

Observations on the effects of mercury on the organs of hearing, and the improper use of it in cases of nervous deafness / by W. Wright.

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OBSERVATIONS
ON THE
EFFECTS OF MERCURY
ON THE
ORGANS OF HEARING,
AND
THE IMPROPER USE OF IT IN CASES
OF
NERVOUS DEAFNESS.

By W. WRIGHT,

SURGEON AURIST TO HER LATE MAJESTY QUEEN CHARLOTTE;
AUTHOR OF AN ESSAY ON THE EAR, ITS ANATOMICAL STRUCTURE, AND
INCIDENTAL COMPLAINTS; AN ADDRESS TO PERSONS AFFLICTED WITH
NERVOUS DEAFNESS; LECTURER ON THE ANATOMY AND PHYSIOLOGY OF
THE EAR, &c. &c.

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STATIONERS' COURT, LUDGATE HILL; AND ALL OTHER RESPECTABLE BOOKSELLERS.

1822.

INTRODUCTORY ADDRESS. EFFECTS OF MERCURY

DURING the course of a very extensive practice, having been frequently consulted by persons who became totally deprived of hearing, in consequence of exposure to cold or damp air, during their use of mercury, and finding the numbers of these unfortunate patients very much increasing, I feel it a duty which I owe to the profession, to whom I am under so many obligations, to call their attention to the subject; and if my reasoning is found correct, they will, no doubt, liberally and humanely join in the endeavour to prevent such frequent recurrence of this evil.

On this species of deafness, I shall make further remarks, in an analysis of all the methods of treating Deafness, or Diseases of the Ears, that have obtained in this country, or on the continent, which I am preparing for the press, containing a condensed translation of the work of M. Itard, recently published in Paris; but as it will be necessarily some time before the portion of the work upon these cases can appear, I have considered that the publication of these observations might be more immediately useful; should such be the consequence, and only one victim be saved, my labour will be amply rewarded.

W. WRIGHT

15, Princess Street, Hanover-Square.

August 8th, 1822.

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W. WRIGHT

15, Princes Street, Hanover Square.

August 31st, 1822,

MERCURY was known to, and regarded by the Egyptians as a poison, though the nature of it, as far as can be traced, was very little understood by them; it is, however, believed, that they used this mineral to cutaneous diseases, although the Arabians have the credit of introducing it into practice, in the form of ointments for leprosy and yaws. The Italian physicians next adopted it in the same form of application for a then newly discovered disease; but there is considerable doubt, whether the disease or the remedy applied for its cure, destroyed the greater number of patients, or produced the larger portion of misery in those who escaped with life. By degrees the discovery was made that these external methods of applying it introduced it into the system, and it then came into use as an internal medicine; but like other new remedies, which being found useful in some complaints, are supposed to be specifics for all that can afflict the human frame, this medicine by degrees acquired such ascendancy, that there were few practitioners who did not prescribe it in some form or other for almost every disease. From the convenience of its exhibition, as it is devoid of nauseous taste, no sinner does a child enter on the stage of life, and begin to experience any of those complaints that flesh is heir to, than it is saluted with a dose of calomel. It is urged by the advocates for this practice, that mercury does not produce any visible effect on children, and therefore cannot be injurious: — the diseases with which children are frequently afflicted who have taken this medicine, are attributed to defects of the constitution, and the mineral poison,

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which is the true cause of the complaint, is administered in larger doses, till many of the victims to a fashionable remedy sink into the grave. It is well known to the medical world, that eruptive diseases of peculiar malignancy are often produced in adults by mercury, yet the same diseases in children are rarely attributed to this cause; indeed, the use of this dangerous remedy, which ought never to be administered except under the direction and superintendence of a competent medical adviser, is now so common, that fathers and mothers of families give to their children and dependants blue pill, or calomel, more freely, and with less of caution, as to damp or cold, than their grandmothers would have ventured to administer a little sennæ tea, or a few grains of rhubarb. The present generation have reason to be thankful for the caution which their ancestors adopted in regard to them; but I much question whether posterity will, in their debilitated constitutions, find the same cause to rejoice in the wisdom and caution of their progenitors.

That mercury is an useful and even indispensable auxiliary in many cases, I freely admit; but it is a medicine of such a nature, that none but scientific men should be allowed to exhibit it.

