ART. IV. *Observations on the Iodo-hydrargyrate of Potassium.* By
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IN the Number of this Journal for February 1834, there is an article by Dr. Channing of New York, on a combination of iodine, mercury, and potassium, which will probably prove a valuable discovery in therapeutics, as it possesses the virtues of mercury and iodine in an eminent degree.

Its extended application to very many chronic and some acute diseases, as specified by Dr. C., would "startle the credulity of the cautious practitioner," were there not also well authenticated facts to prove its efficacy in a long catalogue of maladies.

The spirit of innovation and discovery is abroad in the land: good has no doubt resulted from it; yet it requires the test of careful experiment, to distinguish the good from the evil, to separate the wheat from the chaff. There is also too often manifested an effort to magnify the value of new discoveries by their authors, which is far from commendable. Remedies which are only efficacious in the cure of a few diseases, are stated with all the gravity of truth to cure a host of maladies; thus confidence is lost in medicines which are, in fact, extremely valuable in some few cases.

The preparations of iodine require great care in their exhibition, and in watching the effect of their gradually increasing doses.

Experience proves that all the combinations of iodine, (including the iodo-hydrarg.) are least liable to irritate the system when taken after eating. A much larger dose can be borne on a full stomach, than when fasting. The constitutional effect of the remedy, that is, its curative effect, does not seem at all obviated or prevented by repletion. Animal food is even prescribed by some authors as an adjuvant, and is said to promote its salutary operation. There is an unpleasant metallic taste remaining after the use of the iodo-hydrarg. which I have found best obviated, by taking the medicine in any of the bitter effusions, as of chamomile, gentian, &c.

When the iodo-hydrarg. has been pushed to excess, a train of symptoms is induced which calls for its suspension for a few days. Among the most important of these we may mention nausea and vomiting, giddiness and pain in the head, a peculiar heavy sensation about the eyelids and frontal region, slight pyalism, an eruption on the skin, first appearing on the face and breast, griping and purging. All these unpleasant effects are promptly relieved by suspending the medicine for a few days. Excessive action when once induced is very apt to recur on resuming the medicine, unless it is *very much diminished in quantity*.

In the paper referred to, several well marked cases of phthisis and chronic bronchitis are detailed, as having been cured by the remedy, and which, judging from the symptoms, would probably have died under any known form of treatment. This induced me to prescribe the remedy in

several cases of phthisis, occurring in my practice from time to time, and I am sorry to say that thus far, I have but little cause to congratulate myself on the result. In nearly every instance I have found it too irritating and stimulating, increasing the cough, fever, and difficulty of breathing, in some instances it has unloaded the lungs of vast quantities of pus and mucus, sometimes changed the character of the secretion from pus to mucus; but it has usually produced so much general distress to the patient, that I have been obliged to suspend it entirely. In these cases I have given it as directed by Dr. C. in small doses gradually increased, stopping its use when its effects were excessive, and resuming it again in diminished doses, but as yet it has not benefitted my consumptive patients. They have died under its use as speedily as under any other forms of treatment. My failure in diseases of the lungs referred to, may perhaps be owing to the want of the necessary skill and care, on my part, in its administration. I can only say, thus far it has disappointed me.

In *inflammations* of the lungs and other organs, I have not given it, nor shall I ever prescribe it, until I have lost all confidence in the lancet, tartar emetic, revulsives, &c. From what I have learned of the properties of the iodo-hydrarg. potass. from personal observation, I should think it *almost exclusively* adapted to diseases of a subacute or chronic character. Indeed Dr. Channing does not *particularly* recommend it in inflammatory cases, although he gives us a list of such diseases in which he has prescribed it with advantage.

But that the iodo-hydrarg. potass. is at all applicable to acute diseases I am very much inclined to doubt. That it is an active stimulant may be inferred from its effects in the hands of Dr. Channing, when given in collapse, by its producing pain in the head, excitement of the pulse, eruptive fever, griping and purging, &c., when given in excessive doses.

That a combination of two such Herculean remedies as mercury and iodine, must contain virtues of an active character will not be doubted, but that the same remedy should be equally applicable to the cure of diseases acute and chronic, and that its sanative influence should be felt throughout nearly the whole chain of maladies to which human nature is liable, would rather tend to "startle the credulity of the cautious practitioner," if it be not even a little of a Sangrado-like practice.

I shall advert in this communication to those cases only, to which I have found the remedy particularly applicable: in regard to its influence in other diseases for which I believe we have better remedies, I shall say nothing.

