On the treatment of syphilis and other diseases without mercury : being a collection of evidence to prove that mercury is a cause of disease, not a remedy / by Charles R. Drysdale.

ON

THE TREATMENT OF SYPHILIS

AND

OTHER DISEASES

WITHOUT MERCURY;

BEING A COLLECTION OF EVIDENCE TO PROVE

THAT MERCURY IS A CAUSE OF DISEASE, NOT A REMEDY.

BY

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PREFACE.

THERE is, it appears to me, a stage in the discussion of any question at which all that has to be said on the matter has been advanced by the advocates on either side; and when the evidence ought to be read over and judgment delivered. Has this period been attained in the history of the discussion of the value of mercury in the treatment of syphilis and other diseases? I believe so. We have at present in many of our medical schools, professors of undoubted ability, who hold precisely contradictory ideas on this subject; and, in consequence of their theories, they make use of completely different treatment in syphilis, iritis, and in inflammatory diseases. How long is this state of things to last? Are we to wait for another generation of observers before we decide the question; or have we not already sufficient materials for summing up and giving our verdict? The latter view of the state of matters is the one I have taken in this work; and I hope that those who may read over the evidence contained in its pages, may come to the conclusion which I have arrived at, in company with some of the most illustrious professors of the day, that mercury was introduced at first needlessly into the

practice of medicine, as an internal remedy; and that it now holds its place among the list of remedies solely from its having been used by the practitioners of the past, without any sufficient evidence that it is ever of the slightest service. I am well aware that many exceptions will be taken to the form of this work by those who do not agree with its conclusions. It will be said, among other things, that I have given but little evidence from my own experience, as to the truth of what I assert. To this I reply that, were it needful, I could only reiterate what has been said again and again by others, namely, that I have never seen syphilis assume any very grave secondary or tertiary forms, except when courses of mercury have been employed; but the number of cases which I could cite would be few in comparison with the hundreds of thousands already observed. The matter, I believe, is no longer one of individual experience, but of evidence. In short, my humble aim has been to lay, in an accessible form, before the mass of the profession, the evidence which has convinced myself; and I believe, from many recent conversations which I have had with members of the profession, that this is precisely what is wanted by those who are anxious to arrive at a conclusion on the subject.

C. R. D.

39, *Southampton Row*, *Russell Square*,
London, *October* 16*th*, 1863.

INTRODUCTORY REMARKS.

THE subject of which this work treats has dwelt continually in my thoughts during many years. At the outset of my investigations on this, which I consider the most important point in drug therapeutics, I felt that the utmost obscurity surrounded the subject. Though acquainted with the fact that Professor Syme and several other celebrated practitioners had abandoned mercury in treating ulcers of the generative organs and their sequelæ, and knowing well, from observation, that mercury was perfectly unnecessary in the treatment of other diseases, I was not at that time aware of the overwhelming amount of evidence accumulated against the specific treatment of syphilis. It is therefore with the greatest allowance for the want of acquaintance with the facts of the case in others, that I have written the following pages. I can give mercurialists the most perfect credit for the sincerity of their faith in the powers of the drug, the more willingly also, because it has been more than once my lot to find medical men, who had themselves contracted syphilis, undergoing a long and, in my opinion, most dangerous course of the remedy, for the purpose of, as they thought, neutralising the poison.

In conversing lately with a considerable number of practitioners in London, upon the subject of the administration of mercury, although in most cases I have found the faith in its efficacy very great, both as a specific in syphilis and as the best means of treating cases of acute inflammations, I have met by no means rarely some more sceptical as to the virtues of this agent; and, indeed, it has several times been my fortune to meet with gentlemen who went as far as myself in their dislike for what they considered the most treacherous and delusive of drugs. More than once I have been informed by professional men that they have not ordered a grain of the mineral internally in any form for years, a confession which, as an individual, I have no hesitation also in making. For many years, too, I have watched in hospitals the practice of those who give mercury, and compared it with non-mercurial treatment, and I have no hesitation for one moment in according the palm to the latter practice.

Every week, in dispensary practice, I am witness of the disagreeable effects which take place from the almost universal habit which obtains among practitioners of giving mercury in bronchitis, pneumonia, in pleurisy, in dyspepsia, &c., but most of all in syphilis. Patients, too, are continually informing us that they are bilious, after indulging in copious beer and gin drinking and tobacco smoking, or remaining from nine in the morning until ten at night in a close atmosphere, as is commonly the case with young women employed in book-folding, millinery, &c. And so dangerous a legacy has the profession been left by those who first used the word "bilious" to stand for a mass of cases of indigestion and mal-nutrition, that these patients are accustomed to swallow mercurial pills, whenever they experience the uneasiness which results from such unhealthy modes of living.

Recent discoveries in the means of diagnosis and the extreme care which has been bestowed on this important

branch of medical science have been the most effectual blow to the empirical treatment of disease; and there are but few physicians or surgeons under forty, who now venture upon the heroic treatment of disease by bleeding, mercury, and antimony, to the extent which was so prevalent in Abernethy's time. Bleeding from the arm, indeed, is an operation which few students have ever seen performed during the last ten years, and has been succeeded by cupping to the extent of a few ounces, or by the application of a few leeches. But of all the delusions which have enthralled the medical mind since the days of the great Hippocrates, the belief in the utility of mercury appears to me to be by far the greatest. It is a striking example of the remark that "experience is fallacious," that statements regarding the effects of this drug should have remained so long unchallenged, for we have now been more than three hundred and fifty years "under the influence" of mercury. In the days of Celsus, Galen, &c., the mineral was forbidden by law, as a poison destructive to life, and it is only now again that some persons in Europe are beginning to believe it to be so, and it would seem that the Direction of the United States' army medical staff are of like opinion. In Germany a large number of medical authorities are against the use of mercury; and in France it is almost solely in syphilis that it is employed. I have, therefore, devoted the chief part of these pages to the consideration of its injurious influence in syphilis, and must refer readers to Dr. Hughes Bennett's and to Dr. Habershon's works, for a fuller treatise on its injurious effects in other diseases. The following letter, from the *Medical Times and Gazette*, June, 1863, will give an illustration of my opinions regarding the injury done by this remedy in syphilis.

"*Farringdon Dispensary.—Mercurio-Syphilitic Disease.*

"To the Editor of the *Medical Times and Gazette.*

"Sir,—Several circumstances lead me to believe that, ere long, the propriety of administering mercurials internally in

syphilis will come prominently before the profession for discussion. A recent debate in the Medico-Chirurgical Society and the observations of Mr. Spencer Wells disclose the fact, that the ideas of some of the leading surgeons are beginning to lose their hold upon many of the most distinguished among the younger practitioners on this subject, and as it is well known that even among the mercurialists the most striking differences in practice are observable, perhaps you will kindly permit a total disbeliever in the value of mercurial treatment in syphilis a few remarks upon this subject.

"The question of 'Mercurials in Syphilis' is of the highest importance. On its solution, it appears to me, depends the future of mercury as a therapeutic agent. Dr. Habershon has lately done so much good service in demonstrating the injurious effect of the vaunted remedy in various diseases, that I need not here dilate upon that topic, and will only say that I concur in his disapproval of the administration of mercury in almost all diseases of the lungs, heart, abdomen, and brain. Indeed, Mr. Zachariah Laurence has lately discontinued the use of mercury in the treatment of iritis, and uses opium alone with much success; whilst podophyllin has taken the place of mercury in the treatment of congestion of the liver.

"But the citadel of the mercurialists is syphilis, and they cling to its administration in that disease with a tenacity worthy of a better cause. True it is, that for a time there was a defalcation from their ranks, when Fergusson, Guthrie, Rose, Hennen, &c., on returning from the Peninsula, pointed out how much better the troops got on without it; and the treatment of more than a thousand hospital cases by Fricke, and as many by Desruelles in the Val de Grace Hospital of Paris, without a particle of mercury, followed and nearly routed the adherents of Astruc and Hunter.

"A reaction, however, soon took place under the general-

ship of the illustrious M. Ricord, and his partizans in London and Paris are now decidedly in the majority. I have, however, remarked in the writings of his disciples in England a decided falling off from the zeal of the 'maestro,' for whilst M. Ricord is in favour of a six-month's course of a daily dose of iodide of mercury, followed by three months of iodide of potassium, I find our most distinguished London authors ambiguous as to the length of time the mineral is to be used; and, moreover, they do not all follow M. Ricord's method, but make use of the three modes which are as ancient as the days before Astruc,—viz., inunction, fumigation, and internal administration.

"It has been my lot to see many severe and protracted cases of disease, produced, in my opinion, by the use of each of these three methods, and if such effects are not so frequently visible now as formerly, it is simply because practitioners are now beginning to give less and less of their vaunted specific. All who have read the voluminous evidence of Fergusson, Hennen, Fricke, Desruelles, the French and Swedish Councils of Health, Harris, &c., are well aware that symptoms such as related in the following cases never occur when patients are treated by simple rest, diet, and cleanliness. Besides this, the time of treatment, according to Desruelles, is not half so long when no mercury is administered.

"Case 1. Primary sore treated by mercurials—destruction of the nose--phthisis—death.

"On May 28, 1862, I was asked by Mr. W. Allingham, F.R.C.S., to examine the chest of a young man, age 23. History—Parents healthy; no phthisis in the family. Patient was always in good health until infected. He is a native of London. Two years and eight months ago, whilst serving in a militia regiment in Dublin, he contracted a sore which became large and indurated. Was treated for this at the Richmond Hospital, for six weeks, with pills, to be taken

twice a day, and the saliva ran out. Treated again by the same gentleman, for a period of two months, for another attack of the complaint, by pills, which again made his mouth sore. Has not had any eruption on the body; but sore throat. Sixteen months ago, at Aldershot, ulcers commenced at the corner of the nose, and he began to cough.

"Present condition—The alæ of the nose are completely eaten away, as also the soft palate. There are marks of serpiginous ulcers over both cheeks and on lower extremities. Loud cavernous râles and cavernous breathing are heard under both clavicles. Emaciation extreme. The young man died next day.

"Case 2. Salivation for primary sore—thirteen miscarriages—iritis—necrosis of lower jaw.

"Mary H., age 46, August 1861. Twenty-one years ago patient contracted a sore from her husband, whilst pregnant. She was treated for about nine months with pills and mixture, which made her mouth sore, and had mercurial ointment rubbed into the body in various parts. She was twice salivated during the treatment. Since then she has had thirteen miscarriages and seven children born alive, of whom three died, and of the four living, all are weakly, and one is paralysed. Patient has had iritis in left eye, and is blind in that eye. Has severe pains in left side of head. Four months ago a piece of lower jaw, on left side, came away with two teeth. A large piece of the centre of the lower jaw is necrosed, although not ready for removal.

"Case 3. Mercurial fumigation for secondaries—Extensive rupia.

"Eliza S., age 20, September, 1862.

"History—About twelve months ago she perceived a small hard sore on the vulva, which disappeared without any treatment. About five months afterwards appeared a skin disease and sore throat. She was taken into an hospital, and had mercurial vapour-baths and pills, at bed time, for two months.