About one hundred years ago, our physicians found this medicine rather unmanageable, for they discountenanced it's external application, and advised that it should be given internally when it was absolutely required. Such, however, has been the change of opinion on that point, although ancients and moderns agree as to its deleterious effects on the constitution, that I find the following observations in two modern authors, both in considerable practice and great repute:

“ When mercury can be thrown into the constitution with propriety by the external method, it is

“preferable to the internal plan; because the skin
 “is not nearly so essential to life as the stomach,
 “and is therefore capable in itself of bearing much
 “more than the stomach. The constitution is also
 “less injured. Many courses of mercury would kill
 “the patient if the medicine were only given inter-
 “nally, because it proves hurtful to the stomach and
 “intestines when given in any form, or joined with
 “the greatest correctors.”

This is strong reasoning against the use of mer-
 cury except in cases of urgent necessity; as, if many
 courses would destroy life, according to common
 reasoning, every administration of it must approxi-
 mate the patient nearer to his grave. We will look
 at further quotations from the same authors, and
 others of established reputation.

“Mercury in some constitutions operates like a
 “poison, quite unconnected with its agency as a
 “remedy, and neither proportionate to the inflam-
 “mation of the mouth, nor the actual quantity of
 “the mineral absorbed. The morbid state of the
 “system which tends to the fatal event” (for it is
 just before noticed in this author that SUDDEN DEATH
 sometimes occurs during, and in consequence of a
 mercurial course) “is named *erethismus*, and is
 “characterized by great depression of strength, a
 “sense of anxiety about the præcordia, irregular
 “action of the heart, frequent sighing, trembling,
 “a small, quick, and sometimes intermitting pulse,
 “occasional vomiting, a pale contracted counte-
 “nance, a sense of coldness; but the tongue is
 “seldom furred, and neither the vital, nor natural
 “functions are much disordered. They who die
 “suddenly of the mercurial *erethismus* have fre-
 “quently been making some little exertion just
 “before.”

The same authors advise, that practitioners observing these symptoms in their patients, should immediately cause them to discontinue the use of mercury, and be exposed to a cool dry air—adopt a more generous diet, with the use of cathartics occasionally, the mineral acids and peruvian bark. Although cool air is considered so necessary, joined with these methods of treatment, to avert SUDDEN DEATH, yet it is very justly observed, that there is danger even in the patient being subjected to cold air, from the hazard of some other disease attacking him in consequence.

It is further remarked, that cold liquids taken into the stomach, or exposure of the body to cold air or moisture, must be guarded against during a course of mercury—and by those under the influence of it, lest violent pains, vomiting, and general convulsions ensue.

“ Mercury often produces pains like those of
“ rheumatism, and when it falls on the mouth, some-
“ times produces inflammation, which now and then
“ terminates in mortification.”

“ Mercury may even produce local diseases.”

“ Mercury occasionally attacks the bowels, and
“ causes violent purging even of blood.”

In the earlier periods of applying or administering this medicine—

“ Patients frequently lost their teeth, and they
“ were left pale, emaciated, exhausted, and subject
“ for the remainder of their lives to tremblings,
“ palsies, or other more or less dangerous affections.”

It is also stated, and we have too many miserable examples of the fact, that incautious exposure to cold or damp air, or even the use of a partial or general bath not sufficiently heated, whilst the patient was under the influence of mercury, has occasioned the

most violent catarrhal symptoms,—the fauces and throat became inflamed, the eyes intolerant of light, the eye-lids ulcerated, and sometimes inverted.

With facts like these before us, authenticated by men of respectability, science, and education—and which, from the more general diffusion of knowledge, find their way into many of the superior circles of society, it is not very surprising that persons afflicted with deafness, and acquainted with the effects of mercury, are alarmed when they find it recommended to them as the only chance of cure; and that they should prefer bearing the ills they have, rather than resort to a remedy which might, if administered under the direction of an incautious or unskilful practitioner, produce a train of evils capable of so dreadfully diminishing the enjoyments of life, or terminating existence by a SUDDEN DEATH. But there are too many still ignorant of the nature and properties of this mineral, who, merely regarding it as a fashionable medicine, and that it would be a specimen of bad taste to object to the use of it, consent to its adoption, until too late they find they have fallen victims to its power, without any equivalent in return.

