CLINICAL OBSERVATIONS ON THE ABUSE OF
MERCURY IN THE TREATMENT OF
DISEASES OF THE EYES.By E. LANDOLT, M.D.,
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NOTHING is more difficult than to establish the effect which a drug may exercise upon the course of a pathological process. In the first place, two cases of the same disease are never identical, because the character of the disease varies with the individual. Moreover, among the innumerable circumstances which influence the evolution of the morbid process, there are so many which escape our observation, so many which we do not even suspect, that it is often impossible for one to have a clear notion, if a change arises in the course of an affection—especially a change for the better—whether it may be attributable to the so-called remedy employed, or to quite another cause.

There is much to be said upon this subject. In our great desire to ease our suffering neighbours, we too willingly share in their belief that for every malady Providence has provided a herb, a mineral, or some beneficial agent. And then we draw from all the kingdoms of natural history, we even invent new substances, in the pious hope of finding for each ailment its own specific remedy. We are even sometimes so forcibly convinced of the efficacy of certain substances that we prescribe them almost instinctively, and the failing to do so would seem to us even a great fault. Yet nevertheless nothing establishes, in a sure manner, the beneficent power, or even any influence whatever, of drugs upon maladies which they are supposed to cure. For the same disease our ancestors have ordered, with similar zeal, quite another remedy, which makes us smile as our descendants will, without any doubt, at many a panacea which we believe in. The administration of the remedies has become a kind of auto-suggestion, a reflex action which is produced by the sight only of the pathological symptoms. Examples abound; it is useless to cite them.

One might think that, if the drug is an anodyne one, its use is without inconvenience. This is an error. The disadvantage lies in the fact that, believing in the remedy, we fail to seek with enough perseverance a curative method more appropriate and more efficacious. But often the drugs which are ordered are far from being anodynes. Alongside of their presumably beneficial action they have undoubtedly hurtful effects. If the existing evil is greater than that which we produce with a poison, and if this latter has, on the other hand, a positive favourable action upon the malady or upon the symptoms which it is called upon to combat, we overlook, of course, the small inconvenience in order to obtain the principal result. Who would not willingly accept *malaise*, vertigo, ringing in the ears, etc., to obtain the remission of fever by means of quinine? Such is not always the case with the medicine to the abuse of which I wish to draw attention. The visual organ, though very accessible to diagnostic investigation and to the application of curative means, is nevertheless often the seat of affections of which the nature is still little known and of which the therapeutics leave much to be desired. One seems, then, to oppose to the gravity of the disease the violence of the remedy, and that without sufficient indications, to say the least of it.

Mercury is one of these remedies, and its use in ophthalmology tends to undergo an extension such as many certainly do not suspect. I have assisted for many years as an attentive spectator in these dangerous experiments, for the patients go from clinic to clinic, from one doctor to another. I observe the results of mercurial treatment and I compare them with those obtained without it. I have refrained from speaking sooner because, as I have said, to give an opinion upon the effect of a drug is a very difficult matter. But now my convictions are formed, and I consider it my duty to communicate them. It is needless to say that in ocular affections engendered by syphilis the appropriate treatment for such a diathesis—and amongst others, mercury—is absolutely indicated.

Is it equally so of the atrophy of the optic nerves symptomatic of *tabes dorsalis*? If this disease depends upon syphilis,

it represents such an advanced stage of it that mercury seems to me to have little chance of modifying it in any possible way. I never observed the least favourable influence from its use upon the degeneration of the optic fibres. This ought not to surprise anyone. Whoever has observed under the microscope the state of the optic nerves, the hyperplasia of the connective tissue, the degeneration, the disappearance even, of nerve tissue, cannot but be astonished at the fact of anyone dreaming of regenerating by means of mercury an organ already dead. There is even more than death of the optic nerve, since its very fibres have disappeared. If this is true for tabetic atrophy, it is still more so for all the other forms of optic atrophy. Mercury has absolutely no power over these. On the contrary, these unfortunate patients, already blind or threatened with blindness, are for the most part so weakened, through the want of exercise, by the malady which has given rise to the affection of the optic nerves, which forces upon them a state of dependence, and also through the moral depression too easily appreciated, that everything which impedes their digestive functions or alters in any way whatever their well-being has a fatal influence upon their general condition as well as upon the state of their visual organ. We have, on the contrary, frequently observed that after a stay in the country, at the sea coast, in favourable hygienic conditions, the power of vision declines less rapidly, remains stationary, or improves even in proportion as the general health improves.

