

redness beneath it, means that the skin is beginning to get into trouble, and the bandage must be removed to another place, while the skin is washed and dusted with starch-powder. Sturgis, of New York, recommends one of the older methods—rubbing the ointment upon the soles of the feet. Detmold uses a solution of corrosive sublimate, one grain to the ounce, and has the patient rub on a tablespoonful of this nightly. This method is cleanly and, doubtless, effective; but the danger of accident, if such a powerful drug were employed in large quantities generally, is too obvious to require comment. The same remarks apply to the full bath of watery solution of corrosive sublimate.

The introduction of mercurial ointment by suppository into the rectum, or the injection of mercurial solutions into the rectum, is rarely called for. It is merely mentioned as another channel by which mercury may be introduced into the blood.

Subcutaneous injections of different solutions of mercury require too much attention on the part of the physician, and too much machinery, to commend themselves for general adoption. The method is prompt and effective, as well as accurate in the dosage of the mercury; but the sore spots that follow, the possibility of abscess, the gradually-increasing dread of the slight puncture with the needle of the syringe, which the patient feels, are enough to render the method unadvisable in the majority of cases.

#### MERCURIAL VAPOR-BATH.

Mercury enters the body more kindly and more promptly in the form of vapor than in any other manner. If a prompt and positive effect of the drug is needed, especially when the stomach is delicate, nothing can take its place. The indications for its use are conditions of outcropping eruption, ulcerated and pustular lesions whether recent or long-standing, the sudden appearance of serious symptoms threatening important organs or functions, and all conditions requiring mercury in anything beyond the "tonic dose," when the patient is debilitated, anæmic, or possessed of an irritable stomach.

In cities where there is a respectable medical bathing-establishment, when the patient is in a condition to walk out, the best plan is to send him to take his bath as often as may be necessary, meanwhile continuing his internal treatment. The best form of bath in these establishments is the following:

Preferably about two hours after a meal the patient undresses, and enters a small closed chamber, provided with a seat, for the sake of comfort, and a small, curtained side-window for outside air, which he may breathe when he desires to do so. A small amount of steam is let into the chamber, enough to dampen the body (without inducing perspiration), and to raise the temperature of the air in the chamber to about 90° Fahr. Then the mercurial, which has been selected, is volatilized in the chamber, the patient breathing the fumes which come into contact with the whole body. The



entire bath should not occupy more than twenty minutes, and if any sensation of faintness or oppression comes on before that time, it is better to stop the bath at once. After the fumigation is over, the patient should be wrapped up in a blanket and lie down until he is thoroughly cooled off (a half-hour generally suffices), when he may dress, without any rubbing or drying, and go about his business. This I believe to be the best form of bath. The best substance to be volatilized I find to be the black oxide of mercury, commencing at one, and running rapidly up to a two-drachm dose or more. Calomel is often used. It is exceedingly efficacious, but has the disadvantage of being irritating to the fauces in some patients, while in others (a great majority) it does not produce this effect. When it is irritating, it causes violent paroxysms of coughing. These come on sometimes while the patient is inhaling the fumes, at others no immediate effect is produced, but afterward, perhaps after half an hour, a prolonged paroxysm of violent coughing may come on, which is sometimes quite distressing and difficult to control. In public bathing-establishments, instead of the closed chamber, there is sometimes a sort of large box, into which the patient enters, and (sitting) has the top closed in such a manner as to leave the head outside, the steam, etc., being arranged as in the closed chamber already described. These chambers are also used for sulphur-fumigations. In this form of bath, which some patients prefer, calomel may always be used, or cinnabar, which has long been employed in fumigation, as the

fumes do not reach the mouth and nose. The dose of calomel, or cinnabar, for such a bath, is one drachm or more; time, twenty minutes.

If a feeling of debility follows the bath, it should not be repeated for several days; but in urgent cases, and where they are well borne, the baths may be taken with advantage every other day, and in many cases I have given them daily with surprisingly good effect. They exert a marked influence, however, when given for a time at the rate of only two a week.

Where a public bath is inaccessible or objectionable to the patient, the process may be carried on without much trouble, and with the least possible expense, at home. The only special machinery required is a sheet of tin, with its edges bent down so that it forms a table, upon which the mercurial to be volatilized is placed. Beneath this a tin lamp, burning alcohol, completes the apparatus.