"Present condition—Patient has all over the body, and particularly on her right leg, large scabs of rupia, some of which have fallen off, and disclose large unhealthy ulcers. Is very weak and emaciated, with all the aspect of a person poisoned by the mercurio-syphilitic disease. Ordered pot. iod. as an antidote to the mercury.

"Much triumph has been indulged in by mercurialists concerning the treatment of infantile syphilis by mercury. I regret to say I cannot share their exultation, for I have seen too many deaths of infants, when treated by the mineral, to believe it to be a specific in this form of the disease.

"Some time ago, sir (*Medical Times and Gazette*, November, 1862), you did me the favour to publish two cases of infantile syphilis, which had recovered under the influence of careful diet, cleanliness, and chlorate of potash; since then I have treated two more cases with like remedies and like result; and Mr. W. Allingham, F.R.C.S., has treated ten cases, without a fatal result, by chlorate of potash and hydrochloric acid. Indeed, I believe that mercury, instead of always curing infantile disease, sometimes causes death; the following case is an example of this:—

"Case 4. October 28, 1861. I saw a child, aged eleven months, covered from head to foot with a squamous syphilitic eruption, especially in the legs. The child snuffled, and the posterior cervical glands were enlarged. In other respects the child was plump and well-grown. Child to have its waist bound with a flannel band, on which a small quantity of mercurial ointment is to be smeared; the bandage to be renewed every second day.

"November 8. Spots greatly faded, almost gone. The child looks very feeble, and has lost all its liveliness.

"15th. Mother came for a certificate of death.

"After such results as the above of mercurial interference, let us look at the other picture of the disease, when treated, as all other blood poisons now are, antiphogistically, without specifics.

"Hennen treated 407 cases without mercury, and iritis appeared only in two. Fricke, in the Hamburg Hospital, treated more than a thousand without it, and had not one case of iritis, and never observed any bone disease during the non-specific treatment of the disease.

"John Thompson, Liston, Syme, Hughes Bennett, Cooke, and a host of other celebrated names in England, France, and Germany, have repeatedly asserted the same as these authorities, and have one and all proved, not by assertions only, but by extensive comparative experiment, that syphilis, when treated by careful diet, rest, cleanliness, and external applications, is a disease of a very mild character.

"M. Desruelles, in his account of his treatment of the soldiers at the Val de Grace Hospital, in Paris, says, 'It is easy to see that the internal treatment is reduced to the greatest simplicity; the external treatment is not more complicated, and for the one as for the other, the help of pharmacy is almost nil.'

"So strong an attachment, however, do some physicians and surgeons evince for specific treatment, that I verily believe it will require half a century before the administration of a drug, which has caused, according to the above-quoted authors, the miseries of iritis, bone disease, and ulcers of soft parts, will be abandoned, and the constitution allowed, as in the days of Hippocrates, Celsus, and Galen (for I am convinced, with M. Ricord and Mr. Travers, that the disease has always existed, although the connection between the primaries and the eruption was not perceived by Celsus, &c.), to struggle with the poison fairly, aided by attention to regimen, diet, and cleanliness.

"I conclude, sir, this somewhat lengthy epistle, by a quotation from Professor Hughes Bennett, a gentleman who has done more than any, to clear away the empirical from the treatment of disease, and to establish the deductive or true method of therapeutics. 'When we treat syphilis on the

same principles that we do scarlatina or small-pox it will prove infinitely less fatal than these disorders.'

"I am, &c.,

"CHARLES DRYSDALE, M.D.,

"M.R.C.P., London, F.R.C.S., England.

"39, Southampton-row, Russell-square,

"London, June, 1863."

Some evidence, which has lately been given in courts of justice, ought to warn all of us of the obscurity which must necessarily surround all questions in medicine, and of the advisability of maintaining a calm and unruffled temper in the discussion of medical topics.

The question of the treatment and prevention of syphilis is beset with more than ordinary difficulties. One of these I shall briefly advert to, as it appears still to infest some of the authors of the day. I allude to the notion that syphilis is a disease sent as a Divine chastisement of vice.

In a meeting of the Medico Chirurgical-Society, reported in the *Medical Times and Gazette*, February 25, 1860, Mr. Solly is reported to have said that, "Far from considering syphilis as an evil, he regarded it, on the contrary, as a blessing, and believed that it was inflicted by the Almighty to set a restraint on the indulgence of evil passions. Could the disease be extirpated, which he hoped it could not (marks of disapprobation), fornication would ride rampant through the land."

Again Dr. Druitt, in his *Vade Mecum*, p. 167, chap. xi., London, 1854, quotes Dr. Fergusson's views as to the causation of the disease, in which he says "The irregularities of man are at all times punished by the generation of diseases and loss of health; and it would be difficult to believe in a superintending Providence, if the transgressions of divine and human law should be permitted to remain unpunished." Dr. Druitt adds, "The author fully concurs in this opinion."

As a contrast to this, as it appears to me, most unphilosophical view of the nature and origin of disease, I shall now quote the opinion of the great father of medicine, Hippocrates, without further comment, except to remark, that in some respects the philosophy of the nineteenth century, in London, appears, in the persons of these last-quoted authorities, to have much retrograded from that of the days of Pericles.

In his treatise *On Ancient Medicine,* we have this passage:—"But to me it appears that such affections are just as divine as others; and that no one disease is either more divine or more human than another; but that all are alike divine, for that each has its own nature, and that no one arises without a natural cause." I have but to add that I hope that most of us are embued with the spirit of this passage from Hippocrates, on entering upon such questions, where the feelings are apt to obscure the judgment.

CHAPTER I.

IMPERFECTION OF THE EMPIRICAL MODE OF JUDGING OF REMEDIES.

When we regard the position of several of the branches of knowledge at the present time, we cannot fail to observe a vast difference in their approximation towards perfection. Take, for example, the science of astronomy. Here all is accurately understood, and investigations go on under well-known conditions and with no dissentient voice. None but a fanatic now denies the fact of universal gravitation as far as our own system reaches, nor disbelieves the evidence for the revolution of the planets around the sun. And yet, in days gone by, the belief in the exact opposite of these assertions was quite as prevalent, as the present conviction of the value of mercury, as supposed to be proved by experience.

Take another well-known example from natural science. It appears to have been believed for a long period of the world's history, that reason pointed out that a heavier mass of any material would reach the ground, in falling from a height, before a less ponderous one. In chemistry, again, the supposed substance called phlogiston was brought forward to explain what happened to bodies when undergoing combustion, and, as all chemists know, the difficulty in dethroning this belief was extreme.

When we regard, however, at present, the above-named sciences, it is with a feeling of triumph that we remark, how great a power the improved methods of investigation, now so

well understood in their case, has given our race over the whole of animated and inanimate nature.

When we come, however, to the more important sciences, namely, those in which the happiness of our race is most immediately concerned, how great is our discomfiture, when we perceive in what a chaos are yet involved most of the questions relating to society and to health.

I do not mean to say that much has not been discovered both in the science of society and in medical science; but no one can fail to remark how the treatment of the first of these two branches of knowledge is considered to require hardly any preparatory study, and that the most contradictory opinions upon almost every question involved in either of these sciences prevail.

To take an example: For the last fifty years, it has been well known to all who have studied the subject, from the writings of Malthus, Chalmers, Say, James and John Stuart Mill, &c., that the cause of low wages and their consequent evil effects on the health of the poorer and ill-fed classes in European or old countries, is to be found in the over-population of these countries in proportion to their capital. Yet, although no person of any intelligence, who has studied this matter, looks upon this doctrine as anything but axiomatic, so great is the popular ignorance of this all-important question, that each trifling fallacy, which promises a slight augmentation of production or an inadequate emigration, is pointed to and accepted, by the masses, as a refutation of this law of man's nature. But if fallacies are plentiful in the science of society, they are no less so in medical science. Every great man has had his school in this science, and each school has hardly survived its founder, sometimes even died out before him.

Such reflections are disheartening when we consider that, upon the state of man's knowledge of the sciences of social and individual health, depends almost all our security, or

hopes of happiness. But when we examine the matter more narrowly, it may be observed, that the reason for the high state of perfection reached by some of the natural sciences is to be traced to the correct application of the laws of evidence peculiar to each, or, in other words, to the fact, that the method for investigating them has at length been ascertained. When this has once been accomplished for any science, the filling in of the details of that science is, comparatively speaking, a rapid affair. A host of eager inquirers pursue the beaten track, and soon an imposing edifice arises.

The methods of pursuing each of the sciences are very different, as has been shown by Mr. J. S. Mill, in his *Logic*. Thus, in astronomy, the method is almost entirely that of simple observation and deduction; and this, with the check of verification added, constitutes the sole available mode of investigating that science. In chemistry, again, an entirely different method is pursued; here simple observation and experiment are the means of arriving at truth.

When we look at medical science again, we shall perceive, if we attentively consider the enormous complication of every phenomenon within its range, that the method of investigation, which is so fruitful in chemistry, is here almost barren of results; and that our reliance must be placed in the method which has proved so signally successful in astronomy; discovery of general laws, deductive application of these laws, and lastly verification of their operation.

It is because the science of medicine is yet pursued in the method of chemistry by so many of it votaries, that so little apparent advances are made in it; but we may already perceive approximation to an understanding of the fallacy of this mode of investigation, in the gradually growing disbelief in the assertions of specific worshippers, and the importance now attached to the study of anatomy, physiology, pathology, and hygiene. There cannot be any question among those who are anxious to get at the natural history of different

diseases, that the past empirical treatment and method has tended profoundly to darken the whole subject of pathology; so that, in describing a disease, we even yet are often unable to say what is due to the disease itself, and how much is to be ascribed to the remedy habitually administered for its cure, in the ruling practice of the day.

Now, when we are about to discuss a question, such as the treatment of syphilis, upon which such discordant opinions are held by the most eminent men in the medical profession, the question naturally strikes us, How is it possible that men of great experience, such as Lawrence, Trousseau, Copland, and other mercurialists, can hold such contradictory views to those of Syme, Hughes Bennett, Fricke, and other equally celebrated men? And, supposing either side to be right, how are they to convince their opponents? The answer, it appears to me, is, that there is a science which investigates the criteria of evidence. Let us hear, then, what the most distinguished writer on that science has to say concerning the method of arriving at truth in this very question.

After explaining that in a case where there is composition of causes, there are two methods which we may follow in investigating the effect of a given cause, either the *à priori* or the *à posteriori* method, which latter is sub-divided into the methods by experiment and by simple observation, Mr. J. S. Mill, in his *Logic*, vol. i., proceeds thus:

"In order more completely to clear up the nature of these three methods, we shall select for our purpose a case which as yet furnishes no brilliant example of the success of any of the three methods, but which is all the more suited to illustrate the difficulties inherent in them. Let the subject of inquiry be the conditions of disease and health in the human body, or, for greater simplicity, the condition of recovery from a given disease; and, in order to narrow the question still more, let it be limited, in the first instance, to this one inquiry—Is or is it not some particular medicament—mercury,

for instance—a remedy for that disease? Now, the deductive method would set out from known properties of mercury, and known laws of the human body, and by reasoning from these, would attempt to discover whether mercury will act upon the body, when in the morbid condition supposed, in such a manner as to restore health.

