a long, narrow, superficial affair"—yet notwithstanding the omissions, it is fair to presume that the ulcer was legitimately syphilitic, and that the dangerous symptoms were the result of the injudicious treatment pursued. In its early stages, a light regimen, gentle purgatives, and cleanliness, adopted for the space of two or three days, failed to improve its appearances. Becoming dissatisfied at the progress made, he consulted a second physician, who advised a mercurial course; the sore increasing in size, a third was visited, and he in turn considered the use of mercury necessary. Blue pill and opium caused "profuse salivation, and threw the bowels into a state of excessive torpor." The ulcer spread, and an inguinal gland suppurred, and exposed a foul ulcer as large as the palm of a man's hand. The glans penis was destroyed, and the scrotum covered with ulcers. Professor Bush was now consulted—all medicine was suspended—a mush poultice was kept constantly applied, and a light nutritious diet adopted. Under this course, the patient recovered in six weeks, with the loss of the glans penis. He was afterwards operated on for phymosis by Prof. B. The "dangerous extremity to which he was reduced," is attributed by Dr. Dudley, to the "improper employment of mercury." So far we agree with him. The sore is recognized, although the description is vague. The ulcer, from its situation we presume, commenced on the glans penis in the form of a vesicle, which finally assumed the characteristics mentioned. We have met with two cases similar to the above in almost every respect, and producing like it, phymosis. The ulcerations succeeding vesicles discharged a large quantity of purulent matter, and inoculated the neighboring parts, including the scrotum, which in each case was covered with a crop of pustules scattered over its entire surface. Unlike Dr. Dudley's case, they were treated without the use of mercury—secondary symptoms in both cases supervened. In our cases, "the dangerous extremity" to which our patients were reduced was certainly not to be attributed to that disease producing remedy—mercury.

We have said that the ulcer on the glans penis of the student was in all probability syphilitic—and we now add that the violent symptoms produced, as well as the cure, were the result of the mercury
administered—injudiciously as it was. The propriety or the reverse of the administration of mercury in the treatment not only of syphilis, but all other diseases, should be based on the peculiar state of the system of the individual for whom it is prescribed. Preparatory treatment should in all cases be resorted to, and to an observance of this precaution, is in a great measure to be attributed the success of our fathers in the management of venereal diseases, as well as the great length of time that elapses between the cessation of the treatment of the non-mercurialists and the appearance of secondary symptoms. No practice is more injurious, or likely to do harm, than that of giving mercury for the cure of a venereal ulcer, simply because the former is deemed a specific for the latter, without first investigating the condition of the general health of the patient, which should always be prepared for the proper use of that remedy. We could adduce instances of young, robust men, having their constitutions impaired to a serious extent by an injudicious prescription of mercury which acted on the salivary system—but instead of healing the ulcers, only tended to enlarge them—thus disappointing the hopes of the physician in regard to a speedy cure. Such a case no doubt was that of the student of medicine. Had he been bled, purged, and subjected to a meagre diet for a week or ten days prior to the commencement of the mercurial course, by which means the inflammatory condition of his system would have been reduced, the ulcer would in all probability have disappeared in a short time—the patient would not have been reduced to a dangerous extremity, and Prof. Bush not compelled to doubt the correctness of the diagnosis of the physicians who deemed the ulcer truly venereal. Dr. Dudley properly observes, that the alterative doses of blue pill and opium, induced mercurial erethism; thus substituting one disease for another—converting the venereal, into a mercurial sore, after which a withdrawal of the mercury, and the use of a generous diet, were all that was necessary to relieve him, of a disease which at first was an ulcer—"long, narrow and superficial."

In urging the necessity of preparatory measures, we do not mean that depletion is in all cases to be used. Individuals vary as much in their habits and constitution, as do syphilitic ulcers. We must be guided by the condition of the patient and appearance of the ulcer. In America, where venereal patients are usually in the beginning hardy and robust, depletion is rarely required to prepare the system for the beneficial influence of mercury. In the hospitals of Europe,
the reverse is true; hence the value to surgeons of the advice of John Hunter, who said, "I think no kind of diet has any effect in retarding the cure of syphilis, and I think a man would get equally as well if he lived ever so luxuriant, got drunk every day, and slept in the fields." To a certain extent, Hunter was right—his advice should be followed only in cases of debility, either from previous dissipation or the inordinate use of mercury.

To surgeon Rose, of the Cold-stream Guards, is due the credit of having introduced to the notice of the profession the fact that syphilis in all its stages could be cured without mercury; his announcement was accompanied by reports of numerous cases so relieved. The pretensions of the anti-mercurialists we do not intend examining, as it is conceded that instead of advancing in popularity, they are losing ground. A majority of the cases reported by him and his followers, (among whom may be mentioned M. Guthrie, Dr. Green, and others equally distinguished,) as cured finally, had secondary symptoms—such as had not, are considered by Dr. Dudley (in his attempt to limit the number of true syphilitic ulcers) as pseudo-syphilitic sores. They may or may not have been syphilitic; and although we are an advocate for the use of mercury in all cases as a means of safety, still we are ready to admit that a case now and then occurs, in which the primary ulcer is destroyed by means of escharotics, without the supervention of secondary symptoms; although mercury was not used either internally or externally. Has Dr. Dudley never seen a case parallel to the following, mentioned by Rousseau: A young man, having forgotten in a spell of merry enjoyment that he had left at home his female companion, indulged himself in a taste of variety: came to himself again, and hardly recollecting his dream, he returned to his wife, without any apprehension of being in a situation to infect her; a day or two after, beginning to feel an uneasy sensation upon glans penis, he found on examination that he had three little sores as big as the head of a pin. He applied sulphate of copper, and in the course of three days was as well as ever. Shortly after he went to sea, leaving his wife unapprised of the impending evil. A few days after his departure, painful sensations in her inguinal regions were soon followed by the appearance of swelling: suppuration and ulceration occurred, and she was relieved only after the use of medicine for six months. The husband never afterwards had any symptom of venereal affection, Cases similar to the foregoing are we presume familiar to every physician. Spoken of as they are
by Ricord and other writers on venereal, we are inclined to believe that the small sores on the glans penis of the husband, and the buboes in the groin of his wife were truly syphilitic: the disease in the former was destroyed by the use of an escharotic, without causing secondary symptoms—while the latter, was less fortunate, being reduced to a "dangerous extremity," whether by the injudicious use of mercury or not, we are not informed. In regard to escharotics, we can truly say, that we have always found them useful—oftentimes indispensable. Their employment is never dangerous, or likely to disguise, or lock up the disease; they always leave behind them a certain index for the employment or otherwise of mercury. We refer to the button-like hardness of the cicatrix.

After all that has been said in favor of the non-employment of mercury, its advocates are beginning to change their opinions, and acknowledge that mercury is the antidote for syphilis. From the army reports, most of the cases said to be cured, were cases of recent origin, no further advanced than the simple venereal pustule, or original chancre—while the others were almost universally attacked with secondary symptoms. Although mercury is the only acknowledged specific against its ravages, it is not unfrequently advised—given, when its use is certain destruction. Its administration is not well understood, if we may judge from the conflicting statements of various writers, and knowledge in regard to it can only be gained by experience. The use of mercury being in itself an evil, and its effects frequently so deplorable, it has become an object with the profession to know to what extent it should be carried to be beneficial—a problem which experience has heretofore found difficult to solve: a part of the profession contending that it should be carried to the extent of producing salivation, while others deny the necessity of its being carried so far. Our observation leads us to believe, that a moderate soreness of the gums, continued for a time, proportioned to the violence of the symptoms, and temperament of the individual, is all that is necessary (so far as mercury is concerned) to effect a radical cure of syphilis. The remedy should be gradually introduced into the system, taking due care not to enfeeble the powers of life to an unnecessary extent. We regard not so much the amount of soreness of the gums, as the amount of mercury taken, and the effects produced—viz, healing of the sore, or destruction of the indurated cicatrix, if an escharotic has been used. A speedy salivation is to be deplored—while, on the other hand, a too great tardiness in the
specific effect of the mercury is to be guarded against: in the former case, its effects are to be counteracted by appropriate living, and the use of adjuvant remedies—in the latter, the dose is to be increased. The danger arising from profuse salivation, we need not mention; its effects have been witnessed by almost every practitioner. It becomes the profession to be cautious in its use. Its consequences are so dreadful under certain circumstances, that it is better to err on the safe side, and give too little rather than too much. When not enough has been given to effect our object, the dose can be increased: when too much is administered, its ravages are almost without limit, not unfrequently leaving the original disease uncured, in addition to its own poisonous effects.

In conclusion: much has been said and written on the subject of syphilis, and still the disease is but little understood. Revolutions are constantly going on in regard to its treatment, and it is to be feared that we are not more successful in its management than our fathers. In each successive change, there has been but a substitution of error for error. To arrive at any thing like perfection, in the treatment of this or any other disease, we must rely upon facts only, disregarding the cherished opinions of teachers when not in accordance with experience. By such a course alone shall we be enabled to gain true knowledge concerning the nature and treatment of syphilis, and thereby disarm the disease of all its terrors.

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ARTICLE III.

Case of Acute Traumatic Tetanus, treated with the Cannabis Indica (Indian Hemp) unsuccessfully. By Paul F. Eve, M. D., Professor of Surgery in the Medical College of Georgia.

To Professor O'Shaughnessy, of the Medical College of Calcutta, the profession is indebted for the introduction of the Indian Hemp into the materia medica; and in no other disease is it more recommended than for traumatic tetanus. Within the past few months, there have been various and somewhat conflicting reports respecting the efficacy of this article as a remedial agent, in the British medical journals, and the subject is beginning to attract attention in our own periodicals. In the 4th number of this Journal, we published some
notice of the experience with it by Mr. Donovan of Dublin, and Dr. Lawrie of Glasgow; and under a different head of this number, the reader may find the subject continued.

The prognosis of acute traumatic tetanus is so exceedingly unfavorable, that the profession is prepared at all times to give a fair trial to any suggestion or agent promising success in its treatment. The aphorisms of Hippocrates, that tetanus supervening on a wound, is mortal—they who are seized with tetanus, die within four days, are just as true now as when they were written. The great military surgeon of England, the late Dr. Hennen, confesses that he never saw a case of acute symptomatic tetanus recover. In the acute species, Dr. Dickson of Europe, found all curative measures followed by unqualified disappointment. Mr. Morgan's testimony is still stronger; he says, I have never yet seen or heard of an instance of recovery from acute tetanus.* The fact that Dr. O'Beirne witnessed two hundred cases in the peninsula of Spain, not one of which recovered; and the experience of Sir James McGregor, in several hundred cases which occurred among the British troops in that country and Portugal, very few of whom, he says, were benefited by any medicine or plan whatever, is already alluded to in this number of the Journal, by our valuable collaborator, Dr. Stevens, of Liberty county. Mr. Alcock, surgeon to the British Legion serving in Spain a few years ago, noticed seventeen cases of traumatic tetanus, one of which number alone recovered. And where, we ask, is the practitioner of medicine or surgery, who cures trismus nascentium? It is true that occasionally, by almost any plan of treatment, and even by very opposite ones, this affection, in some of its varieties, is cured. Cases to this effect may be found detailed in every medical journal, (several even in this very number) still no one will deny but that acute traumatic tetanus ought to be considered an opprobrium medicorum.

We find it stated in Druitt's Surgery, that with the resin of the Cannabis Indica, or Indian Hemp, Dr O'Shaughnessy and others, cured eight out of twelve cases of tetanus; and Mr. Donovan says it was almost uniformly successful in his practice. The variety of the disease is not mentioned. In a debate which occurred the 22d April last, in the Royal Medical and Chirurgical Society, and reported in the London Lancet, on the reading of a "case of traumatic tetanus successfully treated by large quantities of wine and brandy, with

* Vide Cyclopaedia of Practical Medicine, vol. iv., p. 369.
other means, and in which Drs. Watson, Wilson, Davis, King, Snow, Curling, (author of a work on tetanus,) Solly, Simon, Caesar Hawkins, &c., took part, we are surprised to see no allusion made to the Indian Hemp.

In the case of Prof. Miller, (who has recently published the best work on the Principles of Surgery,) reported in the London and Edinburgh Monthly Journal of Medical Sciences, for January, 1845, the success cannot be ascribed exclusively to any one agent employed. We refer to another part of this number for the history of this case, where also may be found two or three others, taken from the last number of Braithwaite's Retrospect.

In the September number of the New Orleans Medical and Surgical Journal, may be found a case detailed by Dr. Willson of that city, in which the Indian Hemp was used with success, at least for a time. The tetanus occurred in a negro man, and on the 25th May, 1845, Dr. W. was called to it in consultation with Dr. Farrell. Two weeks before, he was attacked "with stiffness and uneasiness in the back of his neck, consequent upon exposure to wet and inclement weather." "We subsequently learned (says Dr. Willson) the fact of his having suffered, about two months previously, from a punctured wound of his foot, that suppurated, but healed in a short time without any untoward symptom." This was a chronic case, continuing more than a month, but in which the Cannabis Indica was employed with good results. In a postscript, however, by Dr. Farrell, a few weeks after the patient was dismissed, cured, he says—"the case has terminated fatally." In five days from the time he was considered well, he was unfortunately attacked with measles—clonic spasms immediately supervened, and notwithstanding the "Indian hemp was given in large doses—also, brandy, morphine and quinine—without for a moment checking the progress of the disease." Dr J. Farrell adds that, "two years ago I treated a case of traumatic tetanus with the Cannabis Indica; on the fourth day the symptoms were much alleviated, even in a more marked degree than in the preceding cure; unfortunately the supply of the medicine became exhausted, and none could be procured."

From the account of all the cases of tetanus published, in which the Indian hemp was tried, it still remained an unsettled question, whether it could be relied upon in the acute traumatic variety. So far as one instance can decide the matter, wherein the remedy was faithfully employed, and it alone almost exclusively, we are inclined
to the opinion that it may relieve, but will not cure. Certainly if ever there was a case well adapted to give the article a fair trial, this was one. An acute attack from a nail in the foot, entirely neglected for near thirty hours after the incursion of the symptoms, the failure of the ordinary means to afford even relief, and then the steady application of increased doses of the hemp for twenty-four successive hours, under unremitting personal attention, were well calculated to exhibit the remedial powers of the medicine.

