

# THE BOSTON MEDICAL AND SURGICAL JOURNAL.

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VOL. XII.]

WEDNESDAY, JUNE 24, 1835.

[NO. 20.]

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## TREATMENT OF CONSTITUTIONAL IRRITATION FROM LOCAL INJURIES.

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IT will be borne in mind, that the symptoms which characterize constitutional irritation from local injuries, are those which indicate a subdued and disturbed state of the vital forces, and that re-action is the first evidence of any recuperative effort on the part of nature, and the first step toward recovery. To rouse the subdued powers of life, then, and to bring them under the influence of more salutary stimuli, would appear to be the first general indication to be had in view. Assuming the patient's condition to be that which has already been described, arising from injury received by a fall from a height, or in a mode equivalent, his breathless, pulseless, and pallid condition demands repose in the horizontal posture, warmth, and the employment of gentle stimulants. If the surgeon be at hand at the moment of the injury, his first object should be to prevent all officious interference on the part of by-standers, whose well-meant endeavors are so usually misdirected. If he be not exposed to a cold or damp air, nor lying upon a wet or rugged surface, let him, for a few minutes, rest where he is, in the supine posture, which is easiest for respiration; and with his head low, to favor the restoration of the cerebral circulation, the suspension of which prolongs the state of syncope. If his immediate removal be necessary, he should be placed on a hand-barrow, or a plank covered with a folded blanket, still in the horizontal posture, and conveyed in a manner to embarrass his respiratory efforts as little as possible, to the nearest dwelling. He should be placed in an apartment where the circulation of air is free—warmth, by heated bricks or bottles of water, is to be immediately applied to his feet—and, by warm cloths, to his stomach and region of the heart. Gentle frictions with warm dry cloths are to be exercised, and if re-action is still reluctant, let the lips and nostrils be touched with ammonia—with Cologne water, or with warm spirits. A dash of cold water upon the face will produce a deep inspiration, and thus give an impulse to the circulation.

To exhibit any remedy by the mouth, while extreme prostration still exists, will only produce ineffectual efforts to swallow, and still more embarrassed respiration; but when respiration and partial consciousness are established, nothing is so grateful to the patient—nothing so refreshing, as a draught of cold water. For this, indeed, as soon as the patient is conscious of his wants, there is the most eager desire, which instinct should always be gratified. But if we have reason to believe that no

serious lesion has been inflicted upon important organs, especially the brain, and if re-action is still tardy, it is proper that warm wine and water, toddy, or a few drops of aqua ammoniæ, should be administered.

One of the most common and pernicious of popular errors (in this community at least), in regard to the treatment of cases such as I have described, is the conviction of the necessity of bloodletting. So impressed are the by-standers with this belief, that the attempt to obtain blood is often made by some interneddler, before the case is seen by the surgeon; and if not, the latter is always importuned to use the lancet. The impropriety of resorting to it under such circumstances, is now, I believe, among surgeons, universally acknowledged. Fortunately, when the attempt is made, it ordinarily fails, in consequence of the languor of the circulation; but, could blood be copiously taken, it would only have the effect, either to defer, or perhaps altogether discourage the recuperative efforts of nature.

When, however, re-action has become established, and especially when it has been excessive, blood should always be taken in cases in which the shock has been considerable, or where organic injury has been inflicted upon any important part. Even although re-action may have been at length established, and some degree of inflammation and fever induced, the agitation of the nervous system and the morbid exercise of sympathy by no means necessarily cease. Vicissitudes of action and unequal excitement are liable still to occur. Perfect tranquillity should be enjoined, and usually it will be proper to compose the system by means of an anodyne. But the more promptly we may have cut short the period of primary irritation, the less serious will be the consecutive vascular and nervous derangement. These pathological states, indeed, bear to each other a relation analogous to that which exists between the cold and hot stages of an intermittent.

To avoid reiteration, we must necessarily defer the consideration of that variety of constitutional irritation resulting from burns, until we shall treat particularly of these injuries. I would remark, however, that those therapeutic principles which apply to other forms of irritation, are applicable here also, and we shall find the treatment of burns to be illustrated by that which we are now inculcating.