"The experimental method would simply administer mercury in as many cases as possible, noting the age, sex, temperament, and other peculiarities of bodily constitution, the particular form or variety of the disease, the particular state of its progress, &c., remarking in which of these cases it produced a salutary effect, and with what circumstances it was in these cases combined.

"The method of simple observation would compare instances of recovery, to find whether they agreed in having been preceded by the administration of mercury; or would compare instances of recovery with instances of failure, to find cases which, agreeing in all other respects, differed only in the fact that mercury had been administered, or that it had not.

"That the last of these three methods of investigation is applicable to the case, no one has ever seriously contended. No conclusions of value, on a subject of such intricacy, were ever obtained in this way. The utmost that could result would be a vague, general impression for or against the efficacy of mercury—of no avail for guidance, unless confirmed by one of the other two methods. Not that the results, which this method strives to obtain, would not be of the utmost possible value, if they could be obtained. If all the cases of recovery which presented themselves, in an examination extending to a great number of instances, were cases in which mercury had been administered, we might generalize with confidence from this experience, and should have obtained a conclusion of real value.

"But no such basis of generalization can we, in a case of this description, hope, to obtain. The reason is that which

we have spoken of as constituting the characteristic imperfection of the Method of Agreement—Plurality of Causes. Supposing even that mercury does tend to cure the disease, so many other causes, both natural and artificial, also tend to cure it, that there are sure to be abundant instances of recovery, in which mercury has not been administered; unless, indeed, the practice be to administer it in all cases; in which supposition it will equally be found in the cases of failure.

"When an effect results from the union of many causes, the share which each has in the determination of the result cannot in general be great; and the effect is not likely, even in its presence or absence, still less in its variations, to follow, even approximately any one of the causes.

"Recovery from a disease is an event to which in every instance many influences must concur. Mercury may be one such influence; but, from the very fact that there are many other such, it will necessarily happen that although mercury is administered, the patient, for want of other concurring influences, will often not recover, and that he often will recover when it is not administered, the other favourable influences being sufficiently powerful without it.

"Neither, therefore, will the instances of recovery agree in the administration of mercury, nor will the instances of failure agree in its non-administration. It is much if, by multiplied and accurate returns from hospitals and the like, we can collect that there are rather more recoveries and rather fewer failures when mercury is administered than when it is not; a result of very secondary value even as a guide to practice, and almost worthless as a contribution to the theory of the subject.

"The inapplicability of the method of simple observation to ascertain the condition of effects depending on many concurring causes, being thus recognized; we shall next inquire whether any greater benefit can be expected from the other branch of the *à posteriori* method, that which pro-

ceeds by directly trying different combinations of causes either artificially produced or found in nature, and taking notice what is their effect; as, for example, by actually trying the effect of mercury in as many different circumstances as possible. This method differs from the one we have just examined, in turning our attention directly to the causes or agents instead of turning it to the effect—recovery from the disease. And since, as a general rule, the effects of causes are far more accessible to our study than the causes of effects, it is natural to think that this method has a much greater chance of proving successful than the former.

"The method now under consideration is called the Empirical Method, and in order to estimate it fairly we must suppose it to be completely, not incompletely, empirical. We must exclude from it everything which partakes of the nature not of an experimental but of a deductive operation. If, for instance, we try experiments with mercury upon a person in health, in order to ascertain the general laws of its action upon the human body, and then reason from these laws to determine how it will act upon persons affected with a particular disease, this may be a really effectual method, but is deduction. The experimental method does not derive the law of a complex case from the simpler laws which conspire to produce it, but makes its experiments directly upon the complex case. We must make entire abstraction of all knowledge of the simpler tendencies, the *modi operandi* of mercury in detail. Our experimentation must aim at obtaining a direct answer to a specific question: Does or does not mercury tend to cure the particular disease?

"Let us see, therefore, how far the case admits of the observance of these rules of experimentation, which it is found necessary to observe in other cases. When we devise an experiment to ascertain the effect of a given agent, there are certain precautions which we never, if we can help it, omit. In the first place we introduce the agent into the

midst of a set of circumstances which we have exactly ascertained. It need hardly be remarked how far this condition is from being realized in any case connected with the phenomena of life: how far we are from knowing what are all the circumstances which pre-exist in any instance in which mercury is administered to a living being. This difficulty, however, though insuperable in most cases, may not be so in all. There are sometimes (though I should think never in physiology) concurrences of many causes, in which we yet know accurately what the causes are. But when we have got clear of this obstacle, we encounter another still more serious. In other cases, when we intend to try an experiment, we do not esteem it enough that there be no circumstances in the case, the presence of which is unknown to us; we require also that none of the circumstances which we do know, shall have effects susceptible of being confounded with those of the agent whose properties we wish to study.

"We take the utmost pains to exclude all causes capable of composition with the given cause; or if forced to let in any such causes, we take care to make them such that we can compute and allow for their influence; so that those effects of the given cause may, after the subduction of the other effects, be apparent as a residual phenomenon.

"These precautions are inapplicable to such cases as we are now considering. The mercury of our experiment being tried with an unknown multitude (or even let it be a known multitude) of other influencing circumstances, the mere fact of their being influencing circumstances implies that they disguised the effects of the mercury, and preclude us from knowing whether they have any effect or not. Unless we already know what or how much is owing to every other circumstance (that is, unless we suppose the very problem solved which we are considering the means of solving), we cannot tell that the other circumstances may not have produced the whole of the effect, independently, or even in

spite of the mercury. The Method of Difference in the ordinary mode of its use, namely, by comparing the state of things following the experiment with the state which preceded it, is thus, in the case of intermixed effects, entirely unavailing; because other causes than that whose effect we are seeking to determine have been operating during the transition. As for the other mode of employing the method of differences, namely, by comparing not the same case at two different periods, but different cases; this, in the general instance, is quite chimerical. In phenomena so complicated it is questionable if two cases similar in all respects but one ever occured; and were they to occur, we could not possibly know that they were so exactly similar.

"Anything like a scientific use of the method of experiment in these complicated cases is therefore out of the question. We can in the most favourable cases only discover by a succession of trials that a certain cause is very often followed by a certain effect. For, in one of these conjoint effects, the portion which is determined by any one of the influencing agents is generally, as we before remarked, but small. And it must be a more potent cause than most, if even the tendency which it really exerts is not thwarted by other tendencies in nearly as many cases as it is fulfilled."

In chapter xi., on "The Deductive Method," he adds—"The mode of investigating which, from the proved inapplicability of direct methods of observation and experiment, remains to us as the main source of the knowledge which we possess or can acquire respecting the conditions and laws of recurrence of the more complex phenomena, is called, in its most general expression, the Deductive Method; and consists of three operations, the first one of direct induction, the second of ratiocination, and the third of verification. The problem of the deductive method is to find the law of an effect from the laws of the different tendencies of which it is the joint result."

Thus, when in diseases such as syphilis, glanders, measles, variola, and other so-called blood-poisons, we desire to treat deductively, we should first examine what it is that all of these diseases have in common, and should find, perhaps, that there appeared to be a certain animal poison, giving rise to a febrile condition in some cases, or to an eruption of the skin without fever in others. We should, by the deductive method, endeavour to discover what are the substances which in health support the system without irritating it; what foods are most easily assimilated; what stimulants least noxious; what other means there are for allowing all the functions of the economy to act with their fullest vigour, so as to eliminate the poison. Had we experimentalized largely with mercury on the healthy body, we might have discovered that it had some power of eliminating poison from the body by means of the urine, the fæces, the sweat, or by the liver or saliva. We should, by the deductive method, find what the action of mercury is upon the healthy body in another point of view, viz., whether it is not invariably followed by bad results, such as destruction of the appetite, diarrhœa, lowering of the vitality of the blood, producing anœmia, and often causing dropsy when carried far; whether it did not in healthy individuals tend to produce nodes on the bones, iritis, or caries of the bones, as has been asserted by many observers. When we had settled these questions to our satisfaction, then, and not till then, it appears to me, should we be justified in using, according to the deductive method, a metal which has obtained so bad a reputation not only out of the ranks of the profession but even very extensively among some of its most eminent writers, to the treatment of diseases such as syphilis, variola, measles, or other poisoned conditions of the economy.

Dr. Adams, the learned translator of the works of Hippocrates, in speaking of the treatment of inflammation by calomel and opium, remarks: "The experience of some

thirty years would seem to decide in its favour, but how often have certain methods of treatment in other cases obtained the sanction of professional favour for a much longer period, and yet, in the end, been abandoned as positively injurious. In my young days, I knew physicians of the highest reputation who administered these medicines in scrofula, in cancer—in every case. One cannot think of the change of professional opinions on the mercurial treatment of syphilis since the days of Hunter without the most painful feelings of mistrust in all modes of treatment, when we cannot recognize some reasonable bond of connection between the remedy applied and the effects produced, or when long experience and analogy are in favour of them, and when the judgment runs no risk of being imposed upon by fallacious appearances and collateral circumstances. In a word, who does not feel disposed to recur constantly to the great truth proclaimed by our author—'Experience is fallacious, and judgment difficult?'"

Such are the opinions of Mr. J. S. Mill; and, corroborated by the above-quoted sentences, they may suggest to many a zealous mercurialist that his faith in that remedy has been derived from, to say the least, very doubtful evidence.

CHAPTER II.

MERCURY AS A REMEDY IN DISEASE IN GENERAL.

The chologogue and purgative effects of mercury have been the properties for which the drug has been most praised; but it has, in the eyes of its admirers, a whole host of virtues. Practitioners employ it in acute inflammation and congestion of the liver and kidneys; in acute inflammation of any part whether of the lungs, peritoneum, uterus, pleura, &c. In acute rheumatism it is a favourite remedy for pericarditis and endocarditis; in dropsy, connected with cirrhosis of the liver or disease of the heart, it is used as an absorbent. This represents, as far as I know, the cases in which mercury is administered as a therapeutic agent in London.

In Paris the virtues of mercury do not now seem to be so generally recognised as in London, as all know who have attended hospital practice in that city.

It is there employed in some rare cases of peritonitis or in iritis, and in some herpetic affections, and almost alone in these cases, with the exception of syphilis, in which, according to M. Ricord and his school, the mineral is a specific.

In Dublin the use of mercurials is very general; and there is scarcely a pathological state in which the value of the drug is not thought to be perceived. Mercury, in some of the hospital staffs in Dublin, when I visited that city, was profusely exhibited, by some practitioners, in almost every disease; and a friend of mine, resident in a Dublin Hospital,

remarked that he was frequently quite ashamed to enter the wards, as so many of the patients were suffering from salivation.