In pure functional diseases of the stomach, I have very frequently seen it exert a most salutary influence. Indeed so strong is my faith in its remedial powers in ordinary dyspepsia, that I have prescribed but little else for this disease for the last four or five years. By its strong alterative powers, it corrects the depraved secretions of the mucous membrane of the stomach and bowels, and of the chylopoietic viscera in general, and imparts

a tone and vigor to the digestive process which I have not found so readily induced by other remedies. Under its use long lost appetite is restored, the patient is relieved of flatulence, pyrosis, acidity, and constipation; the skin regains its natural color and feeling, there is an improvement in strength, and flesh, the depressed energies of the mind are restored, as a natural consequence of the restoration to health of the body. I do not recollect a case of pure functional disease of the stomach, in which I have given the iodo-hydrarg. potass. without benefitting my patient. It should be administered in some bitter infusion, always after eating, and in medium doses.

I will mention a case in point by way of illustration. Mr. G. R., ætat. 50, has for twenty years been a martyr to dyspepsia. When first attacked and for years afterwards he was in the habit of swallowing physic constantly — was cupped over the epigastrium, blistered, pustulated with tartar emetic, &c., but all to no permanent benefit. He has for years past abandoned all medicine, dieted strictly, and being actively engaged in business has managed to live tolerably comfortable with his disease. When suffering from attacks of an inflammatory or bilious character, he has constantly refused to take medicine but of the most mild and unirritating character, for fear of aggravating his dyspepsia. So great is his aversion to medicine that I had much difficulty in persuading him to take the iodo-hydrarg. potass. After a more severe attack than usual, he however consented to take it: it was prescribed in doses of eight drops, three times daily, in a bitter infusion and directly after eating. In a few days he found himself getting much better, but was not willing to attribute his improvement to the remedy. He continued it for three or four months, omitting it occasionally when he felt quite well, and resuming it again whenever he perceived the least indication of the return of the disease. He informs me to day, December 22d, 1838, that he has not felt so clear of dyspepsia for twenty years, and that the remedy I prescribed has been of more service than any thing he has ever taken for the same purpose.

Dyspepsia in females is often connected with irritation of the upper dorsal spine; this must of course be relieved by cups, leeches, blisters, or tartar emetic, before we can expect a cure. Should there be epigastric tenderness the same remedies will be also here required. I have not found it necessary to restrict the patient's diet so closely while using the iodo-hydrarg., as, under other forms of treatment; a bland farinaceous diet is of course to be preferred.

In *diseases of the liver* the remedy is no doubt inferior to other preparations of mercury. I have frequently seen it remove jaundice, but not more readily than the blue pill and other mercurials.

In *enlargements of the spleen*, it has a most decided effect; and from what little I have seen of its powers, I am inclined to put more confidence in it, than in any other form of iodine; several recent cases in children, the result of intermittents, I have seen reduced by it; but enlargements of this

organ in adults, of a *strictly chronic character*, I have often found incurable by this as well as other remedies. Indeed, it may be considered a question whether chronic cases which do not put the life of the patient in jeopardy by hæmorrhage, or induction of dropsical effusion, had not better be left to nature. I believe the effect of remedies in such cases is often worse than the disease.

In many of the derangements or diseases of function of the uterus, it has a most decided efficacy.

In *amenorrhœa* it has frequently restored the menstrual secretion after other remedies have failed. For this purpose it should be taken in doses of six or eight drops three times daily, during the early part of the month; it should be gradually increased to twelve or fourteen, or as large a dose as can be borne without producing excessive action; this should be continued up to the time of the expected menstrual effort. It should then be suspended entirely for a few days, and again resumed at the minimum dose. It probably operates by inducing a gradual restorative to health of the disordered digestive function, so evident in chlorosis, by relieving constipation, and perhaps determining to the pelvic viscera. Whatever may be its *modus operandi*, it certainly has strong emenagogue powers, and will no doubt prove a very valuable addition to this class of remedies.