The article used had just arrived from England, and was obtained through one of our apothecaries, a graduate of the Philadelphia College of Pharmacy. It was insoluble in water—was precipitated when the tincture was much diluted, and adhered to the hands and vessel. The tincture was made by adding an ounce of the extract to a pint of undiluted alcohol.

Case. Richard, a black man, aged 25, and a carpenter by trade, had a nail run into his foot, by treading upon it, on Friday the 26th of September. He was of good constitution, well made, and enjoyed excellent health. He had a small umbilical hernia, supposed to be congenital, but which gave him little or no inconvenience. It, however, rapidly increased in volume during the attack of tetanus, and pressure was required over it at every paroxysm, to restrain the protruding bowels.

The wound made by the nail was upon the planter surface of the left foot, opposite the metatarso-phalangeal articulation of the little toe, and was thought to have penetrated deeply. A lye-poultice was immediately applied, and Richard returned to his work, using frequently a ladder. On the evening of October 2d, the seventh day after the accident, he complained of pain in his neck and back. The next day he kept his bed and took salts and senna, which freely moved his bowels. At midnight between the 3d and 4th, he had spasms, and Dr. Joseph A. Eve was sent for. He enlarged the wound with a lancet, and some pus was evacuated—a lye-poultice was then applied to the foot. A blister was placed over the whole length of the spine; a gr. of morphine given, and half a tea spoonful of laudanum directed every hour until relief and sleep were obtained.

Oct. 4th, 7 o'clock, A. M. This is the ninth day since the accident, and about thirty-five hours from the commencement of his present symptoms. Dr. E. found he had taken the laudanum three or four times, and in addition to the narcotic and revul-
sive treatment, gave 20 grs. calomel. The body was found arched backward.

I was invited to see the patient at 10, A. M. Symptoms—trismus and opisthotonos; great distress of countenance; drops of sweat on his face and neck; decubitus on the back; great difficulty of deglutition; pulse 90 to 100, full but not strong; respiration 30 to 40—variations dependent upon convulsive spasms which occur every few seconds. Prescription—2 grs. of the Extr. of the Cannabis Indica, in tincture, every fifteen minutes. He swallowed two doses with great difficulty, and then vomited. It will be remarked here, that the 3rd was a cloudy day, with the wind at N. E.—Thermometer 60 to 69—Barometer falling. On the 4th, it rained steadily all day, resembling the 3rd in other respects. As the patient's accommodations were not good, he was brought to my office, and I was not absent from him more than three or four hours altogether during the whole treatment. I administered every dose of medicine, and gave him nearly all the nourishment he could be induced to take.

At 11 o'clock, examined the wound; it is healing under the lycopoultice; and finding the stomach very irritable, I gave of the tinc. of the Indian hemp 5 grs. diluted in tepid water in an enema. At 12, M., injected into rectum 10 grs. At half-past 12, gave 5 to 6 grs. per orem, but which were immediately rejected. At 1, injected 10 grs. more. By great persuasion got the patient to take some brandy and water, and a few table-spoonfuls of Madeira wine. To this he was violently opposed, and though he could now swallow freely and his stomach retained these stimulants, he would not be induced to drink them freely. At half-past 1, the patient has evidently improved—the paroxysms of spasms are now less frequent and less violent—he sleeps quietly, and occasionally snores. He lies on his back, keeps his eyes closed, can open his mouth a little, but has no disposition to talk—seems to be in a half narcotised state. No material change yet in the pulse or respiration.

At 20 minutes past 2 o'clock, gave 4 grs. of the hemp per orem in brandy and water; repeated the same quantity in 5 minutes; they are vomited in 8 minutes. At 3, administered 15 grs. to rectum. Gave 5 grs. sulph. quinine in brandy and water; vomited in three minutes. Drs. Newton and Ford now saw the patient, and were satisfied that the rigidity of the muscles was not great, as he could open the mouth to about half its usual extent, and he laid nearly straight on his back—the convulsive paroxysms recurring about every two to
seven minutes, Richard was observed to scratch his face with his hand, and to draw up his left thigh and leg.

At 4 o'clock, with assistance, he turned on his right side, and at 5, called for a vessel and passed about half a pint of high colored urine. Half-past 5, gave 15 grains of the Cannabis Ind. At 7, took a little arrow root and immediately vomited. Past 7, injected into rectum 24 grs., and at 9 o'clock gave 48 grs. of hemp in enema. Half-past 11, seems to be doing well, pulse still 100, respiration 30, paroxysms some minutes apart. We recommended the brandy and arrow root to be freely given.

Oct. 5th, 3 o'clock, A. M. Called up to patient, and find him worse; pulse 130 and respiration 40. Complains of difficult breathing, and his convulsive spasms come on every minute or two, and are more severe. Administered 16 grs. of hemp per anum; and the patient was evidently improved by it. The respiration became better, the pulse fell to 110, and quietude and sleep followed. 6, A. M. Is again worse; swallows with difficulty, cannot open the mouth, and has obstinately refused to take brandy or wine. Immediately injected 48 grs. of the Hemp. At half-past 8, repeated the 48 grs. The patient is impressed with the belief that he will die. His respiration is 20, pulse 100 to 110; lies with his eyes still closed and his mouth half opened; spasms about half an hour apart.

Half past 10. The wound has healed, and the patient has not complained of it at all from the time it was lanced. Gave \( \frac{1}{2} \) 3 of tobacco in decoction per anum. The patient cannot be roused either by calling or shaking him. In a few moments after this, he vomited a dark colored fluid. Appears to be sinking. Injected brandy-toddy into the oesophagus through a catheter past into the nostril, but it was returned by the mouth. At half past 12, applied electro-galvanism, with the assistance of my friends, Messrs. Martin and Milligen, students of medicine. One wire was placed near the occipito-spinal junction, and the other to the sacrum. It operated for fifteen minutes, and agitated convulsively and forcibly all the muscles. The effects were increased activity in the circulation, (pulse 160,) relaxation of rigidity in the muscles, and much improved respiration.

Half past 3, P. M. The patient unexpectedly asked for water—urged hot brandy-toddy and wine upon him, but he would swallow only a little water. Pulse 150—respiration 38. At 4, gave in enema 1 3 tinct. assafetida and 1 3 tinct. hemp, in a little water.
Tried electro-galvanism again, but found the patient sinking—he died quietly at 6, P. M. This was within four days from his attack with the first symptoms of lock-jaw. He retained all the injections; and I find, by examining the bottle, five ounces of the measured pint of the tinct. of the hemp remaining. I estimate the quantity administered in 24 hours to be near 6 3. It produced no aphrodisiac symptoms—he once asked for bread; took a morsel, but did not swallow it. At another time he called for chicken-soup. Only half a bottle of Madeira wine and about the same quantity of brandy were consumed.

With regard to the fact that there were complete relaxations of the muscles during the treatment of this case, I think I am positively certain. That those of the lower jaw, neck and abdomen—indeed I may add too of the lower and upper extremities—were rigid only at certain periods during the spasmodic contractions, all who saw the patient will admit. The pulsations of the abdominal aorta were easily counted through the opening of the umbilical hernia. The spasmodic convulsions recurred at first every ten or twenty seconds, and the longest intervals were about half an hour. They more frequently came on spontaneously, or in the natural course of the affection, but were occasionally excited by efforts of deglutition, &c.—the exacerbations never lasted more than a few seconds. The tonic contractions or spasm seem to start convulsively from the spinal column and agitate the whole frame. There was no peculiar action or movement in the leg or thigh of the wounded foot. His bowels were not moved during the whole progress of his attack, to the fatal termination. For several hours he passed no urine, and after the first evacuation, it would be squirted forth with much force, and before the vessel could be prepared to receive it. His face and neck were bathed in perspiration at several different times, but at other moments was of natural condition in this respect. He sometimes asked to be fanned, but never complained of pain.

I believe this is a faithful narration of all the phenomena which transpired during the progress of this case. And though the conclusion drawn from it is rather adverse to the exalted opinion entertained by some of the curative powers of the Cannabis Indica in acute traumatic tetanus, still if it can give only relief, it is certainly a valuable acquisition in the treatment of this almost constantly fatal disease. As the opportunity is now generously offered by the spirited editor of the Boston Medical and Surgical Journal, of procuring the
article from the original source, Calcutta, my next supply will be genuine, whatever doubt may arise as to the character of that which has just been employed.

(Through a mistake, I regret that a post-mortem examination was not made.)

PART II.—REVIEWS AND EXTRACTS.

Amputation of the Limbs, in consequence of gun-shot wounds. By M. Lisfranc—being a part of the yet unpublished Treatise of Operative Medicine, by that distinguished Surgeon. (Translated from the Bulletin de Thérapeutique.)

Gun-shot wounds are among the most frequent of the causes of amputation: they produce very often comminuted fractures; they penetrate often into the articulations; they cause contusions and lacerations of the soft parts; the bodies put in motion by gun-powder convert superficially into an eschar the flesh with which they come in contact. When a projectile has removed the muscles of the posterior part of the thigh for about two-thirds of their length, when a wound of this kind occupies the gastrocnemial muscles, I think that it is necessary to amputate, although the arterial and nervous trunks may not have been sacrificed. The extent of the solution of continuity is very considerable; the surface presents conditions less advantageous than the wound resulting from an amputation: the former will cause more serious accidents than the second. The cutting instrument will indeed produce much suffering, but if we do not have recourse to it, the gun-shot wound will cicatrize with difficulty, and in general after a very long time, the cicatrix will be profound, adherent and of large dimensions; it will be easily lacerated; the loss of substance experienced by the muscular system, will embarrass the movements and render many of them impossible. I have seen some subjects, upon whom amputations were not performed after wounds of this character, and the slowness of the cicatrization, the accidents which preceded it, and the bad result obtained, caused much regret that the limb had not been removed. But should the wounds of which we treat, occupy the arm or forearm, inasmuch as their functions are not the same, I think that an operation may be generally avoided.
When projectiles have reduced the muscular system into a pulpy state in a great extent, without having lacerated the skin, the patient ought to be subjected to the precepts which we have established, and which as we have just seen, vary in different localities.

Amputation is especially required by vast solutions of continuity complicated with opening of voluminous vessels, or laceration of the nervous trunks.

We should recollect that on the field of battle, in the camp, we are obliged to perform amputations much more frequently: the opinions which we are about to advance, will be based upon facts observed when the wounded were in circumstances to receive all necessary care; these opinions would be essentially different in the contrary case.

It has been pretended in modern works, that wounds of the articulations produced by a ball, were less serious when the articulation had not been largely opened. We do not entertain this idea, because the fluids furnished by the solution of continuity do not then find a ready escape, because they remain between the wounded articular surfaces and determine much irritation, and inflammation almost always fatal.

Larrey was so well convinced of this truth, that he has given the advice to make when necessary large openings to prevent the detention of pus. Experience has sanctioned this excellent practice in the hands of its author, and I have adopted it often with success. When the projectile opens the joints largely, without occasioning a too considerable loss of substance, it produces then a solution of continuity less disadvantageous than if it were narrow.

But is it necessary to resort to an amputation, when an articulation of the first or second importance has been opened? Labastide reports many cases which shew that the articulations of the wrist, elbow, foot and knee, having experienced penetrating wounds, the patients were cured without the removal of the limb. Dupuytren obtained the same success in those wounded during the revolution of July; Lombard, Léveillé, Percy, Faure, &c. cite facts of the same kind. It is said that these cases of success are but few in number, and that they are opposed by a greater number of cases of failure. This assertion is not exact with respect to the practice of Dupuytren.

I always suppose the patients, I repeat, placed under favorable circumstances as I have above stated, and I maintain that by employing the method of treatment which I have modified, wounds of the
articulations should very seldom require amputations, unless the soft parts surrounding the articulation have experienced too great a loss of substance: of this I have given the proof at the Hôpital de la Pitié and at the hospital of Grenier-d'Abondance, where I have preserved limbs for a great number of patients whose scapulo-humeral, humero-cubital, radio-carpal, carpo-metacarpal, tibio-femoral and tarso-metatarsal articulations, had been profoundly wounded.

It is generally believed that gun-shot wounds, although produced by a ball, almost always require amputation, if the body of a long bone and more particularly of the inferior limb, has experienced a comminuted fracture. I reject this precept; my opinion is based upon a great number of successful cases in which my mode of treatment was employed, and without which I am certain I should have been unsuccessful, like the practitioners who do not adopt it. Among a great number of facts, the following may be cited; but let us premise that in fractures with solution of continuity of the soft parts, the detention of even a small quantity of pus may produce general accidents of a very serious and often fatal character.

Lieutenant-Colonel Grand, was grievously wounded near Grenier d'Abondance; many balls riddled his arm, and the humerus was fractured in two places. Amputation was proposed; I did not entertain that opinion; I employed the medication above indicated, and for ten days every thing announced that it was about to be crowned with complete success. Suddenly a severe chill supervened; the appetite was lost, and a serious gastro-enteritis was developed. No error of regimen had been committed; the tumefaction had somewhat increased in the unsound limb, and also the pain. I believed that all these accidents depended upon the presence of pus, for which I sough with the greatest care. I recognized a slight fluctuation, and gave issue to scarcely two tea-spoonfuls of purulent matter—the next day the chill did not return; the affection of the intestinal canal had already disappeared, the appetite was restored, and the arm had greatly diminished in volume. M. Grand was cured, and is now colonel of a regiment of dragoons. This fact alone is sufficient to excite the attention of the practitioner. We have observed a great many others of the same kind, which it is unnecessary to cite. It is hardly necessary to say that by an early evacuation of the pus, the local and general accidents which it produces, are dissipated even with rapidity, but that if on the contrary, it is suffered to remain, these accidents may become very serious and often fatal. I
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will add, that amputation then often becomes indispensable, and that frequently also the accidents are so intense and rapid, that there is no opportunity for performing it.

The brave Colonel Lebeau had a comminuted fracture of the arm at its superior third, from a ball at the battle of Waterloo; eighteen days afterwards he came to Paris, with the commencement of a very vicious callus; I broke it and placed the fragments in very regular contact, and the fracture was cured without deformity.