In the Edinburgh school, again, mercurials now hold but a slender footing, and in the practice of some of the leading physicians and surgeons, seem reduced to the function of acting as a purge, and by some to the treatment of iritis, when of the sthenic form.

Already, however, in London, we have symptoms of a revolt against the routine practice of mercurial treatment. This is so general among some practitioners, that I remember some years ago, while conversing with a general practitioner, his informing me that he scarcely ever wrote a prescription for any case which did not contain some form of what, in his opinion, was the most invaluable of drugs. I have also heard a gentleman, at present lecturer in one of our hospitals, declare his faith in mercury to be so great, that he believed he could accomplish almost all the curative effects demanded in disease, were he given mercury and opium alone for his therapeutic agents. Before going further, then, it may be as well to inquire whether some evidence cannot be adduced to prove that mercurials are sometimes injurious in the very diseases they are given to cure.

It is my own conviction that I have seen many deaths, and a large amount of damage caused by the administration of mercury; and the writings of all who have noticed this subject give but too certain evidence that these destructive agencies are far less extended now than they were in the good old times of Hunter, Abernethy, Colles, &c., when the so-called "Heroic" treatment of diseases was in fashion.

The following quotations from various authors illustrate the injurious effects which so frequently attend the use of mercurials:—

Dr. Copland, in his *Dictionary*, part 2. vol. ii., p. 1346, says: "The worst symptoms which have been so frequently

ascribed to local manifestations of syphilis, especially affections of the periosteum, bones, &c., have been demonstrated by me to have been the results of excessive doses of calomel alone, very commonly given in hot countries, during the early part of the present century, for the cure of fevers. At one period it was attempted to bring the system under the influence of mercury in these maladies, but the practice very generally failed; and, in some of these cases in which recovery took place, disease of the periosteum was the result.

"Some years ago a gentleman, trading to the west coast of Africa, was attacked by fever and was treated by calomel, given in scruple doses three or four times a day. He recovered from the fever and returned to England. I was called to see him soon afterwards, and found him completely hemiplegic, with two large swellings of the pericranium."

"I was called to a lady similarly affected to the above case, after the prolonged use of mercury for hepatic disease."

Mr. Skey, *On Venereal Diseases*, p. 88, says: "It is constantly urged by the advocates for mercury, that similar diseases to the above do not follow the large administration of the drug, when employed for the cure of other diseases, and I grant that they do not frequently follow it; but I assert most positively that they occasionally do follow it, and were it administered under the same forms and circumstances they would succeed to it much more frequently." In page 89 he says: "Who ever saw phagedaena, consequent on gonorrhœa, simply and negatively treated, or not treated at all. On the other hand, cases are by no means uncommon of phagedaenic disease (I mean sore throat, blotches, ulcers on all parts of the body, with pain and aching in the bones), occurring after gonorrhœa treated with mercury."

Page 90, he relates the case of a woman who had been salivated for liver complaint, and afterwards suffered from ulceration in various parts.

In page 104 he relates four cases of phagedaena occurring

in persons who had been salivated, according to John Hunter's method, for simple gonorrhœa.

In page 318 he says: "How many examples of health and prospects blighted through personal disfigurements and mutilations, severe and protracted suffering from rheumatism in every form, dropsy, latent and pulmonary disease fanned into activity, phagedaena itself, with a horrid catalogue of ulcers and necroses from the use of mercury indiscreetly."

In *Hennen's Military Surgery*, p. 516, he says, "That the phthisical tendency is greatly aggravated (by the use of mercury) and often evolved by it. That profuse hemorrhage from the lungs is often produced by it. That it gives rise to the most aggravated and distressing forms of dyspepsia. That dropsy and affections of the urinary organs are often produced by its abuse. That, although a powerful remedy in hepatic disease, it often gives rise to jaundice. That its effects on the nervous system are often severe and complicated, appearing under the form of pains in the head, insomnolency, and that state of the disease named by Pearson Erythismus, affecting the brain, heart and diaphragm, and indicated by pains, shrinking, and a peculiar appearance of distress in the countenance, anxiety, partial or universal palpitation of the heart; sighing and difficult respiration, and not unfrequently by sudden death on an attempt to move. That the maniacal tendency is peculiarly aggravated by it. In some instances different members of the same family have become furious during mercurial courses. Nor has it been in the instances of mania alone, that the family disposition to be injured by it has manifested itself; there seems to be a hereditary constitution, with which it uniformly disagrees, producing all its most virulent effects."

"Have we not" says a writer in the *Journal des Progres des Sciences Medicales*, 1827, p. 102, "for a long time past regarded a great number of pneumonias and cardites; do we not justly regard many gastrites as a consequence of the

use of mercury, not to speak of mania, alopecia, and of a thickening and peculiar alteration of the face? M. Cullerier thinks that many amauroses are the result of the abuse of mercury."

Liston, in his *Elements of Surgery*, 1840, says: "There is no doubt that extensive, deep, and sloughing ulcers of the throat are produced by mercury . . . It has been asserted that nodes do not occur when mercury has been given for the liver or other complaints; but they do form, under these circumstances, though not so frequently as when the medicine has been exhibited during venereal symptoms."

Samuel Cooper says: "When I was apprentice in St. Bartholomew's Hospital, most of the venereal patients of that establishment were seen with their ulcerated tongues hanging out of their mouths, their fauces prodigiously swelled, and their saliva flowing out in streams."

Dr. Bright mentions a case where five grains of calomel placed on the tongue in apoplexy, and not washed down, excited, in three hours, violent salivation.

Dr. Ramsbotham, as quoted by Dr. Copland, article "Poisons," p. 413, mentions a case where fifteen grains of blue pill, five grains each night, produced fatal salivation. Dr. Christison says that "two drachms of mercurial ointment applied externally, caused violent ptyalism and death in four days." In 1858 I saw a woman, age 65, undergo a slight surgical operation. After the operation she took a grain of calomel three times a day on account of some symptoms, which the surgeon thought indicated this treatment. The consequence was that salivation ensued, and the woman died in three days. The same year another case came under my observation. A man, age 40, exhausted with the toil of providing for the wants of a numerous family, was put under similar treatment for a tumour in the region of the spleen. Salivation ensued, and the man died rapidly from exhaustion. And yet so rooted are mercurialists in the belief

that they can use this drug with perfect impunity, that Mr. De Meric remarks, in his work on Syphilis: "I have given the iodide of mercury in hundreds of cases, in the Royal Free and German Hospitals, to out-patients, who do not take especial care of themselves, and I do not recollect any case where the metal has caused any unpleasant symptoms;" and again, in case 163, "I have given the iodide of mercury for the last four years, at various intervals, without doing the patient any harm." It must be remembered that the action of mercury is not always seen immediately. It goes on accumulating in the system, and has been known to produce salivation long after its disuse. Some case of gangrene in the mouth in children, which I have seen, I have attributed to the routine practice, which is adhered to by many practitioners, of treating almost all the diseases of childhood by larger or smaller doses of mercury and chalk. But perhaps the most ordinary sequel of a course of mercury, such as that recommended by M. Ricord and his school, is phthisis. At the end of this work will be seen the evidence of M. Diday, of Lyons, on this point. I have, myself, frequently seen patients with tubercles who had no family history of the disease, and who had not lived unhealthy lives; but had taken large quantities of mercury for syphilis.

A few examples of the extreme change of opinion which has taken place with regard to the necessity for administering mercury, may furnish food for thought. We are all of us familiar with the treatment of gonorrhœa, which John Hunter recommended, namely, by affecting the constitution to prevent infection. But all who have tried or seen tried the simple treatment of weak injections of sulphate of zinc, recommended by Dr. Graves, of Dublin, who mentions in his work, that he has not for many years, in uncomplicated cases, used any internal remedy for this complaint, must have found how satisfactory this practice is. Recently Mr. Weeden Cooke, in his work on the same subject, recommends solution of the

chloride of zinc, and shows that the only danger in the use of injections is when they are used during the stage of acute inflammation, when alkaline drinks ought to be substituted. Should orchitis supervene, instead of calomel and opium and antimony, &c., this scientific surgeon orders physiological rest of the parts, with a sleeping draught at night and warm fomentations.

I have frequently seen the dangerous operation for strangulated hernia, complicated by the after pouring in of calomel and opium for the slightest symptoms of peritonitis. Now, I have lately seen that splendid triumph of modern British surgery, ovariotomy, in several cases, and have watched the after treatment of one of the most successful of operators—Mr. Spencer Wells. As far as I could ascertain from that gentleman, calomel is not administered by him after the operation; and to this, among other things, I am tempted to attribute, in some degree, his extraordinary success. Mr. W. Allingham, F.R.C.S., has informed me that the administration of calomel and opium is now entirely abandoned in traumatic cases by many of the leading surgeons of London.

Not to leave the domain of surgery, I may shortly refer to the change of opinion which has recently taken place with regard to the treatment of iritis by mercury, bleeding, &c. It has frequently happened to me to see iritis in patients who have been sent to the ophthalmic surgeon by some practitioner who has been treating syphilis by means of mercury. In such cases, at least, surely a further dose of the drug cannot be indicated. But more positive proofs for the non-necessity of mercurial treatment have been furnished by Mr. Hugh Carmichael, Dr. H. Williams, of Boston, and very recently by Mr. Zachariah Laurence. The facts related by Mr. Hugh Carmichael clearly prove that many cases of syphilitic iritis have recovered most completely under doses of turpentine. The dose which Mr. Hugh Carmichael used was a drachm of

oil of turpentine in almond emulsion, three or four times a day. He states that this has very seldom failed to effect a cure of syphilitic iritis, an amendment being perceptible immediately, and the cure taking place in about eleven days.

Professor Hughes Bennett, in his *Clinical Medicine*, p. 288, says: "As to mercurials, the confident belief in their power of causing absorption of lymph by operating on the blood, is not only opposed to sound theory, as formerly explained with regard to blood-letting, but is not supported by that experience which has been so confidently appealed to in its favour. They have been most praised in the treatment of serous membranes and of iritis. But more careful observation has demonstrated that the moment these diseases are treated without mercury, they are uninfluenced (except in certain cases for the worse) by the drug. Of 64 cases of iritis of every degree of severity, treated without mercury by Dr. H. Williams, of Boston, the results, with four exceptions, which were neglected at the commencement, were good."

Mr. Zachariah Laurence, in an opening address in the North London Society, of 1863, p. 9, says: "The second group of ophthalmias embraces the inflammations of the deeper structures of the eye. They are, as a rule, of a much more grave and dangerous character than those of the preceding group. These deep-seated inflammations are commonly treated by depletion, counter-irritation, and mercurialization. I treat them by the internal administration of opium, in combination with sedative local applications.

"This method was, as far as I know, first systematically investigated, and practised by myself, in 1859. Since then, I have published, in the *Edinburgh Medical Journal*, December, 1862, a complete memoir on the subject, exhibiting the histories of 29 cases thus treated, 23 of which were cured."