When constitutional irritation results from the action of a blister, spontaneous re-action would ordinarily soon result; but the affection is distressing, and to the patient alarming—sometimes, also, seriously protracted. It therefore demands our attention. The effectual remedy is a liberal anodyne in the form of tinct. opii, aided by external warmth and hot drinks, which dispel the more quickly the chill that usually accompanies the paroxysm.

I would here remark, that in all those cases in which the cause of irritation is for a time continued, and this pathological state in a degree protracted, narcotic anodynes are the legitimate antagonists of irritation, which they meet and neutralize in the nervous system. They constitute by far the most important class of our remedies; for, although they generally more or less excite the vascular system, they certainly obtund the sensibilities of those tissues on which irritants primarily act, and especially those of the nerves. They also, by their general influence on

the nervous system, arrest the morbid exercise of sympathy, and the communication of disease from one organ to another, or to the system.

In regard to constitutional irritation from surgical operations, we have an advantage not enjoyed in the treatment of other forms, since we may often anticipate its occurrence, and, in a degree, fortify the system against it. We also have it often in our power to select that period in the progress of the local affection propitious to the success of our operations; but this topic we shall discuss more fully under the head of amputations.

When we are about to execute a surgical operation of even trivial magnitude, upon a sensitive subject, it is prudent to administer thirty or forty drops of the tinct. opii, a few minutes before its execution. If the operation be one of formidable character, twice that quantity may be employed, care being taken to ascertain whether there exist any idiosyncrasy forbidding its use.

We are often importuned by those about to suffer severe operations, to render them insensible to pain by powerful narcotics. Immediate suffering might thus, it is true, be partially obviated, but we are well aware that the secondary effects of opium are productive of cerebral engorgement, and general irritability, circumstances extremely unfavorable to the happy results of most surgical operations.

The horizontal posture is that in which a patient best endures the infliction of pain, and, when possible, this should be employed. I have recently couched the eye of a gentleman, who had been previously thrice operated upon by an intelligent surgeon, who placed him in the usual sitting posture. After each operation, he had been immediately seized with tremors, sense of faintness, and vomiting, which greatly distressed the wounded organ, and probably assisted to defeat the complete success of the operation. Warned by these occurrences, I followed the advice of Dupuytren, and in operating on this gentleman, placed him in the recumbent posture on his bed, so that no locomotion was necessary after the operation. In the first instance, he completely escaped all unpleasant symptoms, and in the second, they were slight, and did not occur for some hours, and not till he had become a little exhausted by incautious exertion.

In operations necessarily protracted and painful, the prudent surgeon will, when practicable, give his patient the occasional respite of a moment from his suffering, in order to give the vital powers an opportunity to rally. An intelligent physician, on whom I recently performed lithotomy (in whose case there was peculiar difficulty, because the calculus was encysted), assured me that but for these moments of comparative rest, he must have lost all power of endurance, and perished on the table. At these moments the patient should also be allowed cool water, or wine and water. He should be cheered by the sustaining voice of hope, and assured of speedy relief. The operation should be performed with as much celerity as is consistent with precision. From time to time the pulse should be examined, and should it at any moment give evidence of extreme prostration, the operator must desist, if possible, till re-action is in some degree induced.

Should extreme pain persist, after a surgical operation, a liberal opiate (tinct. opii f. ʒi. to an adult) should be immediately administered, lest

the continuance of local irritation should further disturb the constitution. To preclude the occurrence of chills, such as often follow from severe, and in some, from slight operations, an anodyne may be given, the extremities be kept warm, and warm drinks be exhibited.

Constitutional irritation, induced by great loss of blood, furnishes a case of most perplexing character for the management of the surgeon. There is exhaustion, and yet there is at times over-action ;—we wish to increase the power to sustain, and yet we would sedulously avoid to increase action. At one moment the arteries bound with an apparent force, which will sometimes tempt the young surgeon to resort to the lancet ;—at another moment, their faint pulsations seem to demand the use of the most diffusible stimulants. These are both deceptive indications. In such a case, two objects are to be held in view ; the first—to restore and sustain power ; and the second—to obviate irritation, which is exhausting it by compelling it to excessive action. In all such cases there is some focus of irritation, or debility alone would be the consequence of loss of blood. The philosophical plan of treatment would therefore appear to consist in the judicious employment of anodynes, revulsives, corroborants, and in the use of nutrient, but unirritating aliments, and the careful avoidance of all moral and physical excitants. It is also highly important that the tendency to unequal excitement should be obviated by the suitable employment of local sedatives and stimulants, particularly cold and warmth.