When I was charged at the Hotel Dieu, with a service in which were the soldiers who had been wounded at the battle given under the walls of the capital, Dupuytren and myself saved from amputation six patients whose arms had experienced comminuted fractures by balls; in two of these subjects, the solution of continuity of the bone occupied the middle part of its body, in three of them, it was observed upon the inferior third of the humerus, and in one, a little above the insertion of the deltoid muscle; in all these subjects the suppuration was of long duration; no spicula of bone was extracted; four were cured perfectly, with a more or less pronounced shortening of the limb, two left the hospital with fistulae which furnished a small quantity of purulent matter; one of them returned after several years to show me his wound, which did not prevent him from exercising the business of a jeweller; sometimes, however, the arm was slightly tumefied, because the pus remained in the fistulous passages. I enlarged their orifices, and the accidents disappeared.

But when the thigh-bone is the seat of a comminuted fracture, it is generally believed to be necessary to amputate. Lombard, M. Gautier de Claubry, S. Cooper, Percy, Larrey and Guthrie, say that they have only seen a few patients saved; most succumbed when the limb was not amputated; Ravatons assures us that the wound of which we speak is almost always mortal; M. Ribes has not met with a single cure; he has observed ten soldiers, upon whom the suitable care was bestowed, and they all perished; he adds, that in four thousand soldiers in the Hopital des Invalides, he has never seen one recover after the accident of which we speak. We should remark, however, that with the exception of the ten soldiers mentioned by M. Ribes, the others appear to have been treated in the army, where the necessary means for the care of the wounded are almost always defective, and where these unfortunates are generally transported to great distances in unsuitable vehicles and over bad roads; the reverses which were experienced must then almost necessarily have occurred. It has
been said that in Paris and Belgium, patients do not suffer for the want of any of the means necessary for their cure, and that nevertheless more success has not been obtained; but I do not think that they have employed the mode of treatment which I have indicated, and by whose aid we may almost always avoid or victoriously combat inflammation. I believe then, that in the accident of which I now speak, amputation of the thigh ought not in general to be performed before the inflammation is developed, and before we have acquired the certainty that it will resist a well-directed medication; the formula of M. Serres d'Uzes for mercurial ointment should not be forgotten. All surgeons know, that with the exception of phlebitis and the absorption of the pus, which may take place in all wounds, inflammatory engorgements and its consequences are the only things formidable in the solutions of continuity, of which we treat. I confess, however, that my opinion is not yet based upon a sufficiently great number of facts; but it reposes upon analogies furnished by the thoracic extremities, whose comminuted fractures caused by fire-arms and treated in the manner which I have stated, are almost always unproductive of any grave accident.

Dupuytren has cured one patient. I have saved several; I have not lost one. I have preserved in my Surgical Clinique the two following facts: "I cured without amputation, at the Hopital de la Pitié, two patients wounded in July, 1830; one had received a ball which caused a comminuted fracture of the femur; the other had a fracture of the same limb, which was caused by a bullet, that had also caused a very violent contusion for a pretty considerable extent; no accident supervened; the constitutions of these two wounded persons were very good; their internal organs were in an excellent condition, a circumstance which ought to be much considered in determining the question of an amputation or of the preservation of the limbs.

I also shewed this morning at my Clinique at the Hopital de la Pitié, a patient who was affected in 1814 with a fracture, with wound and spicule at the junction of the superior, with the middle-third of the femur; a complete cure was obtained in the course of a year, without a fistula, and was maintained until 1835, at which period the patient walked very well and experienced no other inconveniences, except those resulting from a shortening of the limb, he hit it very violently against one of the corners of an anvil, and there supervened an abscess, of which he was cured.

It has been said that a comminuted fracture of the femur, produced
by a ball, is almost always followed, when it is cured, by fistulae and engorgement of the limb, which not only prevent the complete exercise of its functions, but which also cause eventually the death of the subjects, in a very great number of circumstances. I cannot admit these ideas; I have had the honor of some experience in military surgery; I have preserved relations with officers in whom the fistulous passages of which we are speaking, persisted; I have already said, that there is developed, it is true, from time to time, tumefaction, which is owing to the presence of pus in the substance of the tissues, but which disappears when the fluid is extracted. These persons walk very well; the suppuration which persists in a small quantity, incommodes them but very little; they are in a more advantageous condition than if they had been subjected to amputation, which it is hardly necessary to say is too often fatal.

The fistulae of which we treat, may be complicated with even a considerable engorgement of the limb; sometimes it is the result of the inflammations which have primitively existed; at other times it is owing to phlegmasia neglected or badly treated, and occasioned by the presence of pus retained in the fistulous passages; this latter cause may be prevented by maintaining an easy escape for the purulent matter. In all cases, we have been in the possession for a great many years of powerful means to combat simple indurations; whether by the aid of local sanguine evacuations wisely directed when sub-inflammation exists, or with discutientes when phlegmasia is absent. I have succeeded by following this treatment, in dissipating considerable hypertrophies of the thigh, and the patients afterwards walked with tolerable facility.

If the treatment be directed by surgeons who believe in the incontestable advantages of the alliance of medicine with surgery, and who are not entirely mechanical in the exercise of their profession, it seems to me impossible that patients should succumb in consequence of their fistulae, unless their constitutions present some irremediable vitiation.

A soldier experienced a fracture of the right thigh, produced by a ball; the solution of continuity occupied the central region of the bone; amputation was not performed; the bone had consolidated, but there remained three fistulae which penetrated to a great depth into the substance of the limb; no spicula was detected by the probe, which did not reach to the osseous tissue; the suppuration was abundant; the induration of the soft parts was very considerable throughout
almost the entire extent of the thigh whose volume was augmented by one third, and symptoms of sub-inflammation existed. I employed emollient cataplasms; I applied twelve leeches; this evacuation was repeated every ten or fifteen days, according to the strength of the patient, and the progress or suspension of the amendment. When the phlegmasia disappeared, and the disease no longer continued to diminish, we suffered seven days to elapse, when we had recourse to discutients, and suspended the employment of them when they caused too much excitement or when the inflammation returned. Five months were sufficient to restore the limb to its normal volume; there remained no induration appreciable by the touch; the pus was formed in small quantity, and the patient walked tolerably well when he left the hospital. We have seen this man for several years, and the success has continued about the same. In cases of this kind, the iodide of potassium, administered internally, would produce excellent effects.

Captain V. received at the battle of Waterloo a ball, which fractured the femur at the point of junction of its superior with its middle third; the fracture was consolidated, but fistula persisted. The patient walks sufficiently well. From time to time pus is retained, when pain and difficulty in taking exercise ensue; but when the purulent matter is evacuated, the tolerably good condition which we have indicated returns. I have been the physician of Capt. V. for eight or ten years.

Two or three times a year, there comes to my consultation an old soldier, whose femur has been fractured about an inch above its middle; he walks almost without lameness, and has two fistulae, one upon the anterior and the other upon the external region of the limb, which is slightly atrophied, although there exists a very limited induration. He sometimes experiences pain, and tumefaction supervenes; he has learned to dilate the orifices of the fistulous passages by means of prepared sponge, the pus escapes and the accidents disappear; incisions are very rarely employed.

Let us say, in concluding, that if fractures caused by gun-shot wounds are complicated with laceration of the principal blood-vessels of the extremities, it is advised to perform amputation. But in cases in which the soft parts have not experienced considerable laceration or loss of substance, and more particularly in wounds of the thoracic extremities, may not an opposite course be pursued? If, indeed, by the method of treatment which I have indicated, we succeed almost
always in avoiding or in combatting victoriously acute inflammation, would not the ligation of the opened artery succeed, though we should make abstraction of the various kinds of apparatus intended to maintain the fragments? We know that many fractures are cured without this apparatus, and that frequently the callus is not too disadvantageous—sometimes even it is not too irregular. I leave to practitioners the care of meditating upon these ideas.

Guns bursting in the hand ordinarily produce very extensive wounds, in consequence of which, however, amputations are very rarely performed; the flaps which cannot live are removed, the surface of the solution of continuity is made as smooth as possible, and a cure almost always takes place, though the first metacarpal bone may have been removed with the thumb—though the articulations of the bones of the carpus with each other, and with those of the metacarpus, may have been more or less opened. I have seen my father obtain very great success in circumstances of this kind. I should remark, however, that he practiced in a very healthy climate, where men enjoyed excellent constitutions. Would it not be possible in cases of this kind to avoid an amputation of the fore-arm, when the disorders in the radio-carpal articulation were not too extensive? We have cited above, a case which inclines towards the affirmative of this question.

Other things being equal, fractures complicated with a solution of continuity of the soft parts, and occasioned by ordinary causes, are less serious than those produced by gun-shot wounds; they offer also less danger in the thoracic, than in the abdominal extremities. It is often very difficult to distinguish the circumstances in which amputation should be performed, from those in which it should be rejected. If several surgeons are assembled to decide this important question with respect to a patient who is before them, it is not uncommon to hear them pronounce opinions essentially different. Let us repeat, that if the locality be advantageous, if the patient be well constituted and the intestinal canal in an excellent state, if his moral condition be good, if the animal economy be not tainted with any virus, operations should be more rarely performed; for in the favorable circumstances which we have just indicated, success has exceeded frequently all hope. I am fond of repeating, to young surgeons who have pursued their studies in the hospitals of large cities, that they should distrust the cases and observations which they have there collected, and that elsewhere amputations should be much more frequently rejected.
When the principal vessels of the fractured limb are divided—when there exist considerable ecchymosis and sanguine effusion—when the soft parts are pretty extensively lacerated or contused, and the articulation, either of the shoulder or of the elbow, or of the wrist, or of the hip, or of the knee, or of the foot, with the leg, is opened, it is necessary to amputate. But when the large vessels have been spared, when the large joints are not in contact with the air, we do not have recourse to the removal of the limb, though the fracture be comminuted, though the effusion of blood be pretty considerable, and though the soft parts be lacerated and bruised to a certain extent. We succeed better, I repeat, upon the arm or fore-arm, than upon the thigh or the leg. I have frequently applied these principles at the Hopital de la Pitié, and all know the great success which I have obtained. A patient who occupied No. 14 of the ward Saint-Antoine of our hospital, was cured of a fracture of the inferior third of the leg, which presented the following circumstances: obliquity of the osseous solution of continuity for two inches upon the tibia, which was denuded to the extent of about two inches and a third from the tissues which should have covered it; the superior fragment of the bone crossed the direction of the inferior one and was lodged at the external side of the latter. In consequence of the dimensions of the wound, I was enabled to recognize this displacement. I produced a relaxation of the muscles; I seized the former of these fragments with the thumb, and index and middle fingers; I raised it at first, and then carried it easily inwards and a little backwards, where it remained without the assistance of any apparatus; the limb was only maintained in a semi-flexed position by cloths folded like a cravat, and disposed transversely upon it. I will remark that, before I had recourse to the manoeuvre which succeeded so well, it had been impossible for me to reduce the fracture, although the displacement longitudinally was very slight, and although I had employed great efforts, extension and counter-extension having been established. It would be useless to say, that the soft parts had been extensively lacerated, and that much blood had been effused among the tissues. The cure certainly did not take place without deformity of the limb; but it is evident that the subject is in an infinitely more advantageous condition than if amputation had been performed. The inflammation and tumefaction were slight, and a counter-opening was made behind the fibula to facilitate the escape of the pus, the quantity of which was inconsiderable. General bleeding and diet were employed,
Amputation of the Limbs.

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according to the principles upon which we have insisted. I combatted, victoriously, a delirium which was very violent and without fever, with musk administered internally in large doses; the sulphate of quinine triumphed promptly over the extreme prostration which had followed the exaltation of the nervous system.

A Professor of one of the Colleges of Paris, had an oblique fracture of the inferior third of the leg, with laceration of the soft parts, to a great extent; the superior fragment projected through the flesh; an extensive ecchymosis existed. A surgeon, attached to one of the hospitals of Paris, had already proposed the removal of the limb. I was called—I did not entertain that opinion. I employed my method of treatment; the apparatus was not applied even until the sixth day; no accident occurred; the cure was complete, and the patient does not limp. If the nature of this work permitted, I could analyse here the cases of patients, cured without amputation at the Hopital de la Pitié, though their limbs had been crushed by the wheels of vehicles.

When the fragments have traversed the skin, and cannot be reduced, in consequence of the narrowness of the opening, we make a suitable enlargement of the wound, and we remove that part of these fragments which is denuded of its periosteum. I have never met with cases in which an enlargement of the wound was not sufficient to permit the reduction of the fracture with the assistance of appropriate means.

When the large vessels have not been divided, and the soft parts do not present a too extensive laceration and attrition, although a large articulation is opened, I think that it is not necessary to amputate. I have saved the limbs of persons in whom the articular surfaces of the elbow, wrist, &c., had been exposed. Would the same success be obtained with respect to the knee, and tibial and tarsal articulations?

Much controversy has existed respecting the questions which we have just discussed. There are indeed some surgeons who have collected numerous facts in favor of the preservation of the limbs—there are others who report a great number of cases in favor of amputation. I think that opinions would be less discrepant, and that perhaps even all dispute would be ended, if medical knowledge was more generally diffused, and if pre-conceived ideas or a spirit of exaggeration or an education in a bad school, did not so frequently serve as a guide to the physician. Read, indeed, the cases which have been
published, and you will see that in the majority of them, truly medical ideas have been singularly neglected.

"N.

On the Pathology, &c., of the Urinary Deposits. By Dr. Golding Bird.—(Ranking's Abstract.)

Although the important researches of Dr. Golding Bird are now somewhat destitute of novelty, having been some time since embodied in the pages of the Medical Gazette, yet we think that we shall be conferring a benefit upon our readers by reproducing the more important portions of them in a condensed form, especially as the publication of a separate and most valuable work on "Urinary Deposits" comes within the limits of our retrospective labors. We feel convinced that the brief summary which we shall give cannot fail to produce the desire for a perusal of the original work:

The principal pathological conditions of the urine which are commonly met with are the presence of uric acid and the urate of ammonia, the oxalate of lime, of the phosphates, and of certain elements of the blood.

URIC ACID.