For what diseases has not salivation been recommended? For phthisis, in the first place, as a counter-irritation, on the

principle that two diseased actions could not go on at once. Many practitioners are still in the habit of using mercury in cases of bronchitis, pneumonia, &c. But all who are acquainted with the observations on this matter, made by Dr. Hughes Bennett, and physicians at Vienna, must be convinced that such diseases do far better when treated rationally by salines, &c. In his *Clinical Medicine*, Dr. Bennett has this remark: "In the same way some pneumonic patients may escape any evil from mercurial salivation; but that this is ever beneficial or shortens the disease, has not been shown." Such appears also to have been the conviction of the late Dr. Todd, of London. For my own part I have completely failed to perceive any benefit obtained by the exhibition of this mineral in bronchitis or pneumonia, whilst, in numerous instances, I have seen salivation employed, and its accompanying nausea and disinclination for food; a symptom, which all accustomed to treat disease, I think, will agree, is in general a condition which we are not anxious to produce. The real battle-fields, however, of the mercurialists and the physiological school appear to me to lie in the following diseases:—rheumatism, pericarditis, peritonitis, acute hydrocephalus, pleurisy, croup, and syphilis.

I confess, that I am, notwithstanding the high authority of Dr. Fuller and others, convinced with Dr. Habershon, &c., from the cases of pericarditis which I have seen treated by calomel and opium, that patients very frequently die while under its influence; that the disease goes on in many instances, I think in all, quite unchecked by it; and that there has appeared to me to be much harm done by the salivation, in many cases, in protracting the period of recovery and producing anœmia.

In some *Clinical and Pathological Notes*, by W. T. Gairdner, M.D., Physician to the Royal Infirmary of Edinburgh, 1859, the author says, page 32: "For many years past I have not heard that a physician has used a lancet in

rheumatic pericarditis; and, at all events, I am sure that the lancet is used very sparingly by the profession in general, and has been so for many years past. But I am not so sure about mercury. Undoubtedly the use of this treacherous mineral is now marked with very just caution, and we almost never hear of those bad consequences which are the result of excessive mercurial action. But is its use—as some even now use it—expedient or necessary? And in rheumatic pericarditis, in particular, would patients recover better or worse were no mercury exhibited? Without altogether holding the question as decided, I am strongly inclined to answer both of these questions in a sense unfavourable to mercury.

"My own use of the much-vaunted and much-abused remedy has been rather experimental, than founded on conviction.

"The reserve with which I have used the remedy, which has so much testimony in its favour, may appear to deserve some explanation. The truth is that, as a student, it was my fortune to serve in the hospital under a very bold mercurialist—a man of the most humane character and of the most entire conscientiousness, who proved his sincerity in regard to this subject by undergoing in his own person three distinct salivations in the course of his fatal illness.

"Under this gentleman's directions I learned much that was valuable; and, among the rest, something in regard to the bad effects of mercury in rheumatic pericarditis. But I have never succeeded in learning anything as to its good effects, though on many occasions afterwards I have administered it with such caution as my knowledge of it inspired.

"To conclude, I believe the precepts of the safe treatment of pericarditis to be as follows:—1. To make large allowance for the insignificant and spontaneously healing class of cases, revealed more by physical signs than symptoms, and to regard these as demanding little active treatment. 2. To

consider rheumatic pericarditis in general as a disease susceptible, to a great extent, of cure under mild, palliative, local remedies and fitting constitutional treatment. 3. To hold the constitutional treatment as subordinate to that of the disease with which the pericarditis is associated."

Dr. Hughes Bennett, speaking of Pericarditis, says: "It has been supposed that the action of mercury has an especial tendency to favour absorption in cases of pericarditis, not only of the serum, but of the organic lymph itself. I have now given it in many cases, but could never satisfy myself that it had the slightest influence in forwarding or modifying the natural changes which occur."

With regard to pleurisy, I can only say that I entertain the strongest repugnance to the treatment of this disease by mercurials, which I have so frequently witnessed. Practitioners do not hesitate to give a grain of calomel three times a day, in the vain idea of checking the progress of the inflammation or promoting absorption of the effused fluid in cases where the whole of one side of the chest is filled with fluid, and where the only hope for the patient's life has appeared to me to lie in letting out a portion of the fluid, which threatens suffocation, and keeping up the strength by food and stimuli.

Dr. Hughes Bennett remarks, in his *Clinical Medicine*, p. 617: "By some calomel is considered to be directly indicated as a means of favouring absorption from the serous cavity; and although I have frequently seen the drug employed for this purpose, I have not met with a single instance where its good effects have been unequivocal."

As far as concerns the treatment of acute hydrocephalus by means of calomel it has been much praised. For my own part, I do not hesitate to admit that I have been most unfortunate in my treatment of this fatal disorder, and that, when I find a child which, after vomiting and convulsions, falls into coma, with slowness of pulse, irregular breathing, and

obstinate constipation, I have began to look upon such a case as beyond the reach of art, and as certain to prove fatal within a short period.

Those who describe this form of encephalo-meningitis in children as curable, have appeared to me, in the cases they have cited, frequently to have seen a cure of the disease by means of calomel when the child was merely suffering from the much less fatal disease of convulsions, or from the ill-recognized typhoid fever of infants, so well described by Dr. Jenner, and frequently denominated infantile remittent fever.

With the following quotation from Dr. Habershon's work on the *Injurious Effects of Mercury in the Treatment of Disease,* I heartily sympathize: "The reckless use of such powerful means is, I believe, one reason of the disrespect, if not contempt, with which many regard the practice of medicine; and at the present day this cause, as much as any other, has fostered those false notions and modes of practice which have so successfully confronted the scientific exercise of medical skill. The internal use of mercury is regarded by many persons as an essential element in the prescription of a physician, and to avoid it, they seek out those whose interest it is to encourage these ideas; and, most truly, the remembrance of the miseries of mercurialization, and the protracted months of salivation consequent upon it, is an effectual recommendation to treatment which allows disease generally to take its own course."

I may add to this observation of Dr. Habershon my conviction that, if we hope soon to have medical science less afflicted with the malady of heresies, our only resource for the future must lie in less heroic treatment and more careful diagnosis and dietetic therapeutics. My own private opinion is, that were mercury left out of the forthcoming Pharmacopœia, as an *internal* remedy, it would have the effect of bringing back almost all schismatics into the orthodox ranks again.

To hear some practitioners speak, one would imagine that we were still among the days of belief in magic, when we hear narrated the wonderful but occult properties ascribed to hydrargyrum cum cretâ. According to its admirers, it not only purges, but improves the blood and all the secretions: they give it when a child has diarrhœa, or is constipated, when in convulsions, or when comatose, in strumous affections and ophthalmia, in croup—in short, in everything.

But I cannot help thinking, that the necessity for evidence is becoming every day more pressing among practitioners; and that the late improvements in the means of diagnosis, &c., have made men less inclined to be overborne by the dictum of a Hunter or an Abernethy, without some clear grounds for their opinion.

CHAPTER III.

ANIMAL POISONS.

The question of specificity of diseases has often been debated; but seems, at present, to be pretty well understood. Broussais, who believed that all diseases were but varieties of inflammation, and all mere examples of greater or less irritation, has now few followers. Whatever men may think as to the origin of the various specific animal poisons, such as variola, measles, scarlatina, glanders, and malignant pustule, it is admitted by all that these diseases are now entirely conveyed by contagion, and that there is no proof of their arising frequently from non-hygienic influences. Variola is the most well marked, perhaps, of all these contagious disorders, and seems to explain by analogy all the other blood-poisons.

A well-marked instance of blood-poisoning may be noticed in the case of the malignant pustule, which appears more frequently in France than in England. A butcher, who has been skinning a sheep affected with a peculiar disease, perceives a small lump arise on his hand, not by any means painful but rather tickling, in fact it appears but a trifle. But, in a short time, there appears an erysipelatous swelling of the part, which gradually invades the whole limb; the axillary glands swell, and the symptoms progress onwards to delirium and infallible death.

Another case of blood-poisoning is to be witnessed in dissection wounds, a remarkable instance of which was published by me in the *Medical Times and Gazette*, of February,

1863. Mr. Lowne, of the Farringdon Dispensary, pricked his finger with a needle, whilst making a *post-mortem* examination of a young woman, who died of phthisis, and in whom symptoms of low peritonitis supervened shortly previous to dissolution.

He continued without any ailment for twenty-one days, and then, and not until then, a pustule formed on the middle finger of his right hand, which was followed by a swelling of that hand, affection of the absorbents of the right arm and axilla, and subsequent abscess also of the left hand. The febrile disturbance was well marked, and there were frequent rigors during the disease, so as to alarm us as to the danger of pyæmia; but, fortunately, after the abscess in the hand had been opened for some time, and thus the poison had probably been eliminated, the patient gradually recovered.

Again, let us take an example of the two diseases, glanders and farcy. A man, age 22, entered Mr. Quain's ward, in University College Hospital, January 17, 1862. His trade was that of a harness-maker. A fortnight before entering the hospital he remarked a swelling and gathering in the ring finger of his right hand, after dressing a diseased horse. This abscess soon spread until it involved the finger, hand, and wrist in a bluish-purple swelling. The hand became œdematous, and the cuticle of the palm became quite separated from the derma. There were several specific pustules on the posterior surface of the hand. When the cuticle was removed the parts beneath looked mortified. Patient looked extremely ill. He was covered with a cold sweat, and was extremely pallid. To have good diet and stimulants. The hand was opened by a long incision. He went on gradually becoming worse, and on January 23 he spent a disturbed night; he had diarrhœa and looked extremely ill; a dark coloured discharge then appeared from his nostrils and mouth, and specific pustules over the greater part of his body. He died next morning.

The following case of farcy has seemed interesting to me from its similarity to the cases of syphilis we often see when treated with mercury; it is from Dr. Atlee's notes, published at Philadelphia, 1855:—

"March 1st, 1854. A patient, with double lachrymal fistula, entered M. Nelaton's clinique. This gentleman, after examination, was tempted to ascribe the affection to syphilis. There were ulcers on the palate. On taking his history, it was found that the young man had been caring some horses, and one of them was sick and concealed from the police. It was then 14 months since he had left off attending on horses, and his affection having commenced six months before, this made out eight months to have elapsed without any manifestations of the disease. The patient became gradually but slowly worse. M. Nelaton said the case was one of chronic glanders. It is upon cases such as these that we can well understand that M. Ricord has founded his dictum that the epidemic, which broke out at the close of the 15th century, was one of farcy or chronic glanders. The time of incubation in this case is very remarkable, being eight months."

In small-pox the incubation may be as long as twenty-one days, in cases of natural contagion; but the inoculated case has a more determinate and shorter duration, namely, nine days. After the poison of variola has entered the blood, a period of fourteen days or thereabout usually passes without any decided symptom. Then there come on pains in the lumbar region, and forty-eight hours afterwards the eruption breaks out. The testes sometimes swell in the course of the eruption, and various other well-known symptoms appear. For tertiary symptoms of variola we have abscesses in various parts of the body, and sometimes dropsy in the severe form of the disease. Ophthalmias also are frequent sequelæ of small-pox. In former days, patients were bled, blistered, &c., in this disease, and I am convinced that had they been sali-

vated or treated with a six months' course of iodide of mercury, to push the disease out of the system, there would be a host of tertiary symptoms in variola not yet described.