Mr. Saunders was the first modern author who advised the use of it in cases of nervous deafness, as he considered that he had discovered by accident, in the case of a Mr. B., that mercury was a specific for this species of deafness when in the incipient state. Mr. Saunders, however, was not the first discoverer; for Riverius, who lived about 1646, mentions a similar *accidental* discovery of its *supposed* beneficial effects in extreme cases of deafness, long before his time; but after repeated trials, it being found totally inefficient, and the baneful effects of the medicine becoming more known, it very properly fell into complete disuse.

Mr. Saunders appears at a loss to account for the

action of the mercury in the case of Mr. B. in any other way, than that it produced some change in the structure of parts adjacent to the nerve. Really, his own statement of the case is so plain, that it is only matter of surprise he could write it, and form such an erroneous conclusion. This Mr. B. came to him, as it appears, infected with syphilis, which after a short time showed itself by such ulcerations of the throat, that no doubt could be formed as to the case. Mercury cured the original complaint; and the deafness, which was not a primary affection, but only a consequence of the thickening, and incipient inflammation of the cuticular lining of the pharynx, whereby contraction took place in the orifices of the eustachian tubes, was of course relieved, when the cause which occasioned it ceased.

The other six cases mentioned by Mr. Saunders were all men, or lads; and from the manner he mentions the whole of them, they appear to be of the lower orders of society; probably affected with the same loathsome disease as Mr. B., but equally as deficient in candour as he was; for it is to be observed, Mr. B. did not acquaint Mr. Saunders with the fact, until he could no longer conceal it from him, and it was only after the discovery of the true nature of the complaint that mercury was recommended. But Mr. Saunders probably never knew the real state of the other six patients, as he commenced the treatment of them by doses of mercury, which would destroy the latent symptoms, and prevent the real nature of the case from being known: and this reasoning does not appear hypothetical, for Mr. Saunders afterwards acknowledged that he had COMPLETELY FAILED in curing NERVOUS DEAFNESS by these methods.

Where syphilitic ulceration exists in the throat, or in cases of inflammation of the pharynx from this

cause, mercury may be indispensable. Yet upon this vague and uncertain idea of its usefulness in nervous deafness, which even the modern advocate of the practice declared was erroneous, the most delicate females, as well as persons of all ages, have been indiscriminately saturated with mercury, and the public have been favoured from time to time with accounts of cures of persons by this method, who seem to have neither a local habitation nor a name, for the initials only are given, which, with the exception of three or four, comprize all the letters of the alphabet, some of which, to add to their importance, are graced with titles. This publication of *anonymous* cases carries no conviction to the mind of a person of common intellect, for he has before him only the *ex-parte* statement of a person who is interested in proving to the world, as far as his *ipse dixit* will do so, that he is superior to every other person in the treatment of a peculiar species of disease. As far as concerns the profession, this conduct is *illiberal*; and as concerns the interest of the party adopting it, the plan is *ill judged*; for the public, and the respectable part of the profession, look upon most of these things as mere advertisements, and the veriest empiric will surpass any practitioner of real merit by the *unblushing effrontery* with which he will fabricate cases, and even introduce the names of some of the nobility as his patrons or patients, who never heard of him, but neglect to expose the imposition lest they should be giving importance by noticing the falsehood. M. Itard, by the publication of his numerous cases, has, I understand from a French physician, lessened the value of his work very considerably in the estimation of the scientific; although venal reviewers are to be found in that country, as well as in this, who will give their unqualified approbation of what they never

read, and if they had read, do not possess the talent or sense to appreciate, or even understand.

As to the fact that mercury will cure *nervous deafness*, most of the scientific members of the profession are completely sceptical. I have seen in the course of my practice several hundred patients who had been treated in this way; some almost till salivation ensued, and others where that effect *was* produced; but I never either saw, nor heard of any person cured, or even relieved by it. Indeed, I am charitably inclined to believe that the advocates for this plan of treatment deceive themselves; for I have often seen patients who had tried this remedy till, enervated by it's effects, and hopeless of relief, they declined all further attendance on the person advising it, who, conceiving himself the *ne plus ultra* of perfection, and that, as *his advice* was no longer required, the patient *must necessarily* be cured, considered that his plan had proved successful, and promulgated it to the world, as an *invitation* for others to receive the same benefit at his hands;—a benefit, which those afflicted with syphilitic deafness may receive from such treatment adopted by their own regular surgeons, but by which the patient with nervous deafness never can gain his hearing. Even the cases of incipient or recent nervous deafness which Mr. Saunders thinks mercury will cure, may generally be relieved without it's use, by the adoption of proper methods; but of this fact there can be no doubt, that if they cannot be cured without mercury, they never will be benefited by even a cautious exhibition of it.