Diagnosis of uric acid deposits. Uric acid does not dissolve by heat, but on the contrary is rendered more distinct by the solution of the urate of ammonia which frequently accompanies it. Hence, in examining for this deposit, heat the urine in a watch-glass; the uric acid becomes visible as the urate of ammonia dissolves. Heated with liquor potassae, the uric acid dissolves. With nitric acid it is also dissolved; leaving, on evaporation, a residue of a beautiful pink, which becomes purple when held over the vapour of ammonia.

Microscopic characters. The original form of the uric acid crystal is the rhombic prism. In order to observe these crystals, allow the urine to repose in a tall vessel, decant the greater portion, and place some of the turbid layer into a watch-glass and warm it gently; remove the supernatant liquor by a pipette, and replace it with distilled water; the crystals then become distinct. "All that is then required, is to place on the stage of the microscope and under the watch-glass, a piece of black velvet; by means of a condensing lens, let a strong light be thrown upon the crystals; then bring the object glass into proper adjustment, and the colour, as well as figure of the crystals, will become beautifully defined on the black ground."

The rhombic form is, however, frequently replaced by others, especially by the square. Sometimes the crystals approach the figure of a fleur-de-lys, at others, they appear as flat tables, curiously marked with longitudinal striae, giving the appearance of a fimbriated
edge. The coarse sand, which is of a red or deep orange color, is
generally composed of cohering, thick, rhomboidal prisms, forming,
indeed, minute calculi.

Diagnosis of urate of ammonia. These deposits vary in colour
from absolute whiteness to a pale fawn colour, brick red, pink, or
purple. The deposit does not appear until the urine has cooled, and
disappears on the application of heat. If urine containing this de-
posit be placed between two glasses and examined with the micro-
scope, it is found to be composed of myriads of minute globules,
forming linear masses, or delicate stellate figures.

Circumstances giving rise to the uric acid and its compounds.
"Excluding all abstract theories, whenever an excess of uric acid, or
its combinations, occur in the urine, a normal quantity of water being
present, it may safely be inferred that one or other of the following
states exist:—

A. Waste of tissues more rapid than the supply. . . . . . . . .
B. Supply of nitrogen in the food greater than is required for the repara-
tion of tissues. . . . . . . . .
C. Supply of nitrogenized food not in excess, but digestive functions unable
to assimilate it. . . . . . . .
D. The cutaneous outlet for nitrogen-
ized excreta being obstructed, the kid-
ney is called upon to compensate for
this deficient function. . . . . . .
E. Congestion of the kidneys, pro-
duced by local causes. . . . .

Fever, inflammation, rheu-
matism, phthisis.
Excessive indulgence in an-
imal food, or too little ex-
ercise.
All grades of dyspepsia.
All diseases attended with
arrest of perspiration.
Blows, and strains of the loins, diseases of the gen-
ital apparatus.

The medical treatment of this condition of the urine must be based
upon the due discrimination of the exciting cause. If the first con-
dition be the cause, the remedy obviously consists in the withdrawal
of a portion of the animal food, or an increase in the amount of ex-
ercise. Under the other conditions of the system the treatment
resolves itself into the following indications:—

1. Attention to the functions of the skin. This is an indication of
much consequence. Warm clothing, with repeated friction by means
of a hair glove, removes the deposit of uric acid gravel. The warm
bath, and still better, the vapour bath, is also a most valuable diaph-
oretic. The latter is conveniently applied in private practice by
means of Duval's apparatus. Actual diaphoresis is by no means ab-
solutely necessary.

2. Restoring the tone of the organs of digestion. This part of the
treatment of calculous affections must be modified by the peculiarities
of the case, and is identical with that of the different forms of dys-
pepsia. Great relief may be obtained by careful attention to the bowels, and minute doses of mercury, as a grain of hyd. c. creta, with three grains of extract conti, given three times a day, with moderate doses of the carbonate of potash in infus. serpentariae. Gastrodynia and pyrosis may be met with half-grain doses of argente nitras, given immediately before a meal.

3. Remedies which act as solvents. These chiefly consist of alkalis and their carbonates; the biborate and phosphate of soda, and benzoic acid. The liquor potassae may be employed in half drachm doses thrice a day. The carbonate of potass and soda are, however, more agreeable forms, and of these the bicarbonate of potass is to be preferred. The latter may be usefully combined with citric acid, in the proportion of grs. v. to 3ss. of the bicarbonate, dissolved in a tumbler of luke-warm water. This mixture evolves enough carbonic acid to be "sparkling," and is taken with readiness.

It is to be remembered that some persons cannot bear the free use of alkalis without suffering severely in their general health. Dr. Prout affirms that their injudicious use may lead to the formation of oxalic acid.

Other solvents are the biborate and the phosphate of soda; the latter is specially recommended by Liebig; the dose should be 3ij. to 3ss, largely diluted. Dr. Bird states that he has administered this drug in two or three chronic cases of uric acid gravel with great effect.

The benzoic acid has likewise been much praised of late, having been first introduced by Mr. Ure. It may be given in ten-grain doses, dissolved in a weak solution of phosphate of soda, as below:

R. Sodæ carb. 3jss.  
Acid. benzoici, 3ij.  
Sodæ phosphatis, 3ijf.  
Aqua ferventis, 3iv.  
Aqua cinnamoni, 5viiss.  
Tinct. hyoscyami, 3iv.  
M. ft.  
Sumat. æger. coch. in magna ter in die.

It is important to bear in mind, that, by the employment of remedies capable of dissolving a deposit in the urine, we are merely palliating, and not curing the disease. Its entire removal can only be accomplished by remedying that state of the system, or of a particular organ, which may be the exciting cause of the calculous formation.

PURPURINE.

Urine containing this substance is of a pink or purple colour, and of variable specific gravity. The purpurine is deposited in conjunction with urate of ammonia, where that product is in excess, and gives to it a deep carmine colour. If the urine be evaporated to the
consistence of an extract, and treated with alcohol, it yields a fine purple tincture. This property will at once distinguish the colouring matter from that of blood, for which it might otherwise be mistaken.

Pathological indications. The presence of purpurine in excess is almost invariably connected with some functional or organic mischief in the liver, spleen, or some other organ connected with the portal circulation. It is, therefore, in its lighter shades, a common occurrence in the dyspepsia of the intemperate. Pink deposits are almost constantly present in cirrhosed or contracted liver.

OXALATE OF LIME.

Dr. Bird was the first to point out the frequent occurrence of this deposit; neither Prout, (until his last edition,) nor Rayer, nor Willis, have given to it the importance which it is now sufficiently clear that it demands. It is, according to the observations of Dr. Bird, of far more frequent occurrence in the densely populated cities than the deposits of earthy phosphates.

Diagnosis and microscopic characters of oxalate of lime. To examine for this deposit, allow a portion of urine, passed soon after meal, to rest in a glass vessel; decant the upper fluid six-sevenths; pour a portion of the remainder into a watch-glass, and warm it gently. This proceeding removes any obscurity arising from the presence of urate of ammonia. Having then allowed the urine to repose for a few minutes, remove the greater portion of the fluid with a pipette, and replace it with distilled water. A white glistening powder will now become visible, which, under a low magnifying power, is found to consist of octahedral crystals of oxalate of lime. These crystals, ignited on platinum foil, give a residue of carbonate of lime. The octahedral is the ordinary shape of the crystals, but they sometimes assume other forms, the most usual of which is that of a dumb-bell.

A very constant phenomenon observed in the microscopic examination of oxalic urine, is the presence of epithelial scales. So constant, indeed, is this occurrence, that the presence of the latter has frequently led to the suspicion of the presence of oxalate of lime.

Pathological origin of oxalate of lime. This is a question of very great interest. It is scarcely possible to avoid being impressed with the probable physiological connection between this matter and the presence of sugar. It is indisputable, that saccharine matter finds its way to the blood under certain circumstances, and is eliminated by the kidneys; and we know that, under certain morbid influences, the blood may, while in the stomach, be rapidly converted into sugar, and pass by the kidneys as an effete matter. Recollecting, also, the facility with which sugar and its chemical allies, as gum, starch, &c., are, under the influence of oxydizing agents, converted into oxalic acid, we are tempted, with Dr Prout, to the conclusion that the oxalate of lime owes its origin to sugar.

Dr. Bird, however, has observed in opposition to this opinion:—
1. That in the urine oxalate of lime is diffused through the fluid, and in a crystalline form. 2. That the urates are in excess in the majority of cases. 3. That in all there is more urea than in healthy urine of the same density. 4. That there is frequently an excess of the phosphates attending the oxalate of lime. 5. That no evidence of free sugar has occurred in the specimens submitted to examination. Now, in diabetes there is seldom an excess of urea or the urates, the increased specific gravity depending solely on the presence of sugar. Thus so far as the abstract examination of the urine is concerned, no countenance is given to the idea of there being any relation between oxalic and saccharine urine. What then is the source of the oxalate of lime?—from the symptoms alone which accompany the deposit, there can be no doubt of the existence of serious functional derangement of the digestive organs, especially of the stomach, duodenum, and liver. Whatever, therefore, be the immediate agent which causes the kidneys to secrete oxalic acid, the primary cause must, as shown by Dr. Prout, be referred to the digestive apparatus. It must be recollected, also, that an excess of urea, and often of uric acid, in most instances accompanies oxalic urine; it is probable, therefore, that both these products are the result of the same morbid influence; and when the close chemical relation between urea, uric, and oxalic acid, is borne in mind, is it not a legitimate conclusion that the disease under consideration is a variety of azoturia, in which the vital chemistry of the kidney converts part of the urea, or the elements which in health would have formed urea, into oxalic acid?

*Symptoms accompanying the secretion of oxalic acid.* As a general rule, persons affected with oxalic urine are remarkably depressed in spirits, and exhibit a peculiarly melancholy aspect. Dr. Prout mentions a lurid tinge on the skin. They are generally emaciated, hypochondriacal, and irritable in temper. The sexual power in men is deficient or absent. There is usually a constant pain or sense of weight in the loins, with great derangement of the assimilative powers.—[To these may be added, according to Dr. Bence Jones, frequent desires to micturate; the urine in some cases being scanty, at others profuse in quantity.]

The most common exciting causes appear to be exposure of the lower part of the spine to cold, mechanical violence in the same region, and unnatural excitement of the sexual organs, as is shown by the frequent concomitant of involuntary seminal emissions. In many cases there was no obvious cause beyond mental anxiety and attention to business.

*Therapeutical indications.* The treatment in the majority of cases is very successful. As a general rule, all the functions of the body, when obviously imperfect, should be corrected; the skin should be protected by flannel; and the diet carefully regulated. This should consist of well-cooked digestible food, of vegetable and animal substances; all things which tend to produce flatulence being carefully avoided. Beer and wine should not be allowed, especially
the former. If some stimulus be required, the best is weak brandy and water. The nitric acid, or the nitro-muriatic acid in infus. gentianæ, if continued sufficiently long, will generally be found successful. In cases where these have failed, active tonics, especially the sulphate of zinc, or if the patient be anemic, the salts of iron, appear to be of great use, as is likewise the shower-bath. There is one remedy which appears to exercise a marked influence over the characters of the urine, and which holds out great promise of utility in oxyluria—this is colchicum. In two instances in which oxalate of lime existed in abundance before its employment, uric acid reappeared and replaced the oxalic acid in a few days.

Earthly phosphates and carbonate of lime.

Diagnosis. The earthy salts are always white unless coloured with blood; they are soluble in dilute hydrochloric acid, and insoluble in ammonia or liquor potassæ. Heat does not clarify the urine. The chief errors in diagnosis arise from the presence of mucous and pus in the urine, which mask the chemical character of the earthy deposit.

The physical appearance of these deposits is variable; where it consists chiefly of the triple phosphates it subsides as a white crystalline gravel, or if the quantity be small it appears on the surface of the urine in the form of an iridescent pellicle. At other times the phosphates will fall to the bottom like a dense cloud of mucus, or hang in ropy masses so similar to that product as not to be distinguished from it by the naked eye.

The urine which deposits these salts is not necessarily alkaline; it is pale, secreted in large quantities, and of low specific gravity (1·005—1·014.) In the case in which the iridescent pellicle appears, there is usually present a form of irritative dyspepsia, but this is merely a functional and not an organic derangement, the urine being often of high specific gravity (1·020—1·030.) and containing an excess of urea. At other times, the urine is deep brown, foetid, generally alkaline, and loaded with ropy mucus, in which the crystals of the triple phosphate will be discovered.

Pathological indications. These deposits always denote a serious state of things, being generally indicative of severe functional, and oftentimes of organic mischief. They always co-exist with a depressed state of nervous energy, which is often generally, and more rarely local in its seat. Of the former we have instances in the wear and tear of body and mind in old people; of the latter in injury to the spine. The occurrence of the triple salt, unconnected with deposit of phosphate of lime, exhibits the least alarming course of events. It is generally in these cases signalized by irritability of temper, restlessness, uncertain appetite, and fatigue on slight exertion.

In the milder cases of indigestion, especially in gouty habits, the phosphates appear in the form of the pellicle before mentioned. This condition of the system is disinclined to the formation of stone,
but is rather to be regarded as an index of the state of the assimilative functions. A valuable diagnostic mark in these cases, in contrast to those where organic mischief is to be apprehended, consists in the fact that in the slighter cases the phosphates appear only in the urine passed at night.

The triple salt likewise appears in the urine of very old people, especially if they have been deprived of the ordinary comforts of life, and occasionally also, as has been noticed by Simon, in acute diseases, as pneumonia and pleurisy, at a time when convalescence has barely commenced.

In those cases in which the phosphates appear in the form of strings resembling mucus, the two classes of salts are usually found mixed. The urine is then almost invariably alkaline, and more or less foetid. The prognosis is always unfavorable in such instances, as either organic disease of the urinary apparatus, or some serious lesion of the spinal marrow, is almost invariably to be suspected.

**Therapeutical indications.** In considering the treatment of the phosphatic diathesis, as it is sometimes called, four different pathological conditions are to be taken into account, each of which is demonstrated by a separate process of symptoms.

A. Cases in which dyspepsia, with some febrile and nervous irritation, exists independently of any evidence of antecedent injury to the spine.