Just as some administer mercury in the form of inunctions, pills, hypodermic injections, in atrophy of the optic nerves, so one sees it employed in affections, already of old date, of the retina and of the choroid; in retinitis pigmentosa, choroido-retinitis, and choroiditis disseminata with extensive atrophy of the uveal tract. The ophthalmoscope, revealing as it does the state of ruin of the choroid, the profound degeneration of the retina, one again asks how mercurial treatment could have the power of regenerating the rods and cones, the nerve cells which are destroyed, and reestablish the delicate functions of the most delicate organ.

No doubt that, in the matter of therapeutics, *a priori* deductions, however logical they may appear, and good common-sense, however indispensable it may be for a medical man, are not sufficient to judge the value of a remedy. Experiment has the last word, and observation is the only judge; but the experiment has been made only too often, and observation has given the verdict. Mercury has proved to be quite useless. It is also inert in other affections in which the absorbent effect attributed to this metal seemed to give it a certain right to be tried. I mean the chronic exudative inflammation of different parts of the uveal tract—iritis, iridocyclitis, serous irido-choroiditis. Except when these affections depend upon syphilis, mercurial treatment is at least superfluous, if it do not exercise a bad influence. In fact, these ocular diseases are met with almost always in cachectic persons, in children, young anæmic girls, badly nourished, living in deplorable hygienic conditions, in women with irregular menstruation suffering from leucorrhœa or from uterine troubles. The treatment of these affections, the raising of the general tone are here of the highest necessity, and this is obtained in a way far different from hypodermic injection or inunction of mercury.

I have never had recourse to this heroic form of treatment, and, moreover, in studying the reports of special clinics, in observing the patients who have been submitted elsewhere to treatment of this kind, I may assert that hygiene, combined if necessary with local treatment, and with a rational general medication directed against special lesions, always suffices to bring about a retrocession of the morbid process, and to save the organ of sight. Is it necessary to cite examples? They abound. I cannot, however, refrain from relating, in a few words, the very significant history of a patient who by chance comes to see me just as I am writing these lines.

An English lady, aged 60, consulted me in 1885 for an iritis, commencing in the left eye. In spite of the usual treatment this disease progressed, gained the other eye, and in both eyes took hold of the entire uveal tract to such a degree that the aqueous humour and the vitreous body became absolutely opaque, and impervious even to the light from the ophthalmoscope; the iris was dull, responded badly to mydriatics;

the intraocular tension was sensibly diminished, showing the gravity of the lesion; and the sight (once normal) was reduced to a vague perception of light. The patient had never had syphilis, and she was of a good constitution, though of rheumatic and gouty tendency. The excessively serious state of the eyes continued from week to week, from month to month. Colleagues, the most competent and worthy of all confidence, recommended, nevertheless, an energetic course of antisyphilitic treatment. But the patient was strongly opposed to iodine, as well as to mercurial preparations. She contented herself with the hygienic rules which I had indicated to her, and a visit at a health resort beneficial to the gouty diathesis. Locally she employed mydriatics and poultices with a persistence and regularity worthy of all praise. She recovered completely and definitely without having taken a single grain of mercury; in fact, to-day I saw her for the first time for five years. Vision is excellent in both eyes; the dioptric media are perfectly transparent; there exist neither adhesions at the pupillary border nor choroidal exudations, nor even specks in the vitreous body. Nothing indicates the passage of the dreadful malady of which her uveal tract was the seat.

On another occasion a friend brought me his young wife. She had gradually lost the sight of her right eye in the space of a few weeks. It was scarcely possible for the patient to recognise the movements of the hand; a large portion of the retina was no longer functionally active, and produced a scotoma in the visual field. The ophthalmoscope revealed an optic neuritis of a most evident character, swelling of the papilla, serous exudation, in which the tortuous and gorged blood vessels were immersed. I did not hide from the husband the gravity of the affection. I explained to him that it depended probably upon a general disease, and that local treatment would not at all suffice, and I therefore sent him to the family physician. This colleague was a homœopathist; he gave infinitesimal doses of these remedies into which there does not enter an atom of mercury. Along with this, a state of hygiene, local and general, was strictly observed; and at the end of six months the neuritis had disappeared entirely, leaving the papilla sensibly pale. Vision, direct as well as indirect, has become normal, and things remain in this state still.

I have mentioned these cases because they are those in which mercurial treatment would seem to be most indicated. But to speak of affections of the lachrymal passages, of keratitis, of scleritis of a nature absolutely non-specific, of separation of the retina, of intraocular hæmorrhages—retinal or choroidal—of simple floating bodies, even in which the patient is exposed only too often to the grave troubles of mercurial absorption, it seems sufficient to point out this abuse to have it stopped. As for myself, convinced of the absolute inutilty of this treatment in the diseases cited, I consider it an imperative duty on the part of the physician to protect those who intrust to him their health against an agent which, an invaluable remedy in some cases, becomes in others a veritable poison.