Mr. Saunders admits that mercury is more calculated to *exhaust*, than to impart *energy* to the nerves, and declares his full conviction that cases of nervous deafness of long standing are never relieved by it; yet the treatment he adopted towards Mr. B. and the

six other cases following, which I have mentioned, is still recommended, with little variation, to all patients whose cases are *supposed nervous*. Calomel, or blue pill, epsom salts, bleeding, setons, blisters, antiphlogistic regimen, and, *imitating* Mr. Saunders, when the strength of even *robust* men begins to be prostrated before this formidable array, bark is prescribed, to raise them up again.

Many patients, after suffering the tortures of this mode of treatment, under the idea of their complaint being nervous deafness, have been cured by the extraction of indurated wax; or other substances, from the lower part of the auditory passage; which shows the necessity of every practitioner in this department examining the ears in a proper manner, particularly as it is attended with no pain to the patient, and is very satisfactory to the aurist, who can, in nine cases out of ten, see the state of the auditory passage, and must be very *incompetent* to his profession if he does not remove every *particle of indurated cerumen*, or other substance, that prevents him from seeing the *membrana tympani*, or drum, as it is commonly called.

Other patients who have suffered the whole of this course of bleeding, blistering, calomel, &c. &c. although they had been deaf for many years, and consequently, according to Mr. Saunders, it was useless to treat them in that manner, experienced no relief, but rather an accession of the noises in the head, and an increase of the deafness, besides becoming so much debilitated in point of constitution, that the remainder of their existence, which, but for the use of these means, might have been passed in the enjoyment of health and vigour, proves a burthen to them; and all hope of alleviation of their deafness, which mild treatment might, in the first in-

stance, have produced, is in too many cases for ever annihilated.

The erroneous reasoning of Mr. Saunders, as to the case of Mr. B., appears to have descended to the present time; and reminds me of a case published in the second volume of the Transactions of the Association of Fellows and Licentiates of the King's and Queen's College of Physicians in Ireland. The case is communicated by Dr. Richard Grattan, Fellow and Censor of the College, and recites, that a young lady had an excrescence growing in the external auditory passage, which, from exposure to a sudden change of temperature, became very painful; abstraction of eight ounces of blood, being all that could be obtained from the temporal artery of the affected side, was resorted to, and five grains of calomel were prescribed, followed by an "*oil*" draught. The pain increased, and in four hours delirium came on. The head was then shaved, "*a sharp blister*" applied to the occiput and nape of the neck, and the temporal artery of the other side was opened, but he could only get four ounces of blood. She still became worse, was quite comatose, eyes half closed, pupils dilated and insensible to light, refused to swallow, countenance pale, arms pressed close to her chest, and so rigid and inflexible, that the Doctor could not extend them, or scarcely feel her pulse, from the position in which she retained them. The Doctor and his friend, Mr. Hewson, the Surgeon, considered her death inevitable, as they thought effusion had already taken place on the brain; willing, however, though they had no hope of saving life, to leave nothing untried, and finding, from the position of her arms, that they could not bleed in the usual method, Mr. Hewson opened the jugular vein, and obtained ten ounces of "*very dark*

coloured blood." She soon after revived, and the next day was considerably better. The third day the Doctor prescribed a mixture of two ounces of acetated liquor of ammonia, four ounces of pure water, sixty drops of tincture of digitalis (foxglove), and two drachms of syrup of saffron; two table spoonsful to be taken every three hours. This quantity would make nearly seven doses, so that each dose contained about nine drops of the tincture of digitalis.