B. Cases characterized by high nervous irritability, with a varying amount of marasmus, following a blow, or other violence inflicted on the spine, but without paralysis.

C. Cases in which the phosphatic urine co-exists with paraplegia, results of spinal lesion.

D. Cases of diseased mucous membrane of the bladder.

Of these it will be only necessary to direct attention to the first, second, and fourth series of cases, as in the third the deposition of phosphates is a mere symptom of a serious lesion, which, whether the result of violence, or of insidious disease, must be treated according to the particular disease existing.

The first class of cases indicative of the presence of irritative dyspepsia is by no means uncommon. The treatment must be directed rather by general principles than limited to the solution of the phosphates. The exhibition of acids is merely palliative, and rather does harm in some cases, by masking an important symptom, while the 'fons et origo mali' still continues in full force. After a certain attention to the moral bearings of the case, our principal attention should be given to the re-establishment of the general health. The bowels are to be regulated by mild mercurial laxatives, active purging being strictly avoided. When this has been accomplished, the following combination will be of use:—Tinc hyoscyani, et Sp. ammon. aromat. 3a mxx, et Mistur. gent. c. 3 j. Should gastrodynia exist, great relief will be obtained by the administration of the oxyde of silver in half grain doses. As the patient approaches
convalescence, considerable benefit will be derived from the sulphate of zinc in increasing doses, till four or five grains are taken thrice in the day.

The second form of the disease, which is characterized by a higher amount of nervous excitability, and by rapid emaciation, is more rare, but less amenable to treatment than the preceding. In this form the deposit is copious, and sometimes consists nearly exclusively of the phosphate of lime. The symptoms are lumbar pain, dry skin, red and varnished tongue, great thirst, and other symptoms closely resembling diabetes. The history generally affords some evidence of a strain or hurt of the back.

In the treatment of these cases, our chief aim must be to tranquil-
lize the brain and nervous system by narcotics, as opium or morphia, as was first suggested by Dr. Prout, after which a generous diet, with the mineral tonics, as bismuth, zinc, or silver, are called for.

In some cases the symptoms are of a milder character, but there is a great tendency to the formation of a calculus: it is in these cases that acids are called for, but there is much uncertainty attending their use. The nitric appears the most serviceable; and the benzoic as recommended by Mr. Ure may be occasionally beneficial; but Dr. Bird puts but little faith in either, especially the latter.

The third class of cases, in which the phosphates are in all prob-
bility secreted by the unhealthy mucous membrane of the bladder are familiar to all, as frequently following chronic cystitis, retention of urine, from stricture and enlarged prostate. Here of course the primary disease must be treated, and not the mere symptom. It is in this form in which much good occasionally follows the injection of dilute acid into the bladder. An interesting case, in which this mode of treatment was completely successful after every other plan had failed, is related by Dr. Bird, to whose work we refer, as our space will not allow of its extraction. Deposits of carbonate of lime, and silicic acid are occasionally met with, but not sufficiently often to render their notice of any great importance.

ALBUMINOUS URINE.

_detection of albumen._ As a general rule, if urine becomes opaque by heat, and on the addition of nitric acid, albumen is present; but if one of these tests alone be employed, there is the possibility of being misled by the following sources of fallacy:—

1. Heat will produce a white precipitate in urine, containing an excess of the earthy phosphates. This is distinguished from albu-
men by disappearing on the addition of a drop of nitric acid.

2. Heat, when applied to urine containing deposits of urate of ammonia, will sometimes, if actual ebullition be prolonged, produce a deposit of an animal matter insoluble in nitric acid. But this appearance is rare, and is distinguished from albumen by being depo-
sited only after protracted ebullition.

3. Nitric acid will produce deposits in the urine of persons who
are taking cubebs or copaiba; *this is distinguished by not being produced by heat.*

4. Albumen may be present, and yet not be precipitated by heat, if the urine be alkaline; *nitric acid must be used* in this case as a test, since albumen combined with alkalies is not affected by heat.

**Therapeutic indications.** When albumen is the only constituent of the blood present in the urine, the treatment will vary, accordingly as the kidney is merely congested or is structurally affected. [The treatment of the latter is not here alluded to, but the reader is referred to the works of Bright, Christison, &c. The management of the congested kidney, as it occurs in the dropsy of scarlatina, is thus described:]-—The warm bath is the most valuable prophylactic remedy. I scarcely recollect, even in a large experience, a case of dropsy after scarlet fever, when the warm bath has been daily used as soon as the skin has begun to exfoliate, and continued until a perspiring healthy surface was obtained. When anasarca has occurred, strict confinement to bed must be enjoined, the warm bath used twice a week, and free action of the skin encouraged. This plan must be continued until all anasarca has vanished, and the urine is free from albumen. When this has taken place, the ammonio-tartrate of iron and more liberal diet will speedily remove the anaemic condition of the patient.

**Bloody Urine.**

The presence of the blood-globules in the urine may be recognised by the microscope. The treatment will vary according to the immediate cause of the hemorrhage. Absolute rest, cold to the loins, the mineral acids, and acetate of lead administered boldly, and for a short time, are our principal remedies. No remedy has, however, appeared to Dr. Bird so efficacious in the treatment of haematuria as the gallic acid. It should be given in five grain doses with mucilage and tincture of hyoscyamus.

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**Treatment of Traumatic Tetanus.** By James Miller, Esq., Professor of Surgery in the University of Edinburgh.—(Braithwaite.)

The case which calls forth the following comments, by Mr. Miller, was that of a girl of seven years of age. We refer to it in this place chiefly to show the value of the *Indian Hemp* in its treatment. The wheel of a cart had passed over the middle finger of the right hand, and of course had inflicted a severe injury. Tetanus gradually made its appearance.

The peculiar risus had begun; the jaws were clenched; the masseters and temporals were tense and hard, and the seat of much pain;
the limbs, especially the upper, were becoming rigid; the abdominal parietes were hard; the least exertion, such as endeavoring to open the mouth, and show the tongue, induced aggravation, with marked opisthotonos; and then, too, pain was complained of, not only in the jaws, but in the back. The finger had never promised well for satisfactory recovery; and I had no doubt as to the propriety of its immediate sacrifice; being well aware, that although in it resided the exciting cause of the formidable train of symptoms fast setting in, yet that removal of this could be expected to prove beneficial, only at a very early period of the case, ere the spinal cord had been all but irretrievably involved. Amputation was accordingly performed, with as little delay as possible, at the metatarso-digital articulation. Little pain was complained of; and blood flowed but sparingly. I abstained from deligation of any vessels; partly, because a moderate loss of blood might not be without its use, at this the commencement of the treatment; but chiefly, because I was anxious, by avoidance of the use of ligature, to leave the wound in as favourable a state as possible—free from all source of further irritation. For a like reason, no stitches were employed; sufficient approximation being effected by tying the adjoining fingers together by a slip of bandage.

Water dressing was applied, and 20 drops increased to 30 drops of the tincture of Indian hemp every hour or two, were administered. The further account and result of the case will be best seen in the following remarks by Mr. Miller.

Perhaps the first questions which present themselves, in regard to the foregoing case, are—was this an example of acute tetanus? or was it, from the beginning, of the chronic character? According to my own conviction, I have no hesitation in answering the former question affirmatively; and the latter, by a negative. And this I do on the following grounds:—1st, The case was traumatic: the affection following a wound, is usually acute. And, in this instance, the accession was at the usual time, and in the usual way. 2nd, The symptoms, at first severe, gradually, yet very perceptibly, gave way before the treatment employed. The trismus, opisthotonos, and rigidity of the upper extremities, as well as of the abdominal muscles, were at first great, and underwent frequent and cruel exacerbation; and these aggravations were induced by the slightest exciting cause. Rigidity gradually relaxed; and the exacerbations became less painful, less frequent, and less easily induced. 3rd, During a temporary interruption of the treatment, the symptoms threatened to return to their original severity; and again yielded to the resumption of the appropriate remedial means.

Then, as to the treatment. For some time I have been satisfied that in the treatment of traumatic tetanus, the most likely means of relief are to be found—1st, In early amputation of the injured part,
or isolation of it from the general nervous system by suitable incision on the cardiac aspect; 2nd, In effective and early evacuation of the bowels, and maintenance of free movement in them; 3rd, In maintaining a sedative effect on the nervous centre implicated in the disease, by cold applied to the spine; 4th, In the continued use of some one remedy calculated to allay muscular spasm—perhaps, aconite, Indian hemp, or tobacco; 5th, In careful administration of nourishment, so as to husband the strength as much as possible; 6th, In maintaining quietude, and avoiding all excitement likely to induce aggravation of the spasm.

1. As already stated, there could be no doubt as to the propriety of amputating the offending part in this case; and the operation was accordingly performed, as soon as the tetanic symptoms were fairly declared. The comparative absence of pain and bleeding, during the incisions, was characteristic of the disease. The nerves of the removed finger were examined by Mr. John Goodsir, and found imbedded in dense inflammatory exudation—they themselves expanded in bulk, and presenting the appearance of considerably increased vascularity. Were a similar case of injury to present itself, with like tendency to spasmodic flexion of the parts implicated, I should be inclined to regard that symptom as ominously premonitory, and should feel called upon, by early amputation, to sacrifice the part, even though it might otherwise afford good prospect of its own recovery.

2. The first prescription was a full dose of calomel and jalap, while the power of swallowing was yet comparatively free. It answered well, bringing away much foetid and dark-colored matter from the bowels, as usually happens in such cases. Sufficient action was afterwards maintained by enemata, containing turpentine and tincture of assafetida. During convalescence, a marked perversion of the intestinal secretions persisted, and was got rid of only by a corresponding continuance in the use of alternative aperients.

3. Since the perusal of a case of hydrophobia, treated by Dr. Todd, of King’s College, London, and published in the Lancet, No. 960, p. 583, I have felt very hopeful of ice applied to the spine, as a remedial agent, not only in that disease, but more especially in tetanus. And I was determined to make trial of it on the first opportunity. Its action is obviously sedative on the nervous system; powerfully and directly so. So soon as circumstances permitted, it was had recourse to in this case, and was maintained in constant, or almost constant operation for ten days; the bags of ice being laid along the whole spine, but with the chief effect directed on the upper part. Forewarned by the circumstances of Dr. Todd’s case, I was prepared to use this remedy with much caution, aware that the sedative power might prove excessive, and might demand not only considerable intermission of the application, but a cotemporaneous use of general support, and, perhaps, of stimuli. I was surprised to find, however, that no occasion for either presented itself. The pulse kept low, certainly, and of but sparing strength, but not too much so. And the
only complaint made of the application, by the patient, was the attributing to it the severe pain felt in the back, which was caused, doubtless, by the opisthotonos. When the symptoms had plainly begun to yield, the ice was discontinued; particularly as, about that time, tendency to free perspiration began to manifest itself. Very shortly after discontinuance of the cold, two marked exacerbations occurred—at a time when these had greatly abated; but as there was no recurrence, I did not think it necessary to resume the application.

4. Of the three anti-spasmodics formerly enumerated, I was afraid of the tobacco, in so young a patient, having both seen and heard of its unmanageable action. Few will deny, that, with every precaution in its use, it has again and again seemed not remotely connected with the fatal issue, more especially in urgent cases of hernia. Of theaconite I had no experience, as an opponent of spasm. Of the cannabis I had; having used it in private practice. Besides, the report of Dr. O'Shaughnessy's success with this remedy, in at least mitigating the sufferings in tetanus, naturally leads to a prepossession in its favor in an unprejudiced mind. I resolved to give it a fair trial. It was begun in a very moderate dose, which was gradually increased, until about three grains of the resinous extract were taken every half hour—a full dose for an adult, in ordinary circumstances, without repetition. A few doses usually induced sleep, with marked mitigation of the spasm; and on the patient's emerging from the state of narcotism, the remedy was resumed, and steadily continued until a similar result was obtained. The period of narcotism, and consequent intermission of the medicine, did not usually exceed two or three hours. The sleep was deep and unbroken, and seemed to be refreshing. It certainly was followed by no headache, or other apparent inconvenience. The eyelids were seldom, if ever, shut, as in ordinary sleep; but remained half open, disclosing the eyes, dull and upturned, and giving to the countenance a very peculiar expression. While the exhibition of the drug was at its maximum, great irritability and peevishness of temper was shown by the patient, during her waking moments; but it were, probably, unfair to attribute this to the medicine.

As the symptoms began to recede, the cannabis was proportionably diminished in dose. Ultimately, it was discontinued altogether, while yet a hardness of the abdominal muscles remained; it seeming, then to meet with comparatively little tolerance in the system, and to induce a quick and irritable state of the circulation. Throughout the whole period of its use, its effects on the appetite was most obvious; but greatest, as was to be expected, during convalescence. The craving for food, of all kinds, was stated to be, at times, absolutely voracious.

In this case the tolerance of the cannabis, engendered by the tetanus, must be apparent to every one. A slim girl, seven years of age, took every half hour—and sometimes for many hours in succession—
a dose of hemp sufficient to throw a healthy adult into strong narcotism. Also, the unfavorable effects which commonly follow experiments with it, on ordinary patients, whose ailments (if any) do not require the remedy—as headache, delirium, visions, vertigo, vomiting, palpitations, general feeling of great discomfort, &c.—seem to have been wholly absent in this case, where nature demanded the use of the medicine.

The Indian hemp I believe to be comparatively valueless, as an anodyne, as well as a hypnotic, in ordinary circumstances; and as such I would not think of administering it. Its virtue seems to consist in a power of controlling inordinate muscular spasm; and the result in this case has certainly tended to confirm that opinion. I shall not attempt to separate the various remedial agents employed; apportioning to each their share in the fortunate issue. I consider that the early amputation, and subsequent gentle treatment of the wound, may have done some good. I have no doubt that very great benefit followed on the due evacuation of the bowels. The cold to the spine may have been beneficially co-operating, perhaps in no inconsiderable degree. Yet, I am inclined to ascribe the greatest portion of the benefit to that remedy of which the system proved so remarkably tolerant—the cannabis Indica.

5. The fifth indication of cure was never lost sight of. From the first, very strong beef tea was ordered to be always in readiness, and to be frequently administered. As the trismus yielded, and the power of swallowing was regained, ordinary food was offered in addition, and usually was taken with greediness.

