

the general anti-inflammatory power of calomel and opium from their own observation, so that their testimony might be brought to support Dr. Hamilton's doctrine. If most of his contemporaries failed both to extend the usefulness of his researches, and to do justice to his deserts, yet he will surely be ranked among those who have proved real benefactors to mankind; since the time is rapidly approaching when, in every department of philosophy, bigotry and prejudice will give way to liberality and truth.

In what are called idiopathic fevers, in those fevers in fact which commence without any decided signs of topical inflammation, and which advance under a continual excitement, calomel should be given from the first as a purgative, determined to the bowels by some other auxiliary: because free purging, by lessening this excitement daily, most frequently wards off inflammation, and where in despite of it, inflammation does occur early, then general or local bleeding should be subjoined, and calomel so managed as to produce its specific as well as purgative influence; but where the inflammation arises at a late period of the excitement when the general tone of the system has been exceedingly relaxed, it will mostly be better to avoid bleeding altogether, and to trust to the other measures assisted by blisters. There is, however, an intermediate stage, one between the first and the last, in which inflammation is apt to arise, and in this local bleeding is often highly advantageous, even when contagion has been the exciting cause; and where the fever has originated from cold or any other common cause, general bleeding to a moderate extent is sometimes highly beneficial, because the fever at that time is attended with less relaxation than would have been the case if it had arisen from contagion. But in continued fevers which are complicated with inflammation from the first, it will be best, when sufficient depletion shall have been premised, to administer calomel as a purgative and specific at the same time. In such affections, indeed, the shortest and most certain way of procuring the specific, is through the purgative operation of calomel, for the high excitement resists the agency of calomel, and the intestines are usually so lined with morbid mucus as

to prevent its absorption, unless this mucus be brushed away, by purging, from the mouths of the absorbent vessels. One large or two tolerably free doses of calomel, therefore, may be administered in the day, followed up by some other aperients to induce plentiful evacuations before bed-time; while to accelerate its most complete absorption, during the night it may be given in divided doses, combined with opium where there is pain in the chest or belly, or much general irritation. Some have contended, that opium is dangerous in inflammatory diseases, inasmuch as it might mask the symptoms, and lull the practitioner into a false and fatal security. But this reasoning is more specious than solid, for after sufficient depletion, no remedy has appeared to me more efficacious.—Every attentive practitioner must have remarked, that in many inflammatory affections, where the lancet and purgatives have been boldly applied, great universal irritation succeeds, which may sink the patient if not timely allayed. For this species of irritation opium is peculiarly fitted, generally calming the turbulence of the system, and inducing tranquil sleep. Yet as a subdued degree of the topical affection is frequently combined with this irritation, it is most prudent to combine the opium with calomel, a combination which obliterates every vestige of topical disease, by equalizing the circulation, and also by inducing in some instances a peculiar relaxation of the whole habit.

While the system continues under the full influence of the fever, while the skin continues hot and the pulse quick, ptyalism is not easily produced, and the most timid may then give calomel with far more freedom than in those diseases unattended with a hot skin and a quick pulse. But as soon as ever the fever begins to decline, calomel should be given most cautiously, because as the system is then verging towards its natural state, its specific action will be more readily induced; and where during the continuance of the fever, it either acts freely on the skin or kidneys, while it keeps the bowels soluble, the practitioner need not be impatient about the appearance of ptyalism; for the *modus operandi* of calomel is to equalize the distribution of blood, to restore the natural balance of the circulation by communicating a power to the

capillary system of vessels, which enables them to resume their secretory offices as before. When calomel is prescribed, even in conjunction with opium, it sometimes acts more forcibly on the intestines than desirable, producing many copious dark stools, followed by small, frequent slimy or bloody discharges. Whenever these occur, the bowels should be cleared by a moderate dose of cold-drawn castor oil in the first place, and then opiates with mucilaginous drinks will speedily remove the irritation. When opium is given expressly to diminish pain or irritation, the first dose should be tolerably large, say two or three grains, and the subsequent ones of course may be smaller. But it must be constantly remembered, that opium ought not to be exhibited in visceral inflammations, until an impression has been made by free evacuations; except indeed where there is excessive pain, and then it may often be used with great advantage in conjunction with venesection, particularly in inflammation of the bowels. In some affections of the abdomen, attended with spasm of the intestines, or with unusual irritation, I have occasionally found it impossible to move bowels, without the previous exhibition of opium. In such cases, about a drachm of the tincture will often do very well, made with two ounces of mucilage into an enema, which should not exceed that measure, else it will not remain long enough to produce a proper effect. When opiates fail in allaying the pain or irritation, the tepid bath sometimes proves highly beneficial, especially after depletion by the lancet and cathartics. If a warm and universal perspiration break out soon after its use, and continue for some time, it is generally a most favourable sign, few cases having been fatal in my practice where it occurred. When calomel and opium do not excite perspiration, the opium may be omitted, and the compound powder of ipecacuan sometimes substituted with great advantage, for this preparation, added to the calomel, often powerfully determines the blood to the surface.