In scarlatina, the period of incubation is sometimes from five up to twenty-five days. All of us are well acquainted with the tertiary accidents in scarlatina, the dropsies, the caries and ulcerations which it frequently leaves behind, and yet I do not find any authorities to recommend salivation or mild mercurials in this disease. If they did, and it is by no means impossible that some one may, I should expect to find the tertiary symptoms of scarlatina even more destructive than they now are, and much more common.

The eruption of measles takes place from five to eight days after contagion. The tertiary symptoms of this disease are certain ophthalmias, and also the catarrh which it frequently leaves behind it, and which is so often the precursor of tubercle in the lungs or elsewhere. No person advises, however, the administration of mild mercurials or salivation in this blood-poison.

Perhaps the only specific poison which admits of being treated by a substance which almost seems to act after the manner of an antidote, is that of malaria; but there is but little analogy between the contagious nature of variola, measles, syphilis, &c., and the non-contagious ague. And, although we cannot, as yet, clearly make out the action of quinine upon ague, we appear to be discovering that it acts generally as a nerve-tonic and antiperiodic in many cases of nervous pain and exhaustion, and we may thus, in time, refer this almost solitary case of specific action to a more general law of its action on the system.

Besides which, one important remark must be made, viz., that quinine is not destructive to the healthy individual, as are mercurials; and hence we need not fear, in exhibiting it, to do much more harm than good.

M. Trousseau remarks upon this subject in his *Clinique*

Medicale, vol. i., p. 241: "On the other hand the list of specific remedies would be very soon exhausted; for the specific nature of a disease does not indicate the existence of a specific remedy; there are, in fact, cases where medicines boasted as specifics not only fail, but aggravate the disease they are said to cure. In such cases we ought to abandon them, and have recourse to the medicines called rational; that is to say, to those which answer to the indication of the treatment of symptoms." To illustrate this observation, M. Trousseau relates the case of a woman who had been treated, shortly before, in his wards for syphilis by mercury "given methodically and with the greatest prudence," and yet had fallen into a profound state of cachectic anœmia; and, he adds, that in other cases we find such results as diarrhœa, and febrile symptoms to supervene under this treatment.

The theory, then, of specific diseases, of which the foregoing have been some of the most typical examples, is that there is a poisoned condition of the circulation; and, as in the case of dissection wounds, &c., abscesses arise, or in measles, variola, &c., eruptions appear, these are considered to be efforts of the system to eliminate the poison by means of purulent depôts or eruptions on the surface. In some cases the poison is too virulent to be thus got rid of, and the patient dies. It would also appear, from the experiments of Dr. Hughes Bennett and others, that it is the presence of a poison in the blood which causes the abscesses in the liver, joints, &c., in pyæmia; and not, as has been generally supposed, the presence of pus in the blood. He would, indeed, be a strong votary of the magic effects of mercury, who should profess to try the effects of salivation or mild mercurials in this disease.

We have another example of blood-poisoning in the case of true cancer. Almost all pathologists now agree, that this disease is, from the first, a blood-poison; and, consequent on this view of the pathology, has been the abandonment of all

empirical treatment, such as salivation, iodine, &c., and nursing the patient by the rational or deductive method of sustaining the bodily powers.

It has recently been asserted by Mr. Weeden Cooke, that the eruption in syphilis bears to the primary sore precisely the same analogy that the variolous eruption bears to the inoculated pustule. He considers that this eruption, if the system be supported whilst undergoing the skin disease, would carry out of the system all the injurious part of the contagion, as happens in variola, measles, &c., merely leaving behind it a diathetic state, such as is left by the other exanthemata, which has no other marked influence on the system, save in preserving the individual from the attacks of any after contagion. A similar theory is held by Professor Hughes Bennett and others.

CHAPTER IV.

HISTORY OF THE TREATMENT OF SYPHILIS BEFORE THE PENINSULAR WAR.

It must be observed that until lately the pathology of syphilis has been by no means so well known as that of its more fatal analogues. Thus, none of the ancient writers on medicine appear clearly to have discovered that there was any relation between the primary ulcers and the secondary skin disease, sore throat, &c, although primary sores were well known to them. To prove that Celsus was acquainted with these, I shall quote his description from book vi, chapter xviii: "The next diseases are those which affect the private parts, the nomenclature of which among the Greeks is not only tolerable but now fully sanctioned by practice, for they are fully employed in almost every volume, work, or treatise of the physicians. But with us Romans these terms are certainly filthy, and never employed by any one who has a proper regard for modesty in language; therefore it is evident, from this explanation, that there is no small difficulty in maintaining at the same time a delicacy of expression while delivering the precepts of art. Not that this circumstance ought to deter me from treating of them; first, because it is my intention to comprehend everything in this work which I have found to be conducive to health; in the next place, because any person ought to know the treatment of these maladies, which are so reluctantly exposed to the view of another.

"Therefore, if the penis be swollen from inflammation, the prepuce cannot be drawn back, there is phymosis, or forward paraphymosis. The part must be freely fomented, &c. . . . . If the foreskin cannot be thus reduced, the superior surface must be divided gently with a scalpel. Now, whether the swelling has been overcome by the latter method, or by the former, ulcers will be found behind the posterior parts of the prepuce, or on the gland: these ulcers will be either clean and dry, or moist and purulent. . . . . And the same composition (wine, turpentine, &c.) is adapted for ulcers on the tonsils, and in the mouth and nostrils.

"Not unfrequently the penis has been destroyed to such a degree beneath the prepuce by these ulcers, that the gland has fallen off. In such cases, the prepuce itself must be removed by circumcision.

"Tubercular warts also arise about the glands. These are to be burnt either with caustics or by the hot iron. . . . .

"These described are not cankers, to which latter all parts of the body are liable; but more particularly ulcers of the genitals. The disease begins with a blackening; and should this ulcerate the prepuce, a probe must be passed under it; afterwards the edges are to be seized by the forceps, and then the diseased part must be cut away, &c.

"There is also a species of ulcer found there sometimes, which the Greeks call phagedæna. Here no time must be lost; but the same caustic remedies must be immediately applied; and if they avail not, the part must be burnt by the actual cautery."

On reading the above quotation from Celsus, we are tempted to observe, that there is not the least difference between the ulcers on the penis therein described, and those with which we are now familiar. We have phymosis, and, on laying open the prepuce, we are told that ulcers are sometimes found, at one time phagedænic in character, at other times not so.

Again, Celsus speaks, in the same passage, of ulcers on the tonsils and uvula. Does he show by this, that he had observed the frequent relation of co-existence between ulcers on the penis and in the latter situation? I am inclined to think so, since the phagedænic sore is frequently accompanied by ulcers of the fauces. One reason, it appears to me, for the non-recognition of the connection of these sores and the secondary eruptions by Celsus, may be found in the fact, that the practice seems to have been rational, and baths, &c., were used; whilst that dangerous drug, mercury, had not yet been introduced as a so-called specific for the disease. Hence the secondary symptoms, which many authors, and M. Ricord among others, believes then to have existed, under the name of leprosy, were probably, in that warm climate, cured as readily as we shall presently see they now are among the convicts in Gibraltar, where cleanliness and careful diet, with topical applications, are employed.

The commencement of the quotation from Celsus shows also one great cause of the obscurity which hangs over the natural history of syphilis. Ever since this matter has been discussed, there has been a childish idea prevalent, that some diseases are more unclean than others, as Celsus remarks; and hence, in a subject already quite difficult enough, as is indeed every department of the healing art, we have superadded a prejudice, which, like a thick veil enshrouded the subject, and rendered it impossible to get a clear view of it.

M. Ricord, in his *Lettres sur la Syphilis*, says: "What strikes one who studies history without preconceived ideas, is to meet among the authors of antiquity—and these before the fifteenth century—perfect descriptions of the disease we now know, and which we place among primary symptoms. Could we now give a better table than Celsus? Galen arrived at tracing the connection between the throat and the genital organs. What is wanting to the early authors is the knowledge of the affiliations of the diseases; of the relations and

origin of the primary symptoms, and of the constitutional ones. Is the leprosy of the modern Greeks or Arabs like the ancient leprosy? By no means. Leprosy in those times was frequently contagious, and frequently communicated by sexual intercourse."

M. Ricord concludes these remarks by observing that the great epidemic of the year 1493, or thereabouts, seems to have been more like farcy than syphilis, and he adds: "I think, with Voltaire, that syphilis is like the fine arts, we know not when either arose."

Dr. Meryon, in his *History of Medicine,* and other authors take a different view of the origin of the disease, and connect it with the discovery of America by Columbus. Sydenham and Copland ascribe its origin to the North of Africa, where a complaint called *yaws* exists, with some analogy to the mercurio-syphilitic disease. The following is Dr. Meryon's account of the introduction of mercury into the treatment of the disease: "In some parts of Spain, where the fluxing of metals was practised, it was observed that the workmen who were engaged in the operation, if attacked by the disease, regained their health without taking any medicine at all; and thus it occurred that mercury was by chance discovered to be a specific; but for which the disease might have been still unconquerable. Mercury was used externally as early as 1497, but Paracelsus first gave it internally, and upbraided physicians for depending on guiacum, &c. . . . . It may be quoted, however, as a notable example of the benefit which the study of medicine has conferred upon mankind; for, just in proportion as the knowledge of its effects upon the organic tissues, and of the therapeutic action of the remedies employed against it have increased, the affection itself has diminished both in intensity and complexity."

The closing remarks of Dr. Meryon may recall to the mind of some of his readers the late dispute, concerning the

necessity for large bleeding in pneumonia. After the treatment of that complaint by Dr. H. Bennett and some Viennese physicians, had made clear to all capable of taking in evidence, which contradicts their practice, that large bleeding was by no means necessary in the disease, at once a remark was made that diseases had now lost their sthenic type, and that the present generation no longer required the heroic treatment which had so benefited their forefathers. The proposition, it is true, was everything but proved. Still, proof is not necessary for belief, and, consequently many have believed that diseases have changed their type. Perhaps so; at any rate we have got rid of large blood-letting in pneumonia; and, by whatever theory we arrived at this fortunate result does not so much signify. It is a remarkable fact, that the very nation of Spaniards, among whom, according to Dr. Meryon, the virtues of mercury were first discovered in syphilis, should have so abandoned this drug; for, as we shall hereafter read, in the words of Dr. Fergusson, the Portuguese physicians looked with perfect horror upon the disciples of John Hunter, Astruc, and others, when they saw the horrible mutilations caused by their mercurial inunctions, whilst their own patients, not being so heroically treated, presented no feature of gravity.

For my part, I should suggest to all who may change their opinions as to the value of mercury, to consider whether the following theory may not help them in doing so. Dr. Meryon, we can perceive, thinks that the cause of the comparative mildness of the disease in our days is attributable to the previous use of the specific, and perhaps some other author may go as far as to say that the drug has already modified the complaint so much, that it no longer needs such heroic treatment.