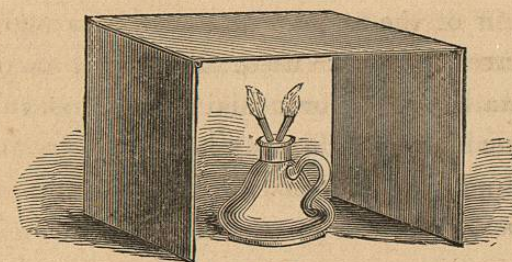


FIG. 3.

To take a bath, the patient sits naked upon a cane-bottomed chair. Two blankets are thrown around the patient and chair together, and are tucked snugly under the chin of the former. A pan of steaming, boiling



water is now placed under the chair. The steam from this in a couple of minutes moistens the skin sufficiently, and if the spirit-lamp be lighted, and the little tin table with its dose of mercury be placed in position over it, also under the chair, two minutes after the pan of water, the skin will be in condition for the mercurial fumes by the time the latter begin to be freely evolved. The patient sits quietly in this bath until the mercurial has been all volatilized (when the lamp may be removed), and for some minutes afterward, in all perhaps twenty minutes. Then, wrapping the inside blanket around him, he lies down and remains quiet until he is cool and ready for bed. Such a bath may be taken nightly or less often, as the necessities of the case and strength of the patient dictate. The effect of the bath may be enhanced by a little inhalation of the mercurial vapor. By so arranging the blankets that they may be opened slightly in front of the chest, the patient may take a whiff of the fumes when it pleases him. Calomel or cinnabar may be used, and, should their fumes prove irritating to the bronchial membranes, they need not be inhaled. Should they not prove irritating on one trial, they may be afterward inhaled with impunity.

The best substance to use in this form of bath is calomel. Black oxide of mercury does not volatilize readily enough by the heat of a spirit-lamp. Cinnabar is allowable, but smells badly. A lamp with one good-sized wick will volatilize from a tin table, of calomel, thirty grains in four and a half minutes; of cinnabar, thirty grains in six minutes.

The cinnabar-fumes are those of burning sulphur, and more apt to irritate the fauces than those of calomel.

The dose of calomel is from thirty grains up to a drachm and more. A larger dose of cinnabar may be used.

The mercurial bath is slow to salivate. It sometimes produces mercurial tremors without salivation. Its effect is prompt, though mild.

## TREATMENT OF SALIVATION.

Salivation may occur by accident or design. To guard against it the teeth should be kept free of tartar (by the dentist). A soft tooth-brush should be often used with some alkaline (perhaps astringent as well) tooth-powder or wash. Such compounds as the following are good specimens of what is wanted. They are all agreeable to the taste:

R.	Pulv. saponis,	gr. xx.—3 ss.
	“ myrthæ,	3 ss.
	“ cinchonæ,	3 ss.—3 j.
	“ iridis florent.,	3 ss.
	Cretæ preparat.,	3 xj.
	Ol. ros.-geran.,	q. s.

M.

Sassafras or winter-green oil may be used instead of the rose-geranium.

Or—

R.	Alumini,	3 j.
	Tr. kramerizæ,	3 ss.
	Aquæ gaultherizæ,	3 iv.
	M.	

Or—

R.	Extr. kramerizæ,	3 j.
	Aluminis,	3 j.
	Aquæ rosæ,	3 iv.
	M.	







Or—

R. Tr. myrrhæ,  
Aquæ gaultheriæ,  
M.

3j-3 ss.  
ad 3 viij.

Where disinfection is required, one grain of permanganate of potash in an ounce of water, or a half of a one-per-cent. solution of carbolic acid, or a teaspoonful of Labarraque solution in a glass of water may be used as a constant mouth-wash.

The patient should be restricted to a milk-diet, or to very soft articles of food.

#### PREPARATIONS OF IODINE AND THEIR USE IN SYPHILIS.

Iodine and its preparations rank next in value to mercury in the treatment of syphilis. They always act as tonics when they are well digested; but most of them are irritating to certain stomachs. As tonics, the iodides are useful in any stage of syphilis, but not more so, I believe, than other tonics which are less liable to prove irritating to the stomach by prolonged use. As curative agents of syphilis, the iodides have but little power, even over symptoms in early syphilis, for their use does not seem to shorten the outcrops of eruption very materially or to prevent relapse.

