tial to the following mixture in all cases of thoracic disease in children, after depleting measures had been premised :—

Chlorate of potash, fifteen grains ;
Dilute hydrocyanic acid, two drops ;
Syrup of red poppies, two drachms ;
Mint water, three ounces. A sixth part every four hours for two years of age.

In chronic pituitous catarrh with œdema, Dr. Wetherhead considers digitalis our sheet-anchor, either in infusion with the nitric æther, or in powder with the bitartrate of potass. The infusion of digitalis with the ammoniated tincture of iron, as advised by Dr. Holland, would be highly applicable under similar circumstances. The effects of cubebs on membranous disease may render it serviceable in chronic bronchial affections, and its combination with the sesquioxide of iron is not unworthy of attention.

The endermic application of morphine and belladonna to allay pulmonary irritation is also deserving of the student's remembrance; and in children particularly, opiate embrocations, as recommended by Dr. Bow and others, are very valuable additions to our therapeutical resources. Perhaps in chronic cases we are too apt to neglect the benefits to be obtained by permanent drains, so frequently advised by the older writers. We have known great relief to follow a caustic issue in the arm, and, in the retrospect of some obstinate cases, regret we have not more frequently advised it.

The above scattered fragments of experience may furnish the busy practitioner with some available hints. We are not attempting to lay down any systematic rules for the treatment of bronchitis; but to those who may wish for a powerful practical exposition of the subject, we would particularly recommend Dr. Stoke's excellent treatise in his work on Diseases of the Chest.

[To be continued.]

CASE

OF

HÆMORRHAGE FROM THE MUCOUS SURFACES,

FOLLOWING THE

EXHIBITION OF MERCURY,

WITH REMARKS ON THE MODE OF ACTION OF MERCURIALS IN GENERAL.

TO THE EDITORS OF THE PROVINCIAL MEDICAL JOURNAL.

GENTLEMEN,—Should the following communication appear of sufficient interest, its insertion in your Journal will oblige.

I am, Gentlemen,
Your obedient servant,
C. RADCLYFFE HALL.

Holmes Chapel, Cheshire,
May 15, 1843.

Thomas Roylance, aged twenty-two, a bricklayer, of strong muscular habit, and previously healthy, never subject to hæmorrhage, contracted gonorrhœa, and, on noticing the discharge, applied to a druggist; complained to him that he had a swelling in his groin. The druggist informed him that he had got "the real disease," and not a "clap," and prescribed some pills,

and a mixture of corrosive sublimate, copaiba, and spirits of nitre.

4th day. Had been purged by the medicine; felt very weak, and his skin had become yellowish.

7th day. For the last two days the mixture caused vomiting, and considerable pain in the abdomen; nose began to bleed, and in the evening slight pyalism commenced; applied to a farmer, who professes to stop bleeding by a *charm*.

8th day. I first saw the patient. The gums were spongy and bleeding; thin blood oozed in drops from the nostrils; the skin and conjunctivæ were yellow; the trunk and extremities covered with petechiæ; the urethra discharged matter, but the urine was passed without scalding; one of the inguinal glands slightly enlarged; pulse 80; bowels confined. To take sulphate of magnesia in infusion of roses, with an additional quantity of acid.

9th day. Epistaxis increased; vomits and expectorates blood; hæmaturia; bowels not opened. A colocynth pill every third hour.

10th day. Bowels have acted several times; chamber vessel contains about a pint of unmixed blood, loosely coagulated, which was voided by the urethra; the man spits blood incessantly; epistaxis profuse; the blood dark, grumous, and very thin; face and conjunctivæ of a lemon color; surface of skin and tongue cold; pulse very frequent, but scarcely to be felt; blood drops from the orifice of the urethra; petechiæ of a yellowish-green hue.