Opium employed under these circumstances, exhibits far less of its stimulating influence than ordinarily. The occasionally increased action of the pulse is owing, not to permanent excitement in the heart and arteries, but to irritation, of which opium is the legitimate antagonist, and no sooner is a full anodyne exhibited, than the tumult of vascular action is assuaged. The salts of morphia will generally be found more salutary than opium. An idiosyncrasy might forbid the use of either, and then digitalis, or the extract of hyosciamus, may be employed.

The tonics resorted to, should be those which are but little stimulating, and which act especially on the stomach. Bitter vegetable infusions will, therefore, be selected, such as those of Columbo, quassia, &c. also the sulphate of quinine, in small doses. Preparations of iron are, perhaps, second to none in value. Porter, in small quantities, will often be found most salutary, by virtue of its anodyne, its tonic, and its nutrient qualities.

The secretions being defective, and often morbid in these cases, and the bowels usually slow, the pil. hydr. with rhubarb or aloes, will be found a salutary aperient. Harsh cathartics must be carefully avoided, for if gastro-enteric irritation do not already exist, it is easily induced.

Nothing can be more important in the management of these cases, than the observance of the most perfect tranquillity. Even the eye and ear should be placed at rest, by the absence of light and sound. So excitable is the nervous system, and especially the optic and auditory portions, that ordinary noises and light will alone keep up a perpetual excitement. I have recently treated a case of constitutional irritation from exhaustion, in which such was the exquisite tenderness of the eye, though there existed no evidence of inflammation, that not only was it necessary

to completely darken the room, but also to use a close screen over the eyes.

Whatever plan of treatment is pursued, however, it must be chronic, like the disease, and recovery must necessarily be slow and tedious.

The reader will observe that I have merely taken that view of this part of our subject which is most interesting to the surgeon. For more particular information, I must refer him to the writings of Marshall Hall and Mr. Travers. I would here remark, that when the febrile symptoms strongly qualify irritation from loss of blood, the case becomes one of irritative fever, and will be briefly discussed in its proper place.

*North Amer. Arch. of Med. and Surg. Science.*

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## THE DRESSING AND HEALING OF WOUNDS.

A LECTURE DELIVERED AT THE NORTH LONDON HOSPITAL, BY ROBERT LISTON, ESQ.

GENTLEMEN,—You would observe, that after the completion of the operation in our patient Taylor, the flap was cleared from coagula, and the incisions were put together, and retained temporarily by a very few points of the interrupted suture. Lint dipped in cold water was then applied, and ordered to be renewed frequently for the first six or eight hours, until, in fact, all oozing had ceased, and the surface had become glazed. You are aware that this period is by much the most favorable for union. The parts are then exposed, and dried thoroughly, and any coagulum that may have formed betwixt the edges, is carefully and gently removed. Your object is then, after the removal of all impediment to union (and clot impedes), to retain the parts accurately, and with the least possible irritation of any kind. This indication is fully answered by the application which you have occasionally seen employed here. It consists of a very strong solution of isinglass in spirit. This is liquified by immersion of the vessel containing it in hot water, and it is readily spread on strips of oiled silk. These are applied in the interstices of the stitches. They speedily adhere, and so firmly, that the points of suture may with the utmost safety be removed within the first twelve hours after the operation. This dressing is not disturbed by serous or purulent discharge, and it is very seldom necessary to reapply it. The plaister adheres much more firmly than any other, and is not productive of the least irritation of the surface. If the strips should be ruffled or detached by any means, their ends are cut off, and fresh bits put on instead, without incurring the risk, by a removal of the whole plaister, of interrupting the adhesion.

The part interested is placed at rest, so that the muscles affecting it are relaxed. The bed-clothes are raised by a cradle or other contrivance, in order that there shall be a free circulation of air around. No other dressing is employed or required; neither ointments, pledgets, compresses, nor bandages. No one will, surely, now-a-days, pretend to say that there is any healing virtue in a composition of oil, lard, or wax, whatever absorbent earth or metallic oxide or salt may be stirred up and