In certain conditions of late secondary eruption, however, especially those which remain obstinately chronic in aggregated groups—scaly and tuberculated spots, chronic pustular patches, serpiginous ulcers—and in all conditions of visceral syphilis, whether gummy or otherwise, the preparations of iodine used along with

mercury (mixed treatment) greatly enhance the value of the latter, sometimes even outrank it in power.

When the lesion is purely gummy, no matter where situated, whether ulcerated or not, and, as a general rule, in all syphilis of the brain, cord, nerves, of bone, of any of the viscera, more especially if the onset of the attack has been sudden, the preparations of iodine must be depended upon for a cure of the symptom—often to the exclusion of mercury—and the drug must be pushed to the very utmost the stomach will stand, and rapidly pushed, if its full effect is to be obtained. After the iodine has done its work, when the symptom has yielded and the patient seems well, then mercury must be resumed at the “tonic dose,” and continued for several months, at least, to seal the cure and prevent relapse.

It must be remembered, in giving the preparations of iodine, that they are quite apt to irritate the stomach, and that a less quantity will be of more service, the stomach being in good condition, than a greater quantity which disturbs digestion.

The iodides pass through the body promptly, and may be recovered in great quantity from the urine. It is during the passage through the blood that the curative influence is exercised. It has been argued that large doses are not necessary because the presence of iodine in the urine, when small doses are taken, proves that the blood is already saturated. This reasoning is theoretical. It cannot be accepted, since clinical experience shows that a very large dose of iodide is sometimes necessary to overcome a given symptom which a



smaller one will not touch, although the urine may show iodine clearly enough.

The fact is, that the kidneys must work actively, and rapidly eliminate the iodine which is put into the stomach, or the action of the drug is apt to be unsatisfactory, and some of the bad effects of iodine are liable to appear. When the iodides prove actively diuretic, then the tolerance of the patient is sure to be great and the good effects of the medicine marked. I am in the habit of asking patients who take the iodides whether they pass more than the accustomed amount of urine. If they do not, I add a diuretic to the solution of the iodide, such as infusion of digitalis in ounce-doses, or acetate or citrate of potash in half-drachm doses, or order the patient to take five to ten drops of the oil of juniper on a lump of sugar two or three times a day, and to drink plenty of water.

Among the bad effects of the iodides, the cutaneous eruptions produced by them are of the least importance, although they cause the patient to complain. Pimples, pustules of acne over the forehead, face, shoulders, buttocks, and sometimes quite generally over the body, may be brought out by a course of the iodides, especially if the dose be high. Reddened, scaly patches about the nose and on the face are less common. Purpura of the lower extremities may be caused by large doses. I have seen in one instance a distinct pemphigoid eruption (especially about the axilla and face), caused by the iodide of potassium. Hutchinson, of London, speaks of an acute bulbous eruption (hy-

droa) as being not infrequently caused by iodide of potassium.

Generally the cutaneous symptoms may be greatly alleviated by frequent warm baths, and by causing the kidneys to eliminate the iodine promptly.

The acute catarrhal symptoms, sometimes produced by taking the iodides, may be relieved in the same manner, but often by reducing temporarily the amount taken; the patient becomes accustomed to the drug, and then his dose may be raised without his being disturbed by it. A little opium or belladonna internally seems to modify this effect. The subcutaneous injection of atropine, as for ptialism (p. 49), might be tried. The symptoms may run so high that the drug has to be stopped.

The bitter taste of iodine in the mouth, especially strong on waking in the morning, cannot be overcome. A little mint-water or a mint-drop in the mouth masks it as well as anything.

Sometimes the increase in the flow of saliva is great enough to amount to mild salivation. It is well, under these circumstances, to try to induce the kidneys to act freely.

Iodine may indirectly cause salivation when given freely after a mercurial course. It is believed to do so by rendering active mercury which has been lying dormant in the tissues. It is a very exceptionally rare occurrence.

Iodism is a general nervous irritation, with depression (sometimes very extreme), caused occasionally in