On raising him upright, with the intention of plugging the nostrils, he fainted completely; the nostrils were then plugged, whilst his head was hanging down over the edge of the bed. Tincture of opium, forty minims; tincture of sesquichloride of iron, one drachm, were given in water; brandy, yolks of eggs, and lemon-juice, supplied every few minutes, and another drachm of the tincture of iron, administered in doses of twenty drops during the next two hours. I now saw him again. Blood still dropped from the urethra, but he had ceased to spit any. To take a tablespoonful of lemon-juice every hour, eggs and port wine frequently, and an ounce of the following mixture every two hours :—

Sulphate of alumina, two drachms;
Dilute sulphuric acid, three drachms;
Tincture of opium, one drachm;
Water, seven ounces and a half. Mix.

14th day. Omitted the wine for last two days, but still continued the mixture and lemon-juice; petechiæ and yellowness of surface gone, and hæmaturia now for the first time ceased.

The plugs were removed from the nostrils. With good diet and the country air he soon regained strength. The clap still remained, the urethra discharging thick matter in some quantity. It yielded readily to the usual remedies.

On referring to the excellent work of Dr. Pereira—perhaps the most complete of our modern treatises on materia medica—I find mentioned, amongst other effects of the long-continued use of small doses of the bichloride of mercury, "dry cough, pain in the chest, disordered respiration, and bloody expectoration." Beyond this, no notice is taken of hæmorrhage as an occasional consequence of the administration of mercury. Such an occurrence is well exemplified in the

case I have related. In many respects the symptoms bore considerable resemblance to those of scurvy. On this account lemon-juice was given, and I believe with advantage. It is interesting to note that there was no discharge of blood per anum, though a profuse one from the urinary organs, usually less prone to hæmorrhage than the intestines. Their greater tendency in this instance might be owing, in some measure, to the pre-existing gonorrhœal inflammation. The alteration of the blood from its healthy condition was manifested in its dark brown color, its thin, too fluid state, and its imperfect, loose coagulation. In a patient who had undergone several courses of mercury, given in small doses, for disease of the liver, and who was twice attacked with epistaxis, and died in consequence of the last attack, the drops which trickled from the nostrils were of a reddish-brown hue, and so thin and watery as scarcely to discolor linen.

However difficult the attempt to define the precise nature of the physiological action of remedies, the difficulty is, perhaps, attributable more to the numerous modifying circumstances under which a given remedy is administered than to any want of uniformity in the mode of operation itself. Whilst one writer considers mercury an excitant, another a sedative, a third a tonic, the truth appears to be that it may act as any of the three, according to circumstances. When a person of lymphatic temperament suffers great languor and depression, perhaps faintness, after taking a purgative dose of calomel, we cannot consider his state one of general excitement. When there succeed to the continued use of mercury, restlessness, headache, anorexia, nausea, hot, dry skin, and frequent pulse, such a condition but ill accords with the ideas attached to the effects of sedatives. Still less will the supervention of mercurial cachexy allow us to consider the mineral invariably a tonic.

The revival of the best parts of the humoral pathology by Liebig, especially by his doctrine of the metamorphosis of the blood from the introduction of an animal poison, together with the results of researches in this country on the actions of poison,* once more invest the blood with the interest formerly attached to it as an important agent in the production and removal of disease. We have sufficient evidence that mercury acts upon every system in the body. It will increase diminished or check inordinate secretion; it will lower the pulse, or accelerate it; allay spasm, and induce palsy. Is it from a difference in the mode of action, or in the parts primarily acted upon, that, under given conditions, these varying effects ensue? or, is the mode of action invariably the same, and the variation in result owing to accidental causes of modification in the medium of action and tissues of the body?