6. In the open ward of a public hospital, it is not easy to obtain quietude for the patient, and avoidance of excitement to spasmodic aggravation. I have no doubt that, latterly, many of the aggravations were attributable to the circumstance of this indication being necessarily so imperfectly fulfilled. In conclusion, I would beg to state, that I have no wish to arrogate for the cannabis more virtue than what may seem its just due. The case may have been of a chronic character throughout, though, in my humble apprehension, it is very far from being apparent that such was its nature. At all events, by this case, evidence as to the action of the cannabis Indica seems to be borne to the following effect:—

1st. It has the power—probably not slight—of controlling inordinate muscular spasm. 2d. In tetanus there is a marked tolerance of the remedy; both as regards the safe exhibition of large doses, in frequent repetition, and the absence of such unpleasant consequences as the usual dose, in ordinary cases, is apt to induce. 3d. With its anti-spasmodic virtue, in appropriate cases, it probably conjoins hypnotic and anodyne properties, though in a minor degree. 4th. It has the effect of remarkably increasing the appetite; and digestion does not seem to be impaired. The dejections, though dark and offensive, contained no unchanged ingesta. 5th. It does not induce constipation. 6th. On recedence of the tetanic symptoms, the dose
of the medicine should proportionably decrease. The tolerance is passing off; and if the original dose be continued, some of the untoward effects are not unlikely to occur.

In a case of idiopathic tetanus which occurred in Guy's Hospital, and reported by Mr. Arnold, the symptoms were chiefly those which characterize this disease, and Dr. Babington prescribed the Cannabis Indica as follows:—

Extract of Indian hemp, three grains; rectified spirit, half a drachm. Mix for a dose, to be taken every half hour in a spoonful of barley-water. The effects of each dose to be carefully watched. The first dose was taken at twelve o'clock. At half past twelve the pulse was 92, and intermitting. In a quarter of an hour after the second dose, the patient showed symptoms of excitement; his eyes brightened, and the masticatory muscles seemed to him to be less rigid; no priapism, but some little flushing of the face; pulse 102. A moisture on the face and hands now appeared, amounting, on the latter, to profuse perspiration, accompanied with tingling. Just before the third dose the pulse was 107, and still irregular; the rigidity, however, was decidedly less. Third dose—He swallowed better than the preceding. Fourth dose—Respiration twenty-two; pulse 128; disposed to sleep. Fifth dose—Respiration the same. He complains of pain in the back and occiput, and of lying, as it were, on something very hard; but he rests motionless, with composed features, and is drowsy. He swallowed this dose without much difficulty. At a quarter past two (fifteen minutes after taking the dose) he fell into a quiet sleep. The dose of Indian hemp was now augmented to five grains in fifty minims of spirits to be taken in barley-water every two hours. The sixth dose was taken at three o'clock. Respiration twenty; pulse 110, full and strong. He had a general perspiration, swallowed well, and said that the pain in the back and occiput was relieved; bowels not yet moved.

Ordered, at half-past four, a turpentine enema, and to continue the extract; and at eleven, p. m., twelve grains of calomel.

May 3d. Ten o'clock, a.m.—No dose had been administered from eleven o'clock on the preceding night, until two; and again at four, one was given. He has had in all forty-eight grains of the extract, up to the present time, and has now just taken another dose. He dozed all night, but had no sound sleep. Bowels still constipated. Ordered, in the afternoon, an enema of turpentine, with two ounces of castor oil. To repeat the extract of Indian hemp every hour, and to have one plaster of this material placed on the chest, and another along the spine. The patient was at this time in nearly the same state as when admitted, but complained of greater pain in the lumbar and dorsal regions. No spasm in the extremities, but some numbness in the fingers. He feels that he has less power over himself than before, and cannot now turn in his bed. Perspires a great deal.
on the face and forehead, as well as on other parts; and the skin is warm as well as moist. Pulse about 80, (though it varies considerably at different times,) regular and strong. The patient does not swallow better than he did yesterday; there is a catching in the epigastrium when he swallows or speaks, though the ordinary breathing is more free than yesterday.

4th. Ten o'clock, a. m.—Bowels freely opened last night, and again this morning; motions are solid and shapeless, "just like a piece of liver" in appearance, and smell strongly of the remedy. He passed a very restless night. Great pain is induced by attempting to speak; the mouth is quite closed, and the disease appears to be slowly gaining ground; pulse 100, with less power than before. The patient complains of the medicine as burning his throat. Ordered, six ounces of wine, and to continue the extract. Two, p. m.—Spasms in the trunk have grown stronger since the morning, and increased in frequency, occurring now about every five minutes, and sometimes apparently extending down the left leg, causing violent pain throughout the whole body, and occasionally jerking the patient off his back; pulse the same. At four, p. m., Mr. Stocker saw him, and ordered the extract of Indian hemp to be administered, in an injection of a pint of beef-tea and wine. This was done at the hours of four, six, nine, and twelve, the last time with the addition of an egg; and on the 5th, at two, four, and six o'clock, a. m.

5th. Eleven, a. m.—The injections have all been retained. He got a little sleep, at intervals, during the last night, and says that he is in less pain than yesterday, yet still complains of much pain about the mouth. The muscles of the face are less contracted, and the teeth can be separated to the width of about a quarter of an inch. He has a control over his arms and legs, and can draw the latter upwards; spasms less violent, though more frequent, occurring every two or three minutes; bowels confined; pulse about 100; more feeble; breathing easy. Ordered, four ounces of brandy, with two eggs, in a pint of beef-tea, and a little decoction of starch, to be administered as an injection, every four hours. This was done at eleven, a. m., two, six, and eleven, p. m.; and on the 6th, at two, half-past five, and ten, a. m.

6th. Three, p. m.—Injections retained. Very restless all the past night; complains of feeling cold this morning, and drowsy; could not sleep, however, for the spasms, which have become stronger; there is more difficulty of breathing; but he retains the free use of his arms and legs. His mind has wandered at intervals during the day, but he now answers questions rationally; pulse 110, with some sharpness; much less perspiration to-day. He had, a little while since, requested to have a little brandy in barley-water, but the first gulp of it brought on a violent spasm, that prevented its being swallowed. Complains of the light and noise of the ward.

7th. Half-past twelve, p. m.—The injections have been continued. He craves after brandy, and the previous night some was given
him in water, which he contrived to swallow; his mind rambled during the night, as it has during the day, but he answers questions rationally; perspiration returning, and spasms diminished; he can open his mouth better; pulse 120; bowels still constipated. Ordered the enema of turpentine and castor oil, as before, and to continue the Indian hemp. Two, p. m.—one injection had returned; the rest were retained. At 6 o'clock Mr. Stocker visited him; the spasms were again more frequent; the thoughts of the patient still wandered, but he protruded his tongue when told; pulse 160; powers rapidly declining; and at half-past two the next morning, May 8th, he died.

The exact quantity of the extract of Indian hemp administered, whether by the mouth or per anum, is ascertainable from the dispensary book, which shows that the following quantities were made up for this patient:—

May 2d. Eleven, a. m., twenty-four grains. Four, p. m., twenty-four grains.
3d. Nine, a. m., twenty-four grains. Four, p. m., forty-eight grains.
4th. Ten, a. m., forty-eight grains. Ten, p. m., twenty grains.
5th. Seven, p. m., forty-eight grains.
6th. Ten, p. m., forty-eight grains. But, of the last named quantity, thirty-six grains remained after the patient's death. It thus appears that the total quantity taken amounted to two hundred and forty-eight grains. It was obtained from three several sources, in nearly equal proportion—viz: the first from Mr. Squire, of Oxford-street; the second, through Mr. Pearce, from a gentleman who brought it from India; and the third from Mr. Rouse, in the Borough. The gentleman who supplied the second portion tested the effects of one grain on his own person: it produced the symptoms of intoxication, with the excitement common in that state, to such a degree, that it was found necessary to call in medical aid—a sufficient proof of the potency of his specimen of the extract.

Mr. Potter, of Newcastle, thinks that the power of Indian hemp in spasmodic affections is not sufficiently appreciated; and publishes a case of traumatic tetanus, in which it was used, and seemed to possess great control over the tetanic spasms. The patient had received a severe laceration on the upper part of the right thigh, which exposed the femoral vessels. Everything went on well till the twelfth day, when symptoms of tetanus appeared. A large dose of calomel and Dover's powder was then given, followed by ten grains of extract of Indian hemp, repeated every two or three hours. As his bowels were confined, two drops of croton oil were placed on the tongue, and an injection given made with

Tobacco leaves, one scruple: boiling water, eight ounces; macerate; strain for an enema. These produced free action of the
bowels. In consequence of the difficulty in swallowing, I determined to give the extract in the form of injection, and therefore ordered him to have the following enema every two hours:—Extract of Indian hemp, one scruple; strong beef-tea, six ounces: mix. This was done, and the injections retained. No violent spasmodic actions took place, but the back became gradually more and more arched, so that it was necessary to place a pillow beneath. The extract did not cause any marked symptom of intoxication, though it evidently produced, at intervals, calm sleep. Without suffering any pain, the disease gradually progressed, death taking place on the fourth day after symptoms appeared. In this case, four drachms and two scruples of the extract were administered, and to the action of this medicine I attribute the freedom from pain and clonic spasm, which surely is sufficient to induce any one to give this remedy a full trial in so fearful a disease.

The following case of idiopathic tetanus is given by Dr. Newbigging:—The patient was a baker, who, while perspiring profusely, went out to chop wood, at a time of intense cold. In the evening of the same day he complained of tetanic symptoms, which gradually increased. Dr. N. saw him first a week after the attack. The pulse was natural; bowels constipated; urine scanty. He was bled to 12 oz.; a drop of croton oil was administered, and a large blister was applied to the upper part of the spine. The bowels were opened by the oil, and he felt altogether relieved. Three days after, he was again bled to 14 oz.; and a strong dose of morphia with 30 drops of tinct. cannabis ind. were given at bedtime. Three days after this, spasmodic action had commenced in the limbs; the dose of morphia was then increased, and ordered to be given four times a day, and elaterium to be used as purgative. Next day, croton oil was again had recourse to, the elaterium having proved inefficual. Dr. Abercrombie, at the same time, recommended the use of arsenic, which was given with the morphia. He continued to improve for a week, when he was suddenly seized with great dysphagia and tremors, which were soon removed by placing him in the erect position. His medicines having been discontinued for two or three days, were renewed. About five weeks after the commencement of the attack, he expectorated a quantity of pus mixed with mucus, which expectoration continued three weeks. He had afterwards thickening of the spinous processes of the cervical vertebrae, and was attacked with anasarca, which was subdued by diuretics, actively administered, and in about three months he was able to return to business.

The principal features of interest in this case of what is considered
a rare disease in this country, are, the gradual affection of the different muscles of the body, commencing with those of the jaw, and the successful issue of the treatment, which, however varied, may be considered to have resulted from the persevering employment of croton oil and opium; for although arsenic, Indian hemp, colchicum, &c., were administered to him at different periods, I believe, to none of these was so much benefit attributed by us—and he was occasionally visited by Dr. Abercrombie, Sir George Ballingal, my father, and Dr. Duncan—as from the exhibition of opium in full doses, with the occasional use of croton oil; for, whether we consider this medicine to be endowed with any specific effect or not, as reasoning from somewhat analogous cases of nervous affections I feel disposed to do, it certainly seemed to be followed by greater relief to the tetanic symptoms than when an ordinary purgative, such as scammony, gamboge, &c., was exhibited. I have occasionally observed benefit from the Indian hemp in allaying irritation and causing sleep, particularly when opium was contra-indicated; but I am somewhat doubtful of the value of this remedy in tetanus, and am disposed to think, that no case where opium is so decidedly indicated can be benefited by the administration of hemp, if the former powerful remedy has failed to be of service.

Large Doses of Opium in the Treatment of Fevers and Inflammatory Affections.

In the August No. of the Missouri Medical and Surgical Journal, we find an interesting article by A. G. Henry, M. D., of Pekin, Illinois; on the treatment of Fevers and Dysentery with large doses of Opium: and in the September No. of the same Periodical, Prof. Thomas Barbour, M. D., of Kemper College, St. Louis, continues the subject. After congratulating the profession on the appearance of Dr. Henry's communication, who gives opium in four to six grs. doses in fevers and dysentery, Prof. B. says—

There are two propositions which, I suppose, every accurate observer will admit to be true, and if true, will afford a satisfactory explanation of the utility of full doses of opium in febrile and inflammatory affections: 1st, That all the phenomena of the initial stage of miasmatic fevers, and, I may add, of the acute phlegmasia, clearly demonstrate that the first link in the chain of disordered actions which constitute fever or inflammation, is a morbid impression on the nervous system, the immediate effect of which is exalted sensibility, or irritability, of which the successive events are necessary sequences:
2d. That it is of paramount importance to control the nervous system—the "primum mobile"—the mainspring which gives impulse to all the complicated actions that make up fever and inflammation; and that, in proportion as we do so, shall we be able to modify the results of its action on the vascular and secretory systems.

The generality of practitioners attempt the accomplishment of the important object referred to, by the use of agencies calculated to subdue the effects of an unduly excited nervous system, and thus but too often prostrate the powers of life; the object of the opiate treatment in connection with such agencies, to a prudent extent, is to directly modify and control the fountain of vital action, in order to obviate its effects upon the animal economy, without the necessity of so great an expenditure of the resources of nature.

Having these principles in view, I have been in the habit, during the last four years, of using large doses of opium—say, 3 to 5 grs., in all the various modifications of fever, for the purpose—1st, of counteracting the febrile periodicity; 2d, of promoting the reactive powers of nature; 3d, of diminishing excessive evacuations; 4th, of quieting nervous irritability, and thus guarding against local congestions and inflammations; and, 5th, of shortening the course of fever.