In inflammatory diseases, the doses of calomel and opium should be varied according to the nature and seat of the symptoms, as well as the precise effect intended to be produced: for an extremely violent acute, or a protracted sub-acute in-

flammation, by more immediately endangering structure, requires a more powerful practice than an ordinary degree of the one, or a short duration of the other; while some organs are so peculiar in their functions as to demand an exclusive rule of treatment, an exception from the general mode of administering the remedies. If the brain be inflamed, calomel ought to be prescribed in full, and often in frequent doses with other brisk purgatives, because this is the best mode of moving the bowels effectually, while it affords the only chance of procuring the specific action of the mercurial; and as for opium, it should be entirely omitted until the force of the topical disease has been subdued by proper evacuations, and then it will only be necessary, where it is an object to allay irritation. Sydenham was in the habit of giving opium in the advanced stages of cerebral affections to quiet the irritation which so often then supervenes; and certainly at that period, even where cerebritis had previously existed, it frequently proves useful, though it must always be given with the greatest caution at first, till we fairly ascertain its influence. Opium has a specific influence on the circulation of the brain, so that we cannot beforehand always estimate its effect, but as calomel modifies its action, and at the same time determines it to the skin, it is safest in doubtful irritations of the cerebrum to give them combinedly. In those fevers which arise from contagion, the whole nervous system undergoes some change, which is inexplicable in the present state of our knowledge; yet whatever this change may be, it requires, not only that opium should be much more guardedly employed, than in ordinary fevers, but that calomel should be given as an aperient, from which great advantage will almost always be derived, and the more so where its purgative leads to its specific operation. When topical inflammation has its seat in the chest, the doses of calomel should be so moderate as not to harass the patient by too repeated purging, which is generally prejudicial; where the mucous membrane of the bronchia is affected; and on the other hand, the doses of opium should commonly be small, lest they distend the vessels of the head, and thereby disturb the action of the lungs, through the consent existing between them by which nerves originate in the brain. It is

always desirable to promote diaphoresis in inflammatory affections of the chest, and therefore James's Powder may often be beneficially combined with the calomel and opium. In abdominal inflammations, particularly if they be seated in the peritoneum, or in the parenchyma of such organs as the liver and kidneys, the doses of calomel should be sufficient to maintain a free action on the bowels, and if possible to affect the system at the same time; but here the doses of opium should be considerable, wherever much pain exists, for if the tongue be at all soft and moist, opium may be regarded as one of the most efficacious agents in abdominal inflammations, especially if the pain be circumscribed. But when the tongue has been hard and dry in abdominal inflammations I have rarely seen much benefit from opium; and this state of the tongue is much more liable to occur in contagious than in common fevers. In some violent cases of visceral inflammation, I have given with great advantage, a scruple of calomel with about two grains of opium for the first dose, and afterwards small and repeated doses of both; whereas in other cases, from five to eight or ten grain doses, with about one grain of opium every six hours for the first day, and in half the quantities afterwards, excited ptyalism the soonest; and sometimes the most speedy effects have been formed, after suitable depletion, from two or three grains of calomel about every second hour, with a dose of opium now and then. It is fortunate where acute or sub-acute inflammation at once yields to the united influences of bleeding and purging, blistering, and anodynes, for then of course no subsequent treatment is necessary; but as far as I have observed, these measures often fail completely to eradicate the inflammation, and leave a kind of subdued degree of it, which has a tendency to produce organic derangement; so that we not unfrequently see persons who drag about diseased bodies for years, and who refer the origin of their chronic ailment to the *dregs* of the violent attack formerly sustained. The immediate relics of acute and sub-acute inflammation have so given way to the opportune use of calomel and opium, where the reduced condition of the patient precluded further evacuations, that I cannot but urge this as an additional reason in favour of the practice here re-

commended. All the precautions, however, before urged with respect to regimen and rest, should never be lost sight of, if we wish to avoid the insidious underminings of chronic after acute or sub-acute diseases. In typhus and similar fevers low degrees of inflammation are often kept up by the continued operation of the specific cause maintaining an increase of the heart's action. In such cases, when calomel is given so as to purge daily and at last to produce slight ptyalism, the result will generally be favourable: this is the mode which I have often successfully pursued in the Fever Institution, where the lateness of the admission precluded blood-letting; but in very weak habits, in which much nervous irritation existed, I have prescribed calomel as a purgative only, for reasons which were before stated.

As far as the constitutions of patients are concerned, mercury is most suitable to the robust. Hence in general it is better borne by males than females, by the active than the sedentary, by the well than the badly fed, and hence, too, in general it is also better borne by the hardy inhabitants of the country, than by their degenerate offspring who have constantly resided in large crowded cities. Whatever decidedly creates the nervous temperament, whatever renders the body highly sensitive, most certainly makes patients less capable of sustaining mercury as an alterative; and when such, therefore, labour under fever, it will for the most part be adviseable to give calomel simply as a purgative; for in them if it be pushed on to produce any thing like ptyalism, it will frequently occasion a tremulous tongue, an irregular action of the heart, and other symptoms of high irritation. In the febrile complaints of infants, too, for the most part calomel should only be prescribed as a purgative, because they partake of the nervous temperament by having an exalted sensibility.—For the same reason, in those secondary fevers which come on when the subjects of them are weak and emaciated from the previous attack, calomel ought only to be given as an occasional cathartic, when the bowels are loaded; but the excitement having been once lessened by evacuations from that quarter, moderate doses of opium will often answer an excellent purpose. It was formerly noticed, that mercury was im-

proper as an alterative in that external species of erythematic inflammation which attacks emaciated subjects just as they are convalescent from a protracted fever; and the same remark is applicable to internal inflammations occurring in constitutions, the strength of which has been broken up by any other cause whatsoever; for in them mercury produces an extreme relaxation and irritation which they cannot sustain, and indeed they are far more fitted for the tranquillizing operation of opium. But there are two interesting diseases concerning which a few remarks shall be subjoined, as calomel has been found useful in the one, and opium in the other, and as they have either a relation to arterial inflammation, or to venous congestion.*

* In another treatise I have expressed it as my full conviction, that mercury is much abused in chronic diseases, to which it has certainly been too universally applied; but I cannot refrain from mentioning here, that my friend Dr. Ayre, in his excellent treatise on Marasmus, has introduced a substantial improvement in the mode of administering mercury in chronic affections of the liver, the minute doses which he recommends being generally preferable to ordinary ones.

INSANITY.