Dr. Grattan attributes the successful termination of this case, so *unexpectedly*, to the calomel and digitalis, which he thinks he prescribed more freely than is generally practised. I do not know the quantum of this tincture commonly prescribed in Ireland, but here the minimum dose of digitalis is ten minims, or about fifteen drops, and the maximum dose is forty minims, or about sixty drops. The dose of calomel was nothing extraordinary, for in a case very similar, to which I was called, about five years ago, in consultation with one of the most eminent physicians in Bristol, the same quantity was prescribed by him for a very delicate young lady, joined with a cathartic; and it is very necessary when it is given in such cases, that it should be in sufficient doses, or joined with other medicines, so as to produce a quick action on the bowels; otherwise it seldom fails to increase the pain in the ears, and aggravate the symptoms of the complaint.

Dr. Grattan reasons with great judgment on the action of the capillaries, and points out that in them commences the process of inflammation; for, as he observes, when they exert themselves, and transmit, as quickly as they receive, the blood, the balance of the circulation is preserved, and no congestion nor inflammation can take place. I am, however, much

astonished that *another cause* of this cure did not occur to Dr. G., which it certainly appears evident, from reading the case, must have been the true reason of this young lady's life being saved. It is admitted the inflammation commenced in the capillary vessels, which thereby ceased to perform that action necessary for the continuance of health, namely, the transmission of the blood from the arteries to the veins, at the same time separating and throwing off, by the excretory ducts, the insensible perspiration—the veins having no propelling power of themselves, except as they receive the impetus through the capillary vessels from the arteries—congestion had taken place in the venous portion of the circulation, probably commencing in the auricular vein, which extended, and in some measure affected the other veins of the head, of which the external jugular vein is the common trunk; by the abstraction of blood from the jugular, a species of mechanical vacuum was created, and the propelling power of the arteries having less opposing force, from the congestion in the finer parts of the veins being withdrawn, overcame the partial obstruction existing in the capillary vessels, and nature by degrees was restored to the exercise of her functions: so, that it seems evident, the *forced bleeding* from the jugular saved the patient, and not the doses of digitalis or calomel; and this is borne out by the colour of the blood being *very dark*, for although the blood is always deeper coloured from a vein, than from an artery, yet it may be presumed, by the manner in which it is mentioned, that it was in this case *singularly* so. The cause of the whole complaint was the abstraction of the latent heat from the capillary vessels, which would be carried off by the vaporisation arising from the application of damp whilst the body was greatly heated; this was

precisely the case of this young lady, who had been to a crowded theatre, and walked home with her head but lightly covered. It was also observed, that the action of the temporal artery of the affected side was not much increased: surely this ought, with the other symptoms, to have suggested the propriety of opening the vein as soon as the symptoms of delirium appeared,—for the action of the artery was laboured, in consequence of having but little, if any outlet for its contents by the proper channels; but when once the congestion was removed, the arterial part of the circulation performed its office with increased energy, and the capillary vessels soon *regenerated that vital heat* so necessary to health.

The effect of mercury either upon an encysted tumour, which sometimes forms in the auditory passage, or upon some of the species of fungous granulations of that part, is very decisive, if given in quantities insufficient to act on the bowels. These kind of tumours sometimes occur in consequence of hard substances being introduced into the meatus by children, and the injury inflicted by injudicious attempts, or the introduction of improper instruments, to extract them.

Deafness in children, and even adults, in some few instances, appears to be occasioned by worms in the intestinal canal, more frequently by the large round worm than any other; at least practical experience, which is far beyond theory, has repeatedly shown, that immediately the worms were expelled, the hearing gradually improved, until it again acquired its full power. Mercury in these cases is very necessary. The old formulæ of calomel and scammony, or calomel at night, and a powder of jalap, gamboge, and scammony the following morning, are probably as good, or better, than any other; certainly far more safe

than quack medicines, which are advertised for that purpose; one of which, patronized by a Chief Baron, a Bishop, and many other persons of distinction, as the proprietors pretend, was proved, by the evidence taken before the Coroner, to have destroyed a child's life at Hull in Yorkshire, in January 1804, and a verdict was recorded, that the child was poisoned by that worm medicine. See Medical Observer, Vol. I, page 154. The father of the child published a spirited pamphlet on the occasion,—yet the same medicine continues to be sold.

The nobility, and other persons of rank, whose names are used by proprietors of quack medicines, or men, and even women, pretending to medical or surgical skill, are really in conscience answerable for, and accessory to, the evils and mischiefs such nostrums, or the incompetence of the parties, may occasion; for, by tacitly allowing their names to be used, the public are induced to believe that the high patronage which is pretended to be accorded, is really granted, and the consequent miseries are widely extended. So common is it become to use the names of the great, that there can be little doubt but if a list was published of the various ways in which the names of persons of rank are used to forward *individual interests*, it would be a curious document, and excite no small degree of astonishment in those personages.