We have undoubted proof that in some cases mercury produces an alteration in the constitution of the blood. Does it do so in all? When it exists, does the abnormal condition of the blood arise from, or depend upon, the alteration of the various secretions over which mercury has so much influence? or, *vice versa*, are the secretions affected in consequence of the peculiar state of the blood which is antecedent in the chain of causation, the effect upon the secreting organs, or that upon

the blood? That mercurials may alter the secretions without apparently vitiating the whole mass of blood, is as certain as that the admixture of the drug with the circulating fluid must precede such an effect. But occasionally we have evidence of the blood being extensively changed *before* the secretions have undergone material alteration. In the case above, for example, the suffused yellowness of the skin ensued before the secretions had been sufficiently disordered to produce, on that account, general deterioration in the quality of the blood. Sir A. Chrichton explains the cure of syphilis by the simple antiphlogistic plan, and of fever by abstinence, on the supposition that those parts of the blood are not supplied which are susceptible of the metamorphosis produced by the existing animal poison. By a slight modification of this view, the rationale of the cure of the same disease by mercury is afforded. We have to assume that the mercury causes such a change in the elements of the blood as to incapacitate them from undergoing the metamorphosis which the animal poison would otherwise occasion. We give a mineral poison, of which the effects are manageable, to subdue an animal poison, of which the operation is less governable. The transmutation of the healthy blood being gradual, the changes gradually effected by mercury repeatedly taken into the system prevent further alteration of the vital fluid by the syphilitic virus. It is presumable that the poison may differ in its virulence, and the blood in the extent of its contamination, and consequently the disease in the facility with which it can be eradicated. If this be correct, the theory of J. Hunter, that mercury acts by exciting a new disease with which syphilis cannot coexist, is literally true.*

The purgative, cholagogue, diuretic, and diaphoretic effects of mercury are, amongst others, referable to its power of augmenting the secreting action of different organs. The natural tendency of the system to expel what cannot be assimilated is vigorously exerted to deplete the blood of that which possesses so potent an influence over its elements; hence the increased action of the different emunctories. By repeating the remedy, however, the system becomes habituated to, and tolerant of, its presence, until the extensive deviation of the blood from its natural condition renders it a source of general irritation, producing that febrile excitement which commonly precedes pyæmia. If this excitement be superadded to high inflammatory fever it may increase the mischief. That under mercurial fever certain parts should assume a kind of inflammation, is only in accordance with the effect of continued vascular excitement from any other cause. The first effect of increased circulation in a healthy organ is increased secretion. One reason why the salivary glands are the first to evince this sub-inflammatory condition is, possibly, that in health, of all the glands the secretion of these is most readily excited; their organisation, too, being comparatively simple, we may suppose them to be endowed with a less amount of vitality, and, therefore, of resisting power, than other more complicated glands.

* The poison of typhus is such that mercurial action can seldom be induced; but when salivation has been excited it is said that death has very rarely occurred (Copland, Pareira). Iodine may act in a somewhat analogous manner upon the blood, both in syphilis and tuberculosis.

Ulceration is invariably a sign of less power of resistance than the plastic effects of inflammation. The inflammation excited by mercury is essentially antiplastic. Sthenic inflammation requires for its elements increased power and organisable blood; mercurialisation, with its usual adjuvants, is efficacious, because the state of organs and of blood which it induces is opposed to both those conditions; but mercury is not equally serviceable to an ulcerating sore; when too long and too freely administered, ulceration is a very common form of the malaction to which it gives rise. In rapidly spreading chancre, in most ulcerations of the mucous membranes, to produce salivation is to increase the disease. Nor is the specific action of mercury usually curative in inflammation of mucous tissues, which are naturally prone to ulceration. The venereal ulcer which heals rapidly under a mercurial course, does so because the constitutional virus on which it depended being destroyed, or suspended for a time, the source of irritation, perhaps the matter secreted, being no longer contagious, is removed, and the sore is allowed to get well, "*sublatâ causâ, tollitur effectus.*"