DEATH DURING ANÆSTHESIA.

BY SURGEON-MAJOR EDWARD LAWRIE.
Hyderabad.

THE BRITISH MEDICAL JOURNAL of January 16th, 1892, contains an interesting article on chloroform by Dr. Lombe Atthill, in which it is stated that the Report of the Second Hyderabad Commission "affirms distinctly that death from chloroform is due to asphyxia." This is entirely a mistake. The Hyderabad Commission has affirmed over and over again that the only danger of asphyxia during chloroform inhalation is that it leads to gasping inspirations, and so to rapid and frequently irremediable overdosing. No doubt the nerve centres are more susceptible to poisoning with chloroform when asphyxia is present than when it is absent.

In the same issue of the BRITISH MEDICAL JOURNAL there is a letter on "Death during Anæsthesia" by Dr. Horatio C. Wood, of Philadelphia. Professor Wood says: "Denial of the existence of the other side of the shield has been persisted in by many an honest and capable man, but in the

long run the world learns for itself, and so I leave this controversy with the hope never to return to it." I trust sincerely Professor Wood will reconsider his decision, and fight it out like a man to the end. The Hyderabad Commission has never denied the existence of two sides of the shield. On one side are the true followers of Simpson and Syme,¹ Syme's cases and my own form a series of chloroform administrations extending over forty-five years without a single death. On the other side are Professor Wood, the Glasgow Committee, Professor Macwilliam, and their disciples the anæsthetists. On that side deaths under chloroform have been numerous, and have increased in frequency of late years in exact proportion as their teaching has gained ground.

We may well ask what is the difference between the two sides of the shield; and is it incapable of adjustment so as to make both sides alike? The main practical difference is this: The fundamental principle of chloroform administration on our side of the shield is that it is useless and dangerous to take the pulse as a guide. On Professor Wood's side, on the other hand, it is an essential principle of chloroform administration to watch the pulse continuously during the whole time of the inhalation. Our principles are founded upon uniform clinical and experimental data, and are characterised by uniform results; but on Professor Wood's side there is a conspicuous absence of uniformity in everything except the death-rolls from anæsthetics and antagonism to the Hyderabad Commission.

Our experimental data show that chloroform never affects the heart directly, and we are prepared to produce chloroform anæsthesia with uniform results in any laboratory or operating theatre in the world. If we can do this anybody can do it. The want of uniformity on Professor Wood's side is illustrated by Dr. Wood's statement that the heart is paralysed by chloroform; by Professor Macwilliam's statement that it is dilated by chloroform; and by the Glasgow Committee's finding that the great danger of chloroform is sudden stoppage of the heart through the vagus; while the anæsthetists tell us through their champion, Dr. Dudley Buxton, that these anatomical conditions—denoting cardiac enfeeblement by chloroform—are the counterparts of the procession of events which they themselves encounter again and again in the operating theatre when chloroform is administered in accordance with their own plans.²

At first sight these differences may appear to be irreconcilable; but in reality they are not so. The Hyderabad Commission has shown³ that there is always complete uniformity in all experiments with chloroform inhaled in the natural way, and that absence of uniformity is only characteristic of experiments where natural breathing is interfered with. This is precisely the point which our opponents have overlooked. In Professor Macwilliam's experiments the thorax was laid open and chloroform was pumped into the lungs with bellows, so that natural breathing was impossible. In those of the Glasgow Committee the chloroform was administered "by a cloth saturated with the agent being held over the mouth and nose," that is, with insufficient air,⁴ and vagus stimulation—which the Hyderabad Commission has since proved is a safeguard in abnormal inhalation—resulted. In Professor Wood's experiments there is an omission of all mention of the regularity or otherwise of the respiration.

In the *Medical Chronicle* of May, 1891, a friendly challenge was thrown down to Professor Wood, Professor Macwilliam, and the Glasgow Committee, of which they have hitherto taken no notice. It may be repeated here, in the hope that they will take it up and see for themselves if the two sides of the shield cannot be brought into accord and the chloroform question settled, in order that deaths during anæsthesia shall henceforth and for ever cease to occur. I therefore repeat my challenge to Professor Wood and his supporters—whether physiologists or anæsthetists—to produce an irregular tracing in the laboratory, or any irregularity of the heart's action in the operating theatre, in any case of chloroform anæsthesia in which the breathing is regular and natural.

¹ The true followers are to be distinguished from those pretenders who call themselves out-and-out followers of Syme, but nevertheless watch the pulse while chloroform is given, which Syme never did, *vide* Chloroform Report, pages 183 and 399.

² *Lancet*, December 13th, 1890.

³ The Report of the Hyderabad Chloroform Commission, p. 297.

⁴ *Ibid.*, pp. 229 and 245.