Many cases in illustration of this fact might be drawn from my case book, did the limits of this paper permit; any one can however satisfy himself on this point, by a few careful trials of the remedy. Some four or five years since, I recollect prescribing the iodo-hydrarg. pot. for Miss E. R. This young lady was dyspeptic, her complexion was very sallow and spotted; she suffered very violent pain during each menstrual period, for which she was obliged to take large doses of morphia during the paroxysm. The prophylactics for dysmenorrhœa, of which she had taken many, had been of no service; as the paper of Dr. Channing did not ascribe any virtue to the medicine in dysmenorrhœa, I merely gave it to relieve her dyspepsia, and if possible, to restore the purity of her complexion, as she was grieving sadly about the loss of her personal charms. After using the medicine a few weeks in doses of six drops three times daily, she found her next monthly paroxysm much less violent in character. During the week preceding the next attack, the dose was increased to ten drops with the desired effect of entirely relieving the dysmenorrhœa. This happy result continued as long as she continued the medicine, but when she suspended it, the pain at the monthly period returned as violently as before. Her general health was however much improved, and the purity of her complexion restored as a natural consequence.

In several other cases of dysmenorrhœa in which I have given it, it has succeeded in preventing the pain when other prophylactics have failed to do so. In some cases it has effected permanent cures, but more generally it has in my hands merely succeeded in preventing the paroxysm while the

patient continued its use. The pathology of dysmenorrhœa we think a little obscure. In some cases there is a membranous secretion thrown off something similar to that ejected in croup; in others, there is a contraction of the os uteri, sometimes so great as scarcely to admit the finest silver probe. The rigidity of the body and cervix may give rise to pain during the menstrual effort in other cases. Notwithstanding the variety of causes tending to produce the disease, yet have we found the most unequivocal benefit from the iodo-hydrarg. pot. in nearly every case in which it has been prescribed, at least during the continuance of the remedy. The use of the bougie, as advised by Dr. M'Intosh in dysmenorrhœa arising from *contraction of the os uteri*, is probably the only scientific and sure remedy; and were it not for the innate aversion of the sex to all such manipulations, it might be made a much more extended and useful application.

In some few cases of *leucorrhœa*, in conjunction with other means, I have seen the iodo-hydrarg. produce a most salutary effect. It is probable, however, that for this disease we have better remedies. Its effects in two cases in which it was exhibited, were of so singular a character, that I cannot avoid mentioning them. In the spring of 1834 I prescribed the medicine referred to, for Mrs. J. P. C. This patient had suffered from fluor albus for many years, was feeble and dyspeptic. She was the mother of four children, the youngest of whom was then eight years old. She took eight or ten drops of the solution three times daily in some bitter infusion; astringent vaginal injections were also used at the same time. These means in a short time cured the leucorrhœa, and also restored the uterus and its appendages to such perfect health, that impregnation took place immediately; since this time she has been three times pregnant.

Mrs. W. G., the other case referred to, was treated for the same symptoms, in the same manner, and about the same time. This patient had borne two children, both of whom were dead, but had not been pregnant for four years; on recovering from her leucorrhœa, she began again to bear children, and has since borne two. These cases occurred so nearly together, that I could not fail to be surprised at the result of the treatment; indeed, so promptly had the remedy restored the uterus to health, that I was led to expect similar results in cases dependent on other causes; I was of course disappointed. Unfruitfulness in women depends on derangements of the sexual organization so opposite and various, that no remedy will ever be found applicable to all cases. Thus too rigid and too relaxed a state of the cervix uteri has been known to produce it; a slight contraction in the os uteri or Fallopian tubes, enlargements of ovaria, congestions of the uterus itself; derangements of function, as amenorrhœa, dysmenorrhœa, or menorrhagia, are all adduced as causes.

In the cases detailed, conception was probably induced, as the result of restoring the mucous membrane of the vagina and uterine cavity, to a perfectly healthy state, and perhaps also by reducing some chronic enlargement of the ovaries.

In the reduction of *glandular enlargements* of a scrofulous character, I have found the most happy effect from the following ointment. R. Dutiodid. hydrarg. grs. viij; Hydriod. potass. ℥ij; Axung. p. ℥i. M. This should be applied to tumours two or three times daily: should it prove too irritating to the skin a further addition of lard will be required. I have also been better pleased with the iodo-hydrarg. pot. in general scrofulous diseases than with any other combination of iodine. When continued any length of time, its effects should be watched, and its *excessive action* carefully guarded against, as the salutary action of the remedy very much depends upon this circumstance.