Should this lead to the dismissal of the specific, as the theory of Dr. Watson, &c., led to the abandonment of large blood-lettings in pneumonia, I, for one, shall be quite

content with the theory, even if not quite borne out by facts.

Mr. Syme, it is true, has another way of stating the case from that of Dr. Meryon. In his *Surgery*, 1842, he says: "It is now fully ascertained that the poison of the present day, though producing effects in all respects similar to those described as arising from syphilis, does not give rise to those dreadful consequences which have been just mentioned, when treated without mercury. The case may be tedious, and the skin, throat, or periosteum may be slightly affected; but none of the serious effects that used to be so much dreaded ever appear, and even the trivial ones just noticed comparatively seldom present themselves.

"We must therefore conclude, either that the violence of the poison is worn out; or that the effects formerly attributed to it, depended on the treatment. The latter of these opinions is supported by the fact, that secondary symptoms of the utmost severity, embittering the patient's existence, and ultimately destroying it, are still met with in the practice of those who employ mercury profusely and indiscriminately; and it is a curious circumstance, which cannot either be explained or denied, that this medicine produces these effects, more especially those in the bones, only in persons who are suffering from venereal ulceration of the genital organs."

Now, in this very different statement of the causes of an effect, that effect being the recognised mildness of syphilis in our days, as compared with the heroic days of Astruc and Hunter, we may recognise the extreme difficulty, which, as Mr. Mill remarks, lies in the way of the experimental method in the treatment of physiological questions.

The history of heroic drug therapeutics is but a tissue of assertions made by men of considerable daring, and also of great energy, such as Hunter, Abernethy, Ricord, &c. The mass of men are too lazy to examine the grounds for their

belief in the assertion of such eminent men, and prefer "jurare in verba magistri," instead of painfully and grudgingly examining every dictum which he utters.

Theophrastus Paracelsus, about the year 1570, is said to have, by his teachings, introduced the use of mercury and antimony into the profession. Astronomy and astrology, chemistry, therapeutics, and metaphysics succeed each other in his extensive writings, and I can only say, that, if we must attribute our first discovery of the internal virtues of mercury to Paracelsus, the present appears to me worthy of the donor.

The most voluminous writer upon the venereal disease in the 18th century is Astruc, who, in a treatise in nine books by John Astruc, physician to the King of France, about 1754, gives a most glowing description of the virtues of mercury in expelling the venereal poison from the body. In page 159 of this book he relates the case, however, of Ulrich Von Hutten, who had himself been salivated seven or eight times, and who thus describes the process:—"They anointed the arms and legs with a linament prepared of various medicines. There were some who anointed the back and neck, some likewise the temples and also the navel, whilst others again rubbed it all over the body, some once a day, others three or four times. The patients were shut up in a room, which was kept constantly and intensely hot, some twenty, others thirty days, and others still longer.

"He was hardly anointed, before he began to languish amazingly, and so great was the strength of the ointment, that it forced into the stomach whatever portion of the disease lay in the upper part of the body, and from thence to the brain, whence it was conveyed by the mouth and throat, and in so violent a manner, as to make the teeth drop out. The jaws, tongue, and palate in all of them were ulcerated, the gums swelled; the teeth became loose, the saliva dribbled incessantly from the mouth, and soon grew intolerably fœtid,

and so infected, that it tainted and polluted whatever it fell upon. The whole apartment stank, and the mode of cure was so hard to suffer, that a great many chose rather to die of the disease than submit to it. After all this there was hardly one in a hundred cured by it. The patients, for the most part, relapsed after a few days respite. I have seen many die in the middle of this cure. Others I have seen with the throat swelled up to the jaws, suffocated from the matter which ought to have been evacuated by the spittle."

About the middle of the 18th century, Baron Von Swieten wrote in his *Aphorisms*, an account of the dangers attending the salivation caused by the inunction method, so much praised by Astruc, and recommended bichloride of Mercury, a treatment which still holds its ground among a certain number of practitioners in London and elsewhere, and appears, according to them, to possess some recondite qualities, which are only to be witnessed, not to be explained.

I now come to the writings of the celebrated John Hunter, one of those eminent men, who, like Aristotle, has, by his energy and by the great powers of his mind, apparently completely enthralled the understandings of his successors, and prevented them, even to this day, from seeing what is daily before their eyes—the dangers of mercurial treatment of disease.

M. Ricord is an avowed disciple of John Hunter, and all our modern school of mercurialists acknowledge either the dictum of Hunter or the modified or so-called eclectic treatment of the brilliant M. Ricord.

A few short extracts from a *A Treatise on the Venereal Disease*, by John Hunter, London, 1786, will explain his views. In page 34 he says: "The surface of the urethra is subject to inflammation and suppuration from various other causes besides the venereal poison; such may be called simple gonorrhœas." And yet, with such correct notions as to the nature of simple urethritis, Hunter is so led away by the

necessity for opposing the venereal poison that he adds, p. 94: "Whatever methods are used for the cure, either locally or constitutionally, it is always necessary to bear in view the possibility of some of the matter being absorbed, and afterwards appearing in the form of a lues venerea, to prevent which I should feel inclined to give small doses of mercury internally. At what moment this mercurial course should begin, I am uncertain; but, if the observation be just, that a disposition once formed is not to be cured by mercury, but that mercury has the power of preventing a disposition from forming, as was formerly explained, we should begin early and continue it, till the generation of venereal matter ceases, and even for some time after. One grain of hydrargyrum cum cretâ twice a day, will suffice."

Alas for medical evidence! Read what follows and then believe, if you can, the dictum of great physicians and surgeons concerning the value of any dangerous internal remedy: "The success of every particular case can never be ascertained, because it is impossible to say when matter has been absorbed, except in cases of bubo. And, when it is not known to be absorbed, it is impossible to say that there would have been a lues venerea, if mercury had not been given, as very few are infected from a gonorrhœa, although they have taken no mercury. It is, however, going on the safe side to give mercury, as we may reasonably suppose it will often prevent a lues venerea, as it does when given during the cure of a chancre and bubo, when we know from experience, that without it lues venerea would certainly take place." What a slight account mercurialists seem to take of the introduction of two or more grains of a mercurial into the system during a prolonged course. A century after this people will read with astonishment Hunter's idea of "being on the safe side."

In page 229, "On the cure of chancre," Hunter says: "The first or cure of the chancre is to be effected either in

external dressings or internally; through the circulation, or in both ways. The second object—the prevention of the constitution from contamination—is to be obtained, firstly by shortening the duration of the chancre, which shortens the time of absorption, and also by internal medicine. For instance, if the power of a chancre to contaminate the system in four weeks is equal to four, and the quantity of mercury necessary to be given internally, both for the cure of the chancre and the preservation of the constitution, is also equal to four, then, whatever shortens the duration of the chancre, must lessen, in the same proportion the quantity of mercury. For example, if four ounces of mercurial ointment will cure a chancre and preserve the constitution in four weeks, three ounces will suffice to preserve the constitution for three weeks. This is no speculation, but the result of experience." In page 357, he says: "Mercury in the lues venerea, as in the chancre, is the real specific and hardly anything else is to be depended upon. If there be such a thing as a specific, mercury is one for the venereal disease, in two of its forms; yet mankind are in pursuit of other specifics for these diseases, as if specifics were more common than diseases. While, at the same time, they are too often contented with the common mode of treating many other diseases, for which they have no specific, and their prejudices are supported by the public, who have in their minds a dread of this medicine, arising from the want of knowledge of our predecessors in administering it."

I confess to sharing the fears of the public with respect to the use of mercury--perhaps to too great an extent—but I base my fears on an extensive experience of the evil effects which I think I so frequently observe from even a far milder treatment than that which Hunter recommended. And I think the following description will make many agree with me. In page 376 he says: "In the more advanced stages of the disease the mercurial course must be pushed further.

The greatest quantity of that medicine that the patient can bear at a time, is to be thrown in, and continued with steadiness, until there is great reason to believe that the disease has been destroyed. It will not, in such cases, be possible to prevent the mouth being considerably affected. The quantity of mercury applied in this way should be, under certain circumstances, in proportion to the surface over which it is applied, and the surface should be completely covered with the ointment; for half an ounce of mercurial ointment, rubbed in upon a given surface, will have much the same effect as one ounce rubbed in on the same surface. Therefore one ounce, to have double the effect, should have double the surface." And now let us see further what the unfortunate patient had to undergo: "The manner of living, under such a severe course, which is in every respect weakening, is to be particularly attended to. The patient must be supported, and the local effects of the medicine in the mouth preventing his taking many kinds of nourishment, especially such as are of a solid form, fluids must form his only nourishment, and these should be such as will become solid after they are swallowed; milk is of this description, and eggs." I know of no fact in medicine more suggestive of the reflection, that the science of the laws of evidence has been as much ignored in medicine as it has been in the theology of the most uncivilised nations, than that the celebrated Hunter should have so horribly salivated his unfortunate patients.

In a treatise on the same subject by Benjamin Bell, Surgeon to the Royal Infirmary of Edinburgh, London, 1793, we have some indication of the antidote theory of mercury in syphilis, which doctrine is held by many of our highest London authors up to this day. In page 197, vol. ii., he says: "The most prevalent opinion on this question is, that mercury cures the disease by the evacuations which it excites. But, if mercury acted in the cure of syphilis by increasing the secretions, other evacuants ought surely to

cure it. But no instance of this has happened." Of fumigation, he remarks, page 228: "When it is wanted to raise a salivation suddenly, or to throw mercury quickly into the system, this is perhaps the surest method of doing it; for, with the fumes of mercury, a salivation is sometimes excited in the constitution in the course of a few hours." This evidence may give an idea of the danger of the mode of treatment at present revived by some London Surgeons, and of which I have seen several severe examples. In page 238, vol. ii., he says: "Mercurius dulcis, or calomel, is given by some, in large doses, for the cure of syphilis, even to the extent of ten grains daily."

Like his predecessors, Astruc, Hunter, &c., Bell gives evidence against his own views, as follows, page 253: "But the sudden manner in which this great quantity of mercury was introduced, and the violent evacuations which it excited, together with the lowering regimen with which it was commonly accompanied, reduced even the strongest constitutions to a degree of debility from which they seldom entirely recovered; so that a great proportion of all delicate persons sank under it."

In page 433, Bell observes: "It is a prevailing opinion that mercury is apt to occasion abortion; it is therefore seldom given in pregnancy." This observation of Bell strengthens my opinion, that, among the other evils attending on mercurial courses, we must reckon abortion. I confess, however, that I have great difficulty in resolving this question, either from my own experience or from reading that of others, namely, whether the abortions we so frequently observe among persons who have been treated for syphilis is due to the blight of the ovum by mercury, or to other causes. I suspect mercury to be by far the most common cause, and I have given in the introduction an example of a woman who had been much salivated, and afterwards suffered from as many as 13 miscarriages.