I have not regarded this valuable agent as the "febrifugum magnum," to the neglect of any of the remedies of acknowledged efficacy; but have used it as a powerful auxiliary to those means, and I acknowledge that the effects have been most gratifying. The conditions in which I have used full doses of opium, say from 3 to 5 grains, are the following:

1st: Simple Intermittent.—I administer it—say 1 drm. tinct. opii, or 30 to 40 grs. of Dover's powder, either alone, or in connection with calomel and quinine, in the latter part of the apyrexial period, to prevent the recurrence of the paroxysm; and in the cold stage, to shorten its duration, and lessen the violence of the succeeding hot stage. So frequently have I succeeded in warding off a chill by the use of opium, together with warm stimulating drinks, that if quinine could not be obtained, I would place more confidence in it as a substitute than any other agent with which I am acquainted.

2d: Remittent Bilious Fever.—Having bled, if necessary, or administered an effectual mercurial cathartic, it has been my practice, for several years, to give a full opiate—say, 3 to 5 grs. of opium, or from 30 to 40 grs. of Dover's powder every night, or every other night, with 10 to 20 grs. of calomel. I am not deterred, generally, from its use, even when those conditions exist which authorities declare to be contra-indications, namely, red and dry tongue; dry skin, excited pulse, and moderate cerebral disturbance, provided the liver is acting, and the bowels have been freely opened. Under such circumstances, instead of an aggravation, I have generally witnessed a decided amendment. Nor should this excite astonishment, when it must be conceded that, most generally, all of the above phenomena, occurring in the early period of fevers, are dependent on high
nervous excitement, and not on an inflammatory condition of the vessels. Even in the latter stage of remittent, and typhoid and typhus fevers, when there are unequivocal evidences of cerebral inflammation, after general and topical blood-letting, cathartics, refrigerants to the head, and revulsives to the moucha, we are justified in the use of large doses of morphia or common opium, as no other remedy will so effectually relieve the restlessness, jactitation, subsultus tendinum, and other urgent symptoms, and impart reactive energy to the nervous system. Indeed, opium and stimulants constitute the sheet-anchor of hope under such circumstances. For this purpose, the following combination is an exceedingly valuable one:—R.: Mist. camphoræ, 4 oz.; moschi, \( \frac{1}{2} \) drm.; antim. tart., grs 2; morph. acet., 3 to 4 grs. Dose, a table-spoonful every 4th or 6th hour.

3d: The Congestive modification of Intermittent or Remittent Fever.—Opium is a most valuable adjuvant in these cases, in order to the developement of full reaction. Its mode of operation is difficult of explanation; I suppose, however, that it tends to equalize the circulation, by allaying the excessive nervous excitability, which rapidly induces exhaustion. For the above object, I would especially recommend the following preparation:—R.: Opii, 2 oz.; camph., capsic., cinnam., ol. caryophyll., aa 1 oz.; Hoffman’s anodyne liquor, 1 pint. Dose, 1 drm., equal to 4 grs. of opium, every fourth or sixth hour, in connection with calomel, quinine and revulsives. Its effects are often wonderful.

In the treatment of both intermittent and remittent fevers, during the past sickly season, I have used the two following prescriptions with the very best effects: 1st—R.: Hydarg. chlor. mit., 1 drm.; opii, 24 grains, made into 24 pills, of which I have given four every night until slight mercurial action is induced: two doses are generally sufficient. 2d—R.: Mass., hydrarg., sulph. quinæ, aa 24 grs., made into fifteen pills, of which I have given two every two hours during the intermission or remission. Among the many cases that have come under my care, very few have continued beyond the third or fourth day.

4th: Puerperal Fever.—After copious blood-letting, our chief reliance should be placed on opium in large doses, combined with calomel—say 4 to 5 grs. of the former with 10 of the latter, to begin with; then 2 grs., each repeated every two or four hours, until the abdominal pain is relieved. I believe that the full developement of this dreadful malady may, generally, be prevented by opium thus administered, together with hot fomentations.

5th: Acute Rheumatism.—In the treatment of this painful affection, I would especially recommend the following combination, after one full bleeding:—R.: Rad. colchici p., \( \frac{1}{2} \) drm.; antim. tart., grs. 3; morph. acet., grs. 3, made into twelve pills, of which two may be given every fourth hour, until relief is obtained.

6th: Acute Pleurisy.—After one full blood-letting, the best means of relief in acute pleurisy is a full dose of opium, in combination with
calomel and tartarized antimony. The following is a convenient mode of administration:—R. : Opii, hydrarg. sub. mur., aa., grs. 12.; antim. tart., grs. 2, made into 6 pills, of which two may be given at first, and afterwards, one every two or four hours. With this mode of practice, it will rarely be necessary to bleed a second time.

7th: Acute Pneumonia.—In pneumonia, the full doses of opium are of great value, after full blood-letting, but they should be used only once in twenty-four hours; the calomel and antimony being used, as is customary, at short intervals.

8th Gastritis.—After free, general and topical blood-letting, my reliance is on opium and calomel; 4 or 5 grains of the former with 2 of the latter at first, then 1 to 2 grains each, every two hours, with cold drinks, purgative enemata, hot poultices, and a blister, in the severest cases, over the epigastrium.

9th: Enteritis.—In this form of inflammation, so rapidly fatal in its tendency, after free general blood-letting, I would resort, with great confidence, to opium in the fullest dose, 4 to 6 grains, combined with 1 to 2 grains of calomel, after which, 1 to 2 grains of each may be safely given every two hours, with oft-repeated hot poultices, an occasional mild aperient, as castor oil, and a large vesicatory, after the more acute symptoms are relieved.

10th: Acute Dysentery.—If there is much fever present, with great abdominal tenderness, I think it safest to commence the treatment with one full blood-letting, after which, 35 or 40 grains of Dover's powder, or, if the stomach is very irritable, 4 grains of pulverized opium, with 5 to 10 of calomel, mixed in an ordinary dose of castor oil, is the best remedy I ever used. If there is no necessity for bleeding, the above portion may be administered at once; and not frequently, it will relieve the disease without other means: generally, however, it will be necessary to continue the use of 2 grains each of calomel and opium every four or six hours, until the abdominal tenderness, tormenta and tenesmus, are removed. As auxiliary to the above, mucilaginous drinks should be freely allowed; occasional portions of castor oil, or oleaginous mixture, should be given, and anodyne injections, as tint. opii, 1 drm.; assafetid., ½ drm., in aqueous solution, repeated twice or thrice daily. When the more acute symptoms are relieved, and there exists chronic irritation, with copious mucous and bloody discharges, I use, with great efficacy, the acetate of lead, combined with opium, in the proportion of 5 to 10 grains of the former to 2 of the latter, every six or eight hours; and if the disease persist under this course—and especially, should there be tympanitis. I would recommend a large blister, and the following mixture, which is applicable to the chronic stage of mucous inflammation of the whole alimentary canal, whether it be gastritis, ileites, or colitis:—B. : Mist. camph., 4 oz.; tint. opii acet., 2 drm.; acid. nitric., ½ drm.; spirit. terebinth., ½ oz.; dose, a dessert or tablespoonful every four or six hours.

In conclusion, I will express the hope, that all medical men who
may read this, or Dr. Henry's paper, may so far confide in our judgment, and the results of our experience, as to give a fair trial to the use of opium, as recommended in fevers and inflammatory affections; if so, I do not doubt but that the testimony of all would tend to establish the safety and value of the practice. It is a subject of vital interest, and is worthy of the candid investigation of the whole profession.

PART III.—MONTHLY PERISCOPE.

Source of Convulsions.—By T. Wilkinson King, Esq. It is a little remarkable, that hitherto there has been no settled opinion in the profession, as to the primary seat of derangement in convulsive affections. Dr. Hall and some others, seem to refer the spasms to general disorder of a specific nature in the spinal marrow. Others impute them rather to meningeal or to superficial affections of the cerebrum.

Convulsions, which leave the patients as well as ever, even after many attacks, cannot be expected to have any visible permanent local alteration connected with them.

In the first place, I shall proceed to show what I have concluded the pons varolii has to do with convulsions—for, here, all motor tracts converge—and, here, one thrust, as it were, may stir up every muscle of the body. I assume that no affection of bone, nor, indeed, any meningeal affection, necessarily affects brain or nerve, and I could almost add no tumour. I see that all the affections here named begin and go on to a great extent without nervous symptoms, and that the signs of nerve-disease, when they do supervene, proceed independently, and without any strict relation of duration, degree, or consequences, to the extraneous disorder. I find, moreover, two sets of real nerve disorders, i.e., 1stly, with a palpable cause and a definite site; and, 2ndly, devoid of visible local change; and I cannot doubt but that some of the latter are fairly illustrated by the former. A new and gradual growth deranges no new fibre—a strumous tubercle in the thalamus gets large, unsuspected; and consequent affections of the opposite arm come and decline variously, according to the varying incidental changes in the brain, around the tubercle. Such a body, in a renovated constitution, rather wastes, turns to cholesterine and may be unheeded through a long life. Strumous, cancerous, inflammatory, and apoplectic diseases of the brain are occasionally found to become arrested at every stage of their course, as when wasting or other disorders, elsewhere, come into greater activity.

On the other hand, I think it is, in the main, pretty certain that cysts, tumours, inflammations, softenings, extravasations, whose size or extension may gradually encroach on the pons, induce convulsions
before the final coma—a certain state of injection, or nutrition, or of nerve-irritation, preceding total oppression.

Every known disorder of the spinal cord causes lesions of motion (rigidity, spasm, or palsy) and of sense (pain darting, or numbness) in proportion to its severity, and only in parts below the seat of the disorder; but, if these affections involved the excitor cords of some physiologists, surely we should have universal disturbances. The convulsions of known spinal diseases are all comparatively limited or insignificant. To what nervous lesions do we not look, for most general palsy, or tremor? As disease approaches the centre of the pons, so general convulsion or fatal paralysis attends. Slow tumours thus indicate the site of the transitory actions which cause convulsions. The same diseases in the cerebrum, cerebellum, and spinal marrow, cause no general convulsions. These assertions I hope to make good. If any one should think he can do as much in opposition, I can only wish to see it.

1. There are various diseases of the cerebrum, which approaching the pons varolii, produce convulsions, first of the opposite side of the body, and then generally.

2. There are various diseases of the cerebellum, which, gradually advancing upon its cura, &c., cause convulsions, first of the opposite side of the body, and then generally.

3. There are various diseases of the tuber annulare itself, which, in their course, usually set up universal convulsions.

4. There are some exceptions to the above statements, but the consideration of them rather illustrates than refutes the main principles advanced.—Medical Times.

On the Explanation of the Difference in size of the Male and Female Urinary Bladder.—By John LeConte, M. D., of Savannah. The fact that the urinary bladders of women are considerably more capacious than those of men, has been observed by anatomists from the earliest ages. This was attempted to be explained by supposing that the conventional rules of society, together with the sedentary habits of females, rendered extraordinary distension of that viscus from protracted retention of urine, more frequent and extensive among them—and thus the organ became enlarged mechanically.

This explanation appears to be exceedingly plausible. Indeed, it has found its way, as if by general consent, into almost all our standard works on anatomy and physiology.

It seems that no one has heretofore noticed the unquestionable fact, that the same difference in the size of the bladder, in favor of the female, obtains in many of the inferior animals; where, of course, this cause cannot be presumed to operate in the slightest degree. It most assuredly does exist in the hog, the sheep, and the cow. I have remarked it so often among these animals, as to be able to select out the bladders of the females from among a number of others of those of both sexes. In view of this established fact,
therefore, the received explanation becomes at once untenable. We must, therefore, seek for a more rational explanation. Let us appeal to nature—let us see how she accommodates herself to circumstances. It is well known to every observant surgeon, that when the urethral passage is constricted from any cause, whether mechanical or the result of disease, the bladder very soon diminishes in capacity, and becomes contracted and thickened. This occurs when there is no disease of the bladder itself, and when that of the urethra has completely subsided, leaving nothing behind but a mechanical obstruction of the passage. Now, what is the deduction to be drawn from this natural process? The conclusion seems to be inevitable, that the diminution of the capacity of the bladder, under such circumstances, is an expedient of nature to meet the exigencies of a contracted outlet. Herein, I think, we are furnished with a clue to the true explanation of the difference of size of the male and female urinary bladder, when every thing is in a normal state. The female urethra is not only larger and more dilatable than that of the male, but is also shorter and straighter. It is generally of uniform diameter, varying from three to four lines, slightly curved, with the concavity looking upwards, and so extensible that calculi as large as walnuts have been known to pass. (Vide Lond. Lancet, 1841-2, vol. 1st, p. 583; also vol. 2d, p. 41.) Now, as we have shown that the size of the bladder is in proportion to that of the urethra, it follows, à priori, that the male must have it smaller than the female; a process of reasoning which has the advantage of being equally applicable to many of the inferior animals. In this, nature has not departed from her ordinary hydrodynamical laws; the size of the outlet is proportional to the capacity of the reservoir, and vice versa. Perhaps, it may not be beyond the resources of the analytical mathematician to deduce the capacity of the bladder from a single measurement of the diameter of the urethra! At any rate, a formula might be easily obtained from hydraulics, which would give us approximative values, not only of the size, but also of the contractile force of the bladder!

It will be observed, that one of the conditions induced by a constricted state of the urethral passage, is a marked augmentation in the thickness of the coats of the bladder. I consulted Dr. Alban Goldsmith, so well known in the treatment of diseases of the genito-urinary apparatus, whose skill and long experience in these affections entitles his opinion to great consideration. He informs me, that he has had numerous opportunities of observing the changes which are wrought in the bladder by obstructions in the urethra. He finds that the organ diminishes in size, and that all the coats are affected, but particularly the muscular; the fibres growing fleshy and strong, are collected into bundles, giving the surface a fasciculated appearance. This strengthening of the coats of the bladder, seems to be another device of nature—in addition to the diminution of capacity—to increase the propulsive power, which is required to force the urine through a small outlet. In accordance with our preceding
mode of reasoning, we should be led to expect that the urinary bladders of male animals should also possess a greater degree of muscularity than those of females. So far as recollection serves us, we think that such is actually the case in nature; and we venture to predict, that minute measurement and close inspection will demonstrate that the urinary bladders of male animals are both thicker and more muscular than those of the opposite sex.