June 17th, 1836, was requested to visit Miss M. T., ætat. 18. The submaxillary gland of the left side has been for two years much enlarged and indurated; several of the axillary glands are also enlarged and one of them having suppurated is now discharging a thin scrofulous fluid. She has amenorrhœa, many nervous symptoms, and a general chlorotic appearance. There is some tenderness on pressure of the upper dorsal and lumbar spine, for the relief of which an ointment of tartarized antimony was applied. A dose of two drops of the iodo-hydrarg. pot. was given three times daily in the usual manner. The ointment of the same according to the above prescription, was applied to the submaxillary and axillary glands—at the expiration of a week, suppuration had occurred in the submaxillary: it was lanced and discharged a considerable amount of healthy looking pus. Under the continued use of the ointment, the induration of the gland entirely subsided leaving no deformity—the axillary glands disappeared by resolution. Her menses returned after using the solution at the above dose in ten days. Her general health as a natural consequence was much improved.

Should the reader be surprised at the very extended range of disease to which we have found the remedy applicable, let him bring to mind the acknowledged influence of the minerals, mercury and iodine over the absorbent, secretory, and glandular systems. In this preparation we have these two powerful remedies, in a state of direct chemical combination (which has long been a desideratum in medicine.) From a remedy so constituted what should we justly expect but great activity, and extended influence. For a more specific account of the powers and properties of the iodo-hydrarg. potass. reference may be had to the very valuable communication of Dr. Channing in the Number of this Journal referred to. We will also beg leave to refer the reader to the book of nature, which is always open before him, and from which he can very readily learn its properties. In illustration of the influence of the remedy on the urinary apparatus, I will report one or two cases of dropsy.

Case I. General Dropsy. March 4th, 1836, was requested to visit Mrs. C. of West Zanesville, in consultation with Dr. Moore, her attending phy-

sician. The Dr. informs me she has for three months past been suffering from dropsical effusions into the cellular structure and peritoneum, probably the result of irritation induced by enlarged spleen or liver. The dropsy came on during the latter months of pregnancy. Parturition took place on the 2d of February, 1835; child lived but a few days after delivery; the dropsy increased rapidly, notwithstanding the liberal use of diuretics as directed by her physicians. We found the patient sitting in a chair, (the recumbent posture could not be borne,) and almost incapable of motion. The anasarca of the lower extremities was most complete, extending up to the pelvis: there was a deep slough over the tibia of the left limb, discharging freely the dropsical fluid—the skin was abraded in many places, blistered from extreme distension, and presented in spots a very unhealthy, livid aspect. The abdomen was distended to bursting, and gave her constant pain; the anasarca had also extended to upper extremities and face.

From the cough, dyspnœa, and stethoscopic signs; I was led also to suspect hydrothorax. Patient has no appetite; sits day after day in her arm-chair, and sleeps but an hour or two in the twenty-four, in the sitting posture. She passes about half a pint of high colored urine daily; in which lithic acid predominates. This case, we think, presented a very hopeless aspect, and this opinion, at the urgent request of the patient, we candidly communicated to her. With the consent of Dr. Moore, I prescribed the iodo-hydrarg. pot. in doses of ten drops three times daily in some vegetable diuretic infusion. Following the indication of nature, numerous punctures with a lancet were made into the cellular structure of the lower extremities, which gave exit to the accumulated fluid, and very much relieved the pain, distension, and danger of sloughing. The first prescription of ten drops, was in the course of a week gradually increased to fifteen—during this period there was a sensible increase of the urinary secretion, and it had in some measure lost its bright red color.

March 12th. There is a perceptible diminution of abdomen, and improvement of appetite.

15th. The dose of medicine is increased to twenty drops, there is a rapid absorption of fluid—six or eight liquid stools are passed daily from the action of the remedy on the bowels.

20th. Patient had a slight chill and fever. Much general distress followed the fever, relief from which she informs me was suddenly obtained by the passage of large quantities of water from the bladder. From this time the absorption of the effused fluids was *very rapid*, and the patient acquired considerable use of her lower extremities.

25th. Medicine increased to twenty-five drops, fluid nearly gone from abdomen, and cellular structure; applied tight bandage to abdomen; patient can lie down with ease; appetite good; strength increasing; seems confident of ultimate recovery.

April 1st. There is an eruption on the skin from the excessive action of

the medicine; too much griping and purging; suspend the medicine for four or five days; applied roller to lower extremities.

5th. Resume the medicine in doses of five drops, to be gradually increased; patient seems decidedly convalescent.

20th. Much pleased to find no indication of dropsical effusion about the abdomen or extremities. She looks much emaciated, but says she is daily gaining strength; yesterday took a long walk about town; her kidneys still appear too active; directed a chalybeate preparation to sustain her strength, also some of the vegetable bitters in decoction.