Whether the veins or the lymphatics are the agents of interstitial absorption, it is probable that their natural stimulus to the removal of parts is the lowered vitality of the molecules of which those parts consist. Thus, the exercise of any organ requiring an expenditure of the living force of its component molecules occasions the rapid absorption of these, and deposition of new in their stead—*i. e.*, promotes nutrition.* Febrile excitement is favorable to absorption, but opposed to assimilation, and, hence, of itself is attended by emaciation; but when conjoined with some degree of vascular over-action, the blood, lessened in quantity, is so altered as not to supply a healthy pabulum for nutrition, we should infer that the molecules of tissue, if any, newly deposited from such blood, would be endued with less vital force—would be less perfectly organised, in other words—and, consequently, sooner fall under the power of the absorbing agent. In practice, mercury is found to promote local absorption, *cæteris paribus*, in proportion to the imperfect organisation of the morbid product. Thus, the more recent the effusion of lymph in iritis, or any other "*itis*," consequently the less perfect its organisation and weaker its vitality, the more rapidly is it taken up.

Diseased products that are not subject to irritation—to alternate removal and deposition, such as malignant deposits—undergo no diminution from the action of mercury. The half-lymph, half-puriform deposit effused between the laminae of the cornea, and into the anterior chamber of the eye, is often rapidly removed under salivation, but whether the absorption of pus when *fully* formed, when quite destitute of vitality, is assisted by mercurial action, is doubtful. The absorption of unorganised products, when it does occur, and subsequent admixture of these with the blood, as in cancer, phlebitis, cellulitis diffusa, &c., is, perhaps, always more a mechanical than a vital act. On theoretical grounds, then, we should not expect that mercury would promote local absorption, either where the product of disease is exempt from the laws

* See the interesting report on the physiology of cells, by Dr. Carpenter, in Forbes' Review.

of nutrition—*e. g.*, cancer, tubercle, where, though undergoing irritation, the product has become too completely vitalised—*e. g.*, organised pleuritic adhesions, or, where the local affection is maintained by inflammatory fever, aggravated by giving mercury at the commencement, without depletion, in a robust constitution and plethoric habit.

That a remedy which is capable of influencing the fluids and solids to the extent which mercury does, should, in some cases, indeed *in all*, if its exhibition be sufficiently protracted, exert an injurious effect upon the constitution, is too obvious to require illustration.

Whether acting by increasing secretion, promoting absorption, or exercising its anti-syphilitic power, or fulfilling all these objects at once, the effects of mercury are, I believe, more easily explained by assuming that, after absorption, its primary action is on the blood than by any other hypothesis, though our knowledge of the precise nature of that action must be admitted to be at present vague and undefined.

INDIAN HEMP.

TO THE EDITORS OF THE PROVINCIAL MEDICAL JOURNAL.

GENTLEMEN,—Should the following observations on the action of the Indian hemp, procured from Mr. Squire, be worthy your notice, you will oblige by their insertion in your valued Journal.

Your obedient servant,

EDWARD CROSSE, Surgeon, &c.

Broad-street, Ludlow,

May 19, 1843.

I took forty minims, which produced little effect more than an inclination to rub the eyelids and some indisposition to exertion. On the day after I took eighty minims; my spirits in an hour after were much elevated; the eyelids felt as if they had become oedematous; I imagined that some object was near to me which was not in the room, so much so as to start from my seat under this delusion; my pulse, which I was obliged to feel several times in order to ascertain it, was 70, usually 90. The most marked effect of this substance was, that my recollection (not memory) *intermitted* regularly about every two minutes, so that, while in conversation, I was obliged to stop speaking, from a momentary total loss of the subject; but the link would be perfectly restored when two or three minutes had elapsed. In four or five hours this phenomenon gradually disappeared, and was succeeded by a sense of languor and great inclination to assume the lowest possible horizontal position, accompanied by the sensation of being bitten in many parts of the body by some insect. I experienced a most disagreeable feeling of distension in the abdomen, as if it were distended by water; an increase of all the secretions, and especially from the mucous membrane of the bronchi. The feeling of distension continued for several days.

There is no doubt that this is a powerful remedy, and I think it desirable that the profession should early be made acquainted with it, as much positive as well as negative injury may occur from scepticism on this point.