There is some variance of opinion as to the properties of mercury. By some, it is considered a stimulant; by others, a sedative. It is not possible here to enter into the controversy upon this subject, further than to remark, that the primary effects of many sedatives are stimulating, and the secondary effects of many stimulants are sedative. Mercury proves, in its primary effects, stimulating to the whole system; but,

like other active medicines, it varies much in its action, according to the habit of the patient's body, the manner of its exhibition, the quantity introduced into the system, the temperature of the atmosphere, &c.; and the effects it produces are by no means certain; sometimes one, and sometimes another secretion is increased, but very generally the salivary glands are more affected by it than any other part of the body.

Various degrees of deafness, attended with most distressing noises in the head, vertigo, &c. are occasioned by sudden changes of temperature, or exposure to a cold or damp atmosphere during the time the system is affected with mercury. In some cases, total deafness comes on suddenly; in others, the diminution of hearing is progressive, until it amounts to complete deprivation of the sense; whilst some only suffer a partial diminution. I have not been able to discover any difference in the symptoms, or effects on the hearing, whether the mercury is introduced into the constitution by means of the absorbent vessels of the skin, or by internal exhibition. Mercurial ointment applied to the head to cure an eruptive disease, in one instance, produced sudden and total deafness. In another, an ointment containing mercury, joined with camphor, was applied to the head for a *supposed* local affection, which, *evidently*, from the symptoms, was only a simple complaint of another part of the body; the consequence was gradual imperfection of hearing, but now total deafness. In a third instance, the patient had attended the King's coronation last year, whilst under the influence of mercury, and being very warm and fatigued, caught cold by sitting down, as is supposed, in some draught of air to rest, which deprived him of all hearing.

A fourth, a young lady taking calomel for a bilious

complaint, had her hair cut, and whilst warm, opened the window and put her head out to look at some thing passing, whereby she became totally deaf, — and not being able to modulate the tones of her voice, is now gradually losing the power of speaking distinctly; and many other similar instances could be cited. *of the* Children, to whom mercury is very commonly administered for most infantile complaints, also often become totally deaf, and remain the sad victims of want of due care in nurses and parents, who suffer them to run about in the damp, or to be washed, without any more precaution than if no medicine had been administered.

An Italian gentleman at Milan sent his case here in writing by an English physician, who desired my opinion on it. His hearing was very much diminished, and the noises in his head were of the most distressing nature, attended by vertigo, and such symptoms of approaching apoplexy, that his life was placed in a state of great hazard; — all which had been occasioned by the use of mercury, and neglect of proper caution.

Another gentleman who had used mercury in France, was obliged to take a voyage to Italy, and being exposed to a gale of wind, became totally deaf on one side, — finding the other impaired, and a sort of intermitting deafness coming on, with noise in the head, giddiness, and a variety of distressing symptoms, for which he could get no relief in Paris, came to London to consult one of our first surgeons, who sent him to me very recently.

I might go on to mention many other instances, where mercury introduced into the system, and want of due caution being recommended by the medical attendant, or of proper attention being paid by the patient, variety of diseases of the organ of hearing

have supervened. Why then should the more gentle vegetable medicines be so much neglected in simple cases of derangement of the stomach? Surely they are more natural and congenial to the constitution, and are certainly unattended with danger. Many of the scientific members of the profession are discountenancing mercury; but it will no doubt still continue in favour with those who are bigotted to a peculiar system of treatment, and others who are too ignorant to appreciate improvements, nor reason fairly and liberally upon the subject.