Remarks. This patient got quite well, and remained so for six months. Being in the humbler walks of life, and obliged to labour hard for the support of herself and family, she contracted a bad cough from exposure to wet and cold; inflammation of the lungs supervened, which was soon followed by return of her dropsy. The medicine was again exhibited, but seemed to have lost its effect; other remedies were given but to no purpose. She was twice tapped to give her temporary relief, and finally died about a year after she first came under my treatment.

I must confess myself much disappointed at the result of this case. I had flattered myself with the idea that a permanent cure had been effected. I report the case to illustrate the prompt action of the remedy on the urinary organs and absorbent system. I do not recollect to have seen larger quantities of water absorbed in a given time, than was effected under the use of the remedy.

Case II. Ascites. First saw Mrs. Bailey in April, 1836, when visiting her mother in the country, about three miles from Zanesville. Although her abdomen is of immense dimensions, Mrs. B. appears quite active, takes a great deal of exercise, and thus sustains her strength. The history she gave of her case is as follows:—After the birth of her first and only child in 1831 she “caught cold” her lochia was suppressed and in a few weeks dropsical effusions took place in the peritoneum. By the judicious prescription of her physician this was readily reduced. She remained free from dropsy for several years, but suffered much from menorrhagia every three weeks. This profuse discharge of blood very much debilitated her, and perhaps proved an exciting cause of dropsy. In 1835 her disease returned, and although she has taken remedies during the past year from several physicians, she perceived no improvement in her case. She suffers very little from her dropsy, much less than any case I have ever seen where the effusion was so extensive. She has, however, some difficulty of breathing when lying down at night. Being very weary of her present dimensions, she requested me to prescribe for her. I gave her the iodo-hydrarg. potass. in doses of ten drops three times daily. This was increased in the course of three weeks to twenty drops. It had the desired effect of increasing the action of the kidneys. She frequently passed nearly a gallon of urine daily—the abdominal swelling was reduced very rapidly but was never entirely removed.

She took the remedy for about two months, occasionally omitting it when its effects were excessive, and resuming it again in diminished doses. As she resided several miles from Zanesville, I could not devote as much attention to her case as would have been desirable—her husband at one time informed me he thought she was nearly well, so rapidly had the swelling diminished. After using the medicines for two months the patient for some cause or other, suspended it entirely. In a few weeks her disease returned with increased violence, there was now extreme distension of the abdomen, cough and great oppression about the chest, particularly in lying down. So great was her distress that I was summoned to perform the operation of paracentesis abdominis at her own urgent request. June 2d, 1836, with a common seton lancet and female catheter (which by the way I much prefer to that blunt and barbarous instrument the trocar) I drew off six gallons by measurement of a reddish limpid inodorous serum. The patient was immediately relieved of all her urgent symptoms; during the flow of water she called for food and drink and eat more heartily than she had done for weeks previously—A bandage and compress were applied to the abdomen. She now resumed her medicine, which again increased the action of the kidneys but did not prevent the return of the dropsy.

July 1st, the patient has occasional chills, also hectic fever and night sweats; she is losing flesh and strength; suspending the iodo-hydrarg., the patient took other diuretics as calomel and squill, digitalis, cremor tartar and jalap; but all to no purpose, the dropsical effusion continued to increase.

25th, I again tapped the patient; about five gallons of fluid were drawn off but very different in character from the first; it was very offensive in smell, of a dirty brown color and evidently purulent. My patient's health was by this time much impaired, she was much emaciated, could not sit up, the hectic fever and night sweats still continued, in fine she was reduced to the verge of the grave, to which I supposed her fast hastening.

At my last visit, July, 25th, I merely prescribed some anodyne remedies thinking her situation entirely hopeless, and requested the husband to summon me should any thing unusual occur, or tapping be again required.

I heard no more of my patient, and supposed her quietly reposing under the sod of the valley. I must confess I felt some compunctious visitings of conscience about the result of this case. I had found my patient a few months previous in the enjoyment of tolerable health, and actively engaged in household duties, and from her appearance there was a strong probability of her remaining in the same state for a long time to come, if her case had been left to nature. Being but a young practitioner, and not so familiar with the "grim monster" as many of my elder brethren, (who will no doubt admit they have sent him many a patient *secundum artem*,) these reflections were any thing but agreeable.