Why the urinary bladders of the females of many animals,—and as a natural consequence, the urethra,—should be larger than those of the males, is a problem which admits of a far less satisfactory solution. The supposition most in accordance with design, is, that a greater quantity of urine is secreted in the female.* This idea seems to be fortified by the anatomical characters of their system, in which the fluids appear to bear a greater proportion, and which predominance has been supposed to have some necessary connection with the functions of reproduction. But, of course, this question can only be settled by an appeal to experimental determinations of the relative amounts of urine secreted, under the same circumstances, by either sex. At any rate, be this last conjecture right or wrong, we trust that we have established beyond a reasonable doubt, that the disparity in the size of the organ in the sexes, is a natural conformation, and not the result of mechanical distension.—Transaction of the Society of Alumni of the College of Physicians and Surgeons of N. Y.

Castration, when two years old, in a man now quite aged.—In the Hotel of the Invalids is a man aged 71 years, who was castrated at Sens when two years old, by a villainous quack, to cure him of hernia. This mutilated person is of small stature, his extremities are slender, his bones feeble, his voice sharp, and his chin without beard. He does not detest women, but when near them has only fugitive desires, and his enjoyment in coition has always been scarce appreciable. His penis, like all organs which do not perform their functions, is atrophied, and the prepuce is much longer than the gland. In this stunted body, which has evidently been arrested in its development, there has nevertheless been energy and courage. This individual, though exempt from military service, joined the army—he was in the wars of the French Empire, and the scars which he bears are authentic certificates of his ardor in battle, and of his bravery. At present, one is struck in passing his bed, with all the traits of an old woman. Notwithstanding his advanced age, his memory is good; he relates, with precision, the events in which he assisted, and his language is

* Since the above was written, this point has been clearly demonstrated by the experimental researches of Dr. Wm. Prout and Mr. Alfred Becquerel, of Paris.

J. Le C.
expressive of much goodness of heart. Every thing about him
breathes the air of sadness and the impress of a vague melancholy;
a regret attaches to each step of his life, and which has its origin in
the dreadful mutilation to which he was made to submit in childhood.
(Journal des Con. Médico-Chirurgicales.)

Re-union of divided Nerves.—M. Marjolin takes great pleasure in
relating an operation which he witnessed, where the surgeon, M.
Michon, found it necessary in extirpating a degenerated mass, to in-
clude more than an inch of the trunk of the sciatic nerve. Paralysis
of all the movements of the limb ought to have been the consequence.
Nevertheless this person, after his cure, recovered such a degree of
muscular agility, that he could dance and waltz as formerly.

In the Provincial Medical and Surgical Journal, Dr. Oke reports a
case, where he had to cut the musculo-cutaneous nerve in operating
upon a necrosed humerus. This brought on paralysis instantly of
the movements of the right hand. This patient was an excellent
scribe. He took lessons for four months to learn how to write with
the left hand, at which time he began to feel movements in the fingers
of the other, and in a few weeks he had so far recovered, that he
could write well with both hands.—(Jour. des Con. Médico-Chir.)

Reproduction of a portion of the lower Jaw-bone with Teeth.—
By E. S. Bennett, M. D., of Charleston, S. C. Early in the
month of March, 1845, I was requested to visit, professionally, a
negro child about thirty months old, the property of Col. J. L., of
our city, who was reported to have a singular appearance about
the mouth, resembling a piece of bone growing from and connected
with the inferior maxillary, preventing the child from mastication,
and it could only take fluids, and that but sparingly. I found the child
in an extremely emaciated condition—having been suffering for five
months; upon examining it with some care, I found the bone (infe-
rior maxilla) in a state of necrosis, extending from the canine tooth
on the right side, along the whole bone on its entire aspect, to the ar-
ticulation on the left. The anterior portion of the bone had been
raised from its natural position, and becoming elevated as far back
as the ramus on the left, and its point, which was rough and very
rugged, fixed in the soft parts on the right side of the corner of the
mouth, and from this state of irritation an extensive and frightful
ulcer was developed. The only question suggesting itself was,
whether the child, in its then emaciated condition, could survive the
operation; the chances I considered as equal, and determined upon
dilation of the soft adhering part within the mouth, and removing the
whole mass, which was accordingly done, and with a pair of strong curved forceps, the bone was seized as far back as the bend, and by a careful rotary motion of the hand, the disarticulation was accomplished, and the bone removed. Within a few days a decided pleasing improvement was observed; and in four weeks, I was enabled to return the little sufferer to the country.

It may be asked, and with propriety, what was the exciting cause of so frightful a state of things?—had the child taken mercury in any of its forms? I think I may safely say no; having been myself in attendance on the plantation for ten years, and can safely say none; but the disease may be, and probably was, sui generis, or the result of some local hyperemia—the result of the process of dentition.

This case settles the question definitely as to whether nature of herself is capable of reproducing the bony structures entirely; in this case, not only the whole bone has been reproduced, but dentition also—being now armed with two formidable grinders.—American Journ. of Dental Science.

A new haemostatic means—sheep brains.—M. Dupuy, at the sitting of the Academy of Medicine in Paris, 17th June, stated, that the cerebral matter of sheep possessed in a very high degree the property of coagulating the blood, and of immediately arresting haemorrhages. A small portion of the brain injected into the femoral vein of an animal produced death in a few minutes. The blood was found coagulated in the heart, and in the vessels, as M. D. had predicted. He thought that surgeons might profit by this fact.—(Journ. des Con. Médico-Chirurg.)

A new operation for defect of rectum in the infant.—M. Baude-
locque proposed to the Academy of Sciences on the 26th August, a new operation, as a substitute to opening the colon either in the lumbar or iliac regions, when the infant at birth is found to be deprived of a rectum. The absence of this intestine being established, it is necessary at first to dilate the natural anus by prepared sponge, then to introduce a speculum two and a half inches long; at the sacrovertebral angle the cul-de-sac of the descending colon will be found, and may be seized with a tenaculum. If this cannot be done, then an incision is to be made in the linea alba of the abdominal wall, and the cul-de-sac of the colon carried down to the natural anus, to which it is to be attached by sutures.

We find this proposed by M. B., in one of the last numbers of the Journal des Connaissances Médico-Chirurgicales. We are not disposed to place a very high estimate upon it, for the operation, as
described, we do not hesitate to say cannot well be performed without opening the abdomen. In the first place, infants having a malformation or defect of the rectum, have also generally an imperforated anus. Secondly, there would be considerable difficulty to dilate a passage from the anus to the sacro-vertebral junction for a speculum. Thirdly, when arrived at, who could distinguish, at this depth, the descending colon from the surrounding tissues? Still, however, we confess we have no objection, in defect of the rectum, to opening the abdomen in the linea alba, if by this operation, the intestine can in any way be attached to the anus.

The employment of Blisters in acute diseases of the Brain. By Dr. Tritschler.—Blisters are frequently used, and applied to all parts of the body, except the frontal region, which, according to Dr. T., is the best place to make them act in acute affections of the brain. He covers the whole frontal region, and even the root of the nose, by a vesicatory, and remarks, that besides a free suppuration produced by it, there is generally a copious flow of mucous from this organ. We learn, too, from the Journal des Connaissances Médico-Chirurgicales, that the physicians of the Parisian Hospitals employ these blisters with success against cerebral symptoms in severe fevers. The application of a single one is not sufficient to disfigure a patient.

Formulae of Alcaline Medication. By M. Devergie, Physician to St. Louis Hospital, Paris.—At the close of an article by M. D., in the Bulletin Général de Thérapeutique, on the Alcaline Medication for diseases of the Skin, we find the following prescriptions:

Artificial water of Vichy: R. Bicarbonate of Soda, 31

Spring water, pint, 1 ½

To take in two portions during the day. The dose of the bicarbonate may be increased to 2, 3, or 4 3 each day; it is proper then to augment the water to 3 or 4 tumblers. Gaseous or the Soda water of the shops, will make this drink more agreeable.

Alcaline Syrup. R. Bicarbonate of Soda, gr. xv.

Syrup of Sugar, ½ x.

Dose, a table-spoonful, morning and night, in a fourth of a tumbler of water. For an infant, a tea-spoonful is the dose in the same quantity of water.

Alcaline Potion. R. Bicarbonate of Potash, 3 ⅛v.

Infusion of Linden, ½ iv.

Syrup of Mucilage, ½ i.

Distilled water of mint, gtt. xxv.

Dose, two or three table-spoonfuls each day for an adult.
Poison by Tartaric Acid.

Alcaline Wash.  R. Carbonate of Soda, $\frac{3}{8}s$.  Water, O. $\frac{1}{4}$

More active Alcaline Wash.  R. Carbonate of Soda, $\frac{3}{8}vi$.  Common Salt, $\frac{3}{8}ii$.  Water, O. $\frac{1}{4}$

Alcaline Liniment.  R. Carbonate of Soda or Potash, $\frac{3}{8}i$.  Olive Oil, $\ldots \ldots \frac{3}{8}iv$.  Yellow of egg, $\ldots \ldots \text{one}$.

Moisten the carbonate before adding the oil.

Weak Alcaline Ointment.  R. Carbonate of Soda, gr. x.  Lard, $\ldots \ldots \frac{3}{8}i$.

The carbonate may be increased to 4 or 6 $\varnothing$, when a more active ointment is desired; and $\varnothing 4$ of slacked lime may be added—using then the carb. of potash.

Alcaline Bath.  Carbonate of Soda or Potash, from a half to a pound.

Alcaline and Tonic Bath.  R. Carbonate of Soda, from a half to a pound; Common salt, 1 to 2 pounds.  Gelatine or soap may be added to this.

When sulphur is added to the alcaline preparations, the latter have only a secondary place in the composition.

Poison by Tartaric Acid.—It has been questioned if this acid be a poison.  Pommer and M. Orfila are for the affirmative; Coindet and Christison for the negative.  The following fact strengthens the opinion of the two first named: Wm. Wats, being affected with rheumatism, applied the 7th Dec., 1844, to Charles Watkins, druggist, to purchase $2 \frac{3}{4}$ of Epsom salts.  Before leaving, the thought suddenly occurred to him of changing it for another salt less bitter.  This was granted to him, and having returned home and dissolved the new article given him, he swallowed it.  His face, some moments after this, became red.  He cried out he was poisoned, and then ceased to speak.  Other symptoms were developed, and Mr. Wats died on the 16th.  Mr. Brood, charged with the examination of what remained in the glass from which he had drank, recognized Tartaric Acid.  The apothecary, Mr. Watkins, confessed his error, and attributed it to the change which some one had made of the bottle of the acid, for that commonly occupied by an insipid salt.—(Pharmaceutical Journal.)
Lithontriptic action of the Uva Ursi. By Dr. Fenolio.—An old calculous patient had fever, and experienced severe pain in the bladder. He would not consent to be sounded. Dr. F. prescribed a decoction of the uva ursi, prepared thus: R. Uva Ursi, ʒss.; Water ʒix. Boil for fifteen minutes; strain, add syrup of gum, ʒv., and take the whole in three doses. After using this tea for three days, the patient passed 13 pretty large gravels, and in five days more, 90 others. The whole formed a considerable mass. His suffering and fever disappeared.—(Jour. des Con. Médico-Chir.)

Treatment of Dysmenorrhae.—Dr. Rigby, in his treatise on this subject, considers that it depends, in common with some other uterine affections, on derangement of the assimilating processes which may be merely "the local phenomena of a general condition of the system." This general condition, he thinks, is chiefly dependent on a gouty or rheumatic diathesis. He generally begins the treatment with one active dose of calomel, from five to eight grains, followed by a mild purge of rhubarb or magnesia next morning. Leeches to the anus, either immediately before the menstrual period, or equidistant between the two periods, are very efficacious; but often require repetition before their full value is seen.

"The attention of the practitioner must now be devoted to the more specific treatment in the case. If the circulation be plethoric and strong, the urine scanty, high-colored, with considerable excess of lithic acid and lithates, colchicum, in the form of the acetous extract, with extract of hop or henbane, may be given at night, or night and morning, and some mild saline, with sp. ætheris nitrici, occasionally during the day.

"The salines, as recommended by Dr. Prout, are well worthy of attention; they not only diminish the disposition to the formation of lithic acid during the processes of primary assimilation, but allay the irritable state of the digestive organs, and the urine becomes increased in quantity and more healthy in its characters.

"Where the disease assumes the rheumatic or rheumatic-gouty character, we usually find it associated with less power of general circulation, and with local symptoms of less active character. Guaiacum and iodine are valuable remedies in these affections, either separately or combined. The tinctura guaiaci ammoniata may be taken in milk night and morning; or ten grains of pulv. guaiaci and of magnes. carb. every morning, and from two to five grains of potass. iod. with extract of hop or henbane at night; or if it be deemed unnecessary to use the guaiacum, the potassæ iod. may be given two or three times a-day in sarsaparilla with liq. potassæ, and the bowels regulated by an alternative or laxative pill at night; or, if it be desirable to promote diaphoresis, by a dose of Dover’s powder.

"There are few remedies which keep up a healthy action of the liver so well as the taraxacum, especially when preceded by a dose or two of mercurial medicine. In most of the affections under consideration, where it is important to maintain this function in due activity, and yet where the constant use of mercurials is highly inexpedient, taraxacum becomes a valuable adjunct. It is prepared under a variety of forms, but I prefer the extract as being the most certain and convenient; half a tea-spoonful at night, dissolved in a little warm milk, forms a, by no means, disagreeable cocoa-like drink; or it may be taken with milk and lime-water if necessary. Besides its ordinary effect on the liver, and
therefore indirectly upon the bowels, by supplying them with healthy bile, I have reason to think that it also acts upon the skin like sarsaparilla, and for this purpose may sometimes be advantageously combined with it."

Braithwaite's Retrospect.

A Surgical Anecdote.—We find the following in the last No. of the Journal des Connaissances Médico-Chirurgicales:—One of the most distinguished surgeons of Paris, being about to operate upon what he supposed a common cataract of the eye, observed to the students present, at the close of a brilliant lecture,—Here is a cataract easy to operate by displacement. The needle introduced into the eye was manoeuvred for a long time without causing the opacity to disappear. The instrument was then withdrawn, and the operator, without saying a word, turned his back upon the patient. A witty confrere, wishing to ascertain the cause of this bad humor, examined the eye, and laughingly said, "I see what it is. It appears that there has only been here a displacement of diagnosis.


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23 Fair days. Rain, 1 inch.