Another instance of the abuse of mercury occurs to me. A young lady who was troubled with occasional head-aches, which, from the symptoms, clearly arose from indigestion, consulted an apothecary in her neighbourhood, who assured her it was a dangerous complaint of the head, and treated it as a local affection, with external applications, and internal doses of calomel. She continued a *constant* patient to her medical friend for several years, occasionally seeing a physician of the apothecary's introduction, during which she lost all her teeth, became very nervous and weak, with palpitation of the heart, &c. Whilst under this treatment, and taking these medicines, she was ordered to use sea bathing, and deafness, to a very great degree, was the consequence. Another physician was called in, who advised four grains of blue pill every night for six or eight weeks, and an active cathartic once in twelve or fourteen days. This increased her debility, and the noises in her head, and in that state she consulted me in regard to her deafness, with a written statement of her case from her apothecary, whose ignorance was evident from his orthography as to those parts of the human body he wished to describe, as well as in his account of her symptoms. This poor creature had been his patient TWELVE YEARS, and was

a sad tale indeed!!!

perfectly satisfied he had never given her mercury; but the prescriptions, which she had carefully retained, showed how she had been deceived. One of our first physicians, whom she consulted (as to her general health, at the same time that she called on me, explained the deception to her relatives who accompanied her; but, from the *debility* which, he thought, was a consequence of *the treatment she had undergone*, he gave no hopes of her recovery; and a fine young lady, possessing an ample fortune, was thus sacrificed by *ignorance* and *cupidity* at the shrine of a fashionable medicine.

There is considerable difficulty in ascertaining the precise manner in which the ear becomes thus affected, in consequence of the use of mercury, and the application of cold or moisture to the body; because the capillary vessels being excited by the medicine to increased action, the application of damp or cold would more easily produce vaporisation, and the latent heat being thereby carried off, we should look for inflammation in consequence of the interruption of the due circulation. But in these cases no such symptom is discovered,—no visible derangement of the structure of the ear, or its functions, is to be observed on the closest investigation; the ceruminous glands perform their functions properly, the membrana tympani is perfect, both in shape and appearance: therefore the aberration from a state of health must arise in the more internal parts of the organ. With a view to assist as much as possible in restoring the tone of every part, cleansing the external auditory passage of every particle of cerumen, and gently stimulating the glands to increased action, is as much as can be done to that part.

Mercury being capable of increasing all secretions, those of the mastoid cells, no doubt, become more

profuse; but being suddenly checked, probably the secretion passes into the cavity of the tympanum, and over the internal side of the membrana tympani, (or drum) in an inspissated state, and may thereby interrupt its vibratory power, which is the primary action of the mechanism whereby sounds are conveyed to the sensorium; or the efflux of this secretion may pass down, and even form obstructions in the eustachian tube; and this is a very probable reason in some instances, for I have seen patients deaf from exposure to cold whilst taking mercury, who, if laid upon their back, could hear quite well, but after standing up for a short time, gradually became deaf again. I have mentioned cases of syphilitic ulceration, and closure, or obstruction of the eustachian tubes from that cause; which also may arise from the primary effect of mercury upon the cuticular lining of the pharynx, being inflammation, which, in membranes, rapidly advances to ulceration. As topical applications to affect the mastoid cells, the use of moxa, (so much extolled on the continent for various diseases, and now introduced into this country in a more manageable form by Mr. Guthrie, who has favoured me with his plan of applying it,) or very dense sparks from a powerful electric machine upon the part, (which I am also adopting, through the medium of an old established professional gentleman, whose high character and skill are universally acknowledged,) will prove more successful than blisters. And with a view to cleanse the pharynx, fauces, and eustachian tubes, a gargle composed of mineral acid and some slight stimulative, may prove of considerable service. As to the perforation of the mastoid process, I shall make observations upon that plan in my larger work; therefore shall only remark here, that it has not proved so successful as was anticipated.

As the secondary effects of mercury are oftentimes paralysis, the portio mollis, or soft portion of the auditory nerve, whose delicate filaments float in such a sensitive medium, and even the membranes of the fenestra rotunda, ovata, and membrana tympani, being all supplied with nervous and muscular sensibility, may become affected with incipient paralysis. Stimulants in general, and none more than mercury, produce, in their secondary effects, a corresponding debility; thus the nervous system of these parts being so sensible, may more frequently suffer, and, from their complexity of formation, are less understood than other and more tangible parts of the system. Medicine may here be called in to aid the cure: and by the exhibition of the various kinds of correctors to this baneful mineral,—more manageable stimulants,—and other methods, according to the circumstances of the case, I hope in my next work to be able to show that these patients are not deprived of all chance of relief; but, on the contrary, they may reasonably hope to re-enter into the business and enjoyments of life, and again join in social intercourse with their fellow mortals.

FINIS.