I commence the account of the treatment of syphilis in the 19th century, so fruitful in its progress in the direction of positive science, by quotations from a work entitled *Observations on the Effects of Various Articles of the Materia Medica on the Cure of Lues Venerea*, by John Pearson, Senior Surgeon to the Lock Hospital, London, 1800.

Mr. Pearson, in page 39, shows that which is now well-known to all who have read the evidence detailed in the following chapter, that there were some of the best authors about the 16th or 17th centuries, who were acquainted with the fact that ulcers on the genetalia and their sequelæ require no drugs to speak of for their cure, but may be as completely recovered from as other complaints, by careful diet, regimen, &c.

"That the venereal virus could be subdued, and its mischievous effects eradicated by a coarse and simple diet, joined to laborious exercise, and a constant exposure to all the vicissitudes of weather, without the aid of any medicine, was inculcated by the highest medical authority of the 16th century—Frascatorius:

"Vidi ego saepe malum qui jam sudoribus omne finisset, sylvisque luem liquisset in altis. Sed nec turpe puta dextram submittere aratro et longam trahere incurvo sub vomere sulcum. Tu lecto ne crede, gravi ne crede sopori."

After quoting other similar authors, Pearson shows how completely the long continuance of the drug system had made practitioners, before the Peninsular war, oblivious of the common-sense treatment of diseased conditions of the system. In page 47, he says: "But if credence may be given to men of eminence in the profession, this rigorous course of discipline is not necessary; for, according to Thierry de Hery, M. de Blegny, &c., the disease may terminate by a natural crisis, and is susceptible of a natural cure. A decision so extraordinary as this does not restrict the efficacy of nature to the curing of a gonorrhœa, or the removing of the primary

symptoms of the lues venerea, but extends her sanative powers to the eradicating of every form of secondary symptoms. I need not undertake, at this day, to prove that the whole of this statement about the efficacy of regimen, and the doctrine of a natural crisis, has no foundation in truth or reality. The German peasant, the Russian boor, the temperate Hindoo, the inhabitants of the South Sea Islands, the wretched Africans, enchained in our West Indies, will no doubt furnish us with abundant instances, where the requisites of exposure of the body to the extremes of heat and cold, of scant allowance, and excessive fatigue, may all be found in full measure, yet no proofs can be brought that the powers ot the constitution, aided by this sort of discipline, did ever effect the cure of the disease without any intervention of medical assistance. I presume that no well-informed man gives credit to a single assertion that has been made by the above writers." Like other mercurialists, Pearson admits the treacherous nature of the remedy in less skilful hands than those of John Pearson.

"When mercury," he says, "is under the direction of an unskilful man, it will fail of effecting a cure more frequently than it will succeed. . . . . The complaint will be generally exasperated by it, and rendered more intractable than if no mercury had been given."

In page 130 he gives an example of this:

"In the course of two or three years after my appointment to the care of the Lock Hospital, I observed that, in almost every year, one or sometimes two deaths occurred among the patients admitted. I ascertained that these events were to be traced to mercury acting as a poison on the system."

CHAPTER V.

EVIDENCE AGAINST MERCURY IN SYPHILIS, 1812–40.

After all these contradictions and exaggerated statements of the mercurial school, it is refreshing to commence an account of the period which was ushered in in 1812, by Dr. William Fergusson. One of the most fortunate results of the British campaign in the Peninsula was the discovery made by the scientific part of the army, that syphilis was treated successfully in Portugal by simple hygiene and low diet. Indeed, it seems to me to be the most important discovery in the practice of modern times after that of vaccination. For before that time thousands died after long and protracted suffering, caused by the very mercury which was given as a remedy. Dr. Fergusson, who was residing in Portugal, wrote a letter home, dated Evora, April 30, 1812, which letter was read before a meeting of the Medico-Chirurgical Society of London, June 9, 1812.

He thus commences: "Syphilis has excited much interest and altercation in this country on the part of all British medical observers, no less for its dreadful ravages among their own countrymen, than for its comparatively milder phenomena among the inhabitants of this country. In the British army it is probable that more men have sustained the most melancholy of all mutilations during the four years that it has been in Portugal, through this disease, than the registers of all the hospitals in England could produce for

the last century; while venereal ulceration has not only been more intractable to the operation of mercury than under similar circumstances at home; but the constitution, while strongly under the influence of the remedy, has become afflicted with the secondary symptoms in a proportion that could not have been expected. With the natives, on the contrary, the disease is very mild; curable, for the most part, by topical treatment alone, or wearing itself out, when received into the constitution, after running a certain course (not always a destructive one) without the use of any adequate mercurial treatment. I have now been upwards of ten years at the head of their hospital department, and can declare, that it never occurred to me, amongst all the venereal patients whom in that time I have seen pass through the hospitals, to meet a single one under the influence of mercury, excepting those cases wherein I have personally superintended its administration.

"They go out cured by topical remedies alone, and I have lived long enough among them to ascertain that their return to hospital, under such circumstances, for secondary symptoms, is far from a universal, or even a frequent occurrence. To make this understood, I shall take the case before me, as verified this day by myself and Staff-Surgeon Jebb, and exhibit the state of the disease at the hospital from which I now write.

"The venereal list amounts to 46; they had all been several weeks in the hospital previous to my arrival, and two of them only were taking mercury; the rest being primarily affected with ulcers and buboes, or secondaries with ulcers in the throat, were, with only one exception, doing perfectly well from topical remedies alone, quite as well, certainly, as an equal number of patients under the most favourable circumstances of a mercurial course for an equal number of weeks could be supposed to do in an English hospital; and all will be soon discharged, apparently cured, without having

had further recourse to any mercurial remedy, unless my longer residence here enables me to enforce its use."

In page 6, he says: "That the disease is now curable here in its first stages without either mercury or sarsaparilla is unquestionable, as well from the thousands of actual cases, as from the certainty that the use of mercury, when pushed to the extent that can at all constitute it a remedy in any state, is actually unknown to the native practitioners, who in that point of view religiously abstain from its use, considering it, with horror, as one of the poisons which foreigners madly wield; and therefore, I would infer that the disease is exhausted, and has expended much of its virulence in this country, as much from its easy cure, as from the analogy of the natural small-pox." . . . .

Dr. Fergusson then proposes a theory, which he adopted at the moment, but afterwards abandoned—page 14: "The Portuguese, through apathy, and at a dreadful price, levied on the generations that are past, appear to have gained a great exemption from their immediate effects; but the price was too high, and God forbid that we should offer up our bodies to be unresisting subjects of the disease."

Although not in chronological order, it is instructive to quote the opinions of Dr. Fergusson after a lapse of thirty-four years. During the interval, from 1812 to 1846, the experiments of Rose, Guthrie, Hennen, Fricke, Desruelles, &c., had appeared, and extended the knowledge of the non-necessity for any specific treatment for ulceration of the organs of generation, and their sequelæ, to all parts of Europe. The following extracts from Dr. Fergusson's *Notes and Recollections of a Professional Life,* London, 1846, are a warning to the intolerant portion of our medical fraternity, not to be too dogmatic in their assertion as to the certainty of any method of treating disease being the best possible. In page 117, he says: "Until our experience in the Peninsular wars, there had been but one opinion among us of its

utter incurability but by mercury; and, if by chance, the disease got well without it, we had as little hesitation in declaring that it could not possibly have been syphilis, but some other disease putting on that form.

"On my appointment to be Chief of the Medical Department of the Portuguese Army, in 1810, I found that the native faculty never used mercury for primary symptoms, and very little, if any, for secondary ones, and they obstinately contended for the right and propriety of their conduct. Such infatuation, as I then thought it, was not to be reasoned with. I applied to the Commander-in-chief, and obtained the strongest general order that could be penned, ordering the use of mercury in every stage of the venereal disease. Still I was beat. Whenever I could not personally superintend, the remedy was neglected; if present, the mercury was mingled with sulphur; and when I insisted upon seeing whether it had been rubbed in, I was presented with a skin as black as an Æthiop's. At first the dislike and horror for the remedy was so great that they would rush from the room when it was applied, and wash it off with soap and water. In fact, I saw that I was playing a losing game, where I could not help myself; yet, at the same time, I could not help acknowledging that the grave consequences I apprehended must have ensued from their preposterous conduct did not follow; and that our soldiers who were mercurialized, I may say, to extremity, often suffered them in a lamentable way.

"But I did not at first open my eyes to the whole truth; and, within two years afterwards, first Mr. Rose and then Mr. Guthrie ventured upon bolder views, and published to the world the feasibility, propriety, and safety of treating British soldiers in the same manner as the Portuguese. I confess that nothing in the practice of physic ever staggered me more than the discovery that the creed of ages should be found utterly baseless; that the wisest amongst us should

have in all the intermediate time been destroying, instead of saving, their patients, by murderous and unnecessary doses of mercury, was enough to shake the firmest faith in physic, and to prove that what might seem the best established principles of medicine were no more than the delusions of the passing day. Were I now to make a scale of the applicability of mercury, I would say that the tithe of what formerly used to be administered is the proper initiatory quantity in any case, until it be ascertained whether it suits the patient's constitution or not; that, again, a tithe of that tithe, or a centime, is the allowable preliminary dose in secondary symptoms; for, wonderful to say, those, which were once believed to be ineradicable in less than a lifetime of mercury, are now found to be cured with far greater facility than the primary symptoms." In page 21, he says: "Among all this blundering and prejudice, it seems to me to have been discovered that mercury was, after all, making its own work, by producing the very appearances of ulceration it was given to eradicate; for so like are the abrasions of the mouth and the throat, or other secreting surfaces, arising from mercury and from syphilis, that the best experience cannot even now distinguish between them, and in former times went on destroying in the dark, always believing, while their patients were falling before their eyes, that their practice was orthodox and indisputable." In page 122, he says: "I shall conclude this part of my subject, at present, by stating the incontrovertible fact, that the British army, at this moment, contains thousands in perfect health, and has contained thousands more, who have been perfectly cured of every stage or state of syphilitic disorder, without ever having taken a particle of mercury. The steps which led to this important discovery may, before concluding, still be worthy of some further remarks. When the British army landed in Portugal, the soldiers were all of the native kind and habit; sanguineous, plethoric, highly fed for soldiers, and addicted

to the use of alcohol. The climate at the autumnal season of the year was hot, and the campaign, before reaching the capital, had been active. Under these circumstances, intercourse with the common women of the country produced the usual consequences of syphilitic disease, for, which at that time we knew but of one remedy, *intus et in cute, ab ovo usque ad mala,* and afterwards as long as the patient remained above ground, no matter what mutilations and exfoliations he might have suffered, mercury was the sole panacea. With such subjects, more especially at the beginning of the disease, before being leeched and depleted, it might have been foreseen that phagedæna would assume the reins, while mercury gave the spur. Our hospitals exhibited instances of the most melancholy mutilations; and even amongst the officers these were occasionally seen. The Portuguese, meanwhile, regarded the treatment with horror and astonishment; with them the disease was ordinarily of chronic and