About three months after my last visit I met the husband of my patient

in town. My surprise may be imagined when he informed me his wife was *nearly well*, and was going about the house engaged as usual in domestic affairs. The history he gave of her case was this. After the last operation, the purulent secretion again accumulated in the abdomen, at the expiration of six weeks the distension being as great as ever, *ulceration occurred at the navel*, and the fœtid pus again found exit. The discharge was now so exceedingly offensive that no one could remain with her in the house, during its flow—About a quart of this fluid was discharged daily, for at least two weeks; it then began to diminish in quantity. She wore a compress and bandage to prevent its constant flow, which was removed at stated intervals. The orifice at the navel remained open during the latter part of the summer and fall of 1836; if the fistulous opening became obstructed at any time for a day or two, she was thrown into fever by the suppression of the discharge.

December 8th, 1836. Saw my patient in Zanesville. In walking the body is inclined forward; she cannot stand erect on account of the pain felt in the abdomen, probably from adhesions between the coats of the peritoneum. There are now two small orifices at the navel which evince no disposition to close; they give exit to about a tablespoonful daily of white inodorous pus. She still wears her bandage, and is very careful to keep the orifices open; discharge gradually diminishing.

January 1st, 1839. Met the husband to day, who informs me that Mrs. B. is perfectly well in all respects; has gained strength and flesh; can now stand erect without inconvenience.

April 20th, 1840. Mrs. B. continues in perfect health.

Remarks.—It would appear from this case that the operation of paracentesis abdominis when performed by nature is attended with far better results than when done by the surgeon. She also selects a different place for it, viz: the umbilicus, instead of the linea alba. And why, let me ask, should not the navel be always selected for this operation? The integuments and muscles at this spot are always the thinnest; and when there is much distension of the abdomen, there is always a natural *pointing* at this place, as if to indicate the spot for puncture. The natural gravitation of the fluid could be easily corrected by position or the use of the bandage; the danger of wounding the bladder, epigastric actions would be diminished, the pain to the patient would be lessened. I have myself performed the operation at the umbilicus, and have been pleased with the result.

It will be recollected that the fluid drawn off at the first operation, was of a pale reddish color, evidently serous, and without offensive smell; at the second tapping it had assumed the character of thin pus; which purulent character afterward became still more evident. Upon what principle can this sudden change be accounted for. In examining the abdomen after the first tapping there was no tumour of the ovaries, liver, or other abdominal organ, which by suppurating and bursting into the peritoneum, could thus

diffuse pus through its serous contents. We certainly may suppose the peritoneum itself to have poured out their purulent matter from its surface (as it is one of the acknowledged morbid products of all serous structures) but why, or wherefore, I must leave to better pathologists than myself. In fine, the case is an apt illustration of the remark, (which I think should be the motto of the disciples of Hahnemann,) that the "practice of physie is the art of amusing the patients, while nature cures the disease."

ART. V. *Observations on the Pathology and Treatment of Intermittent Fever.* By J. F. PEEBLES, M. D., of Petersburg, Va.

It has been long known, that intermittent fever occurs only in those districts of country, where the materials exist for the generation of its peculiar cause, and when the individual affected has been exposed for a sufficient length of time to the action of this poison, to have that particular condition of the system induced, for it to take on this singular diseased action. How this cause acts, and through what channel it passes, and what is the particular condition of the system it induces to originate this fever, has never been positively determined. Reasoning however from its primary phenomena, and from the order and regular succession in the chain of diseased action, we are induced to hazard an opinion, that the cause of intermittent fever, acts first upon the skin and the nervous expansions ramifying throughout its tissue, producing there, a morbid impression, which is transferred to the brain and spinal marrow, where it continues its mischief in a manner as we shall hereafter show, which produces the paroxysm.

Wherever, however, malaria may primarily attack the system, it is quite certain its first apparent effect is manifested in the skin. The earliest symptoms of intermittent fever come on so gradually and imperceptibly, that the practitioner is rarely able to observe them, unless, as it has been frequently my case, he witnesses them in his own person. In an attack of this fever, many hours before the patient is aware of actual indisposition, the insensible perspiration of the skin is dried up, and the capillary vessels throughout its whole tissue contract, suspend their circulation, and force the blood into the larger interior vessels, leaving the dermoid surface whitened and contracted. This diseased action in the skin is the first link in the chain of the disease, and is soon followed by the second in which the brain and spinal marrow suffers.

The first evidence which the latter organs give of their being involved in the disorder, is manifested in the lassitude complained of by the sufferer and the disposition to yawn, accompanied by an aching pain over the region of the loins and frequently dull headache. Whatever may be the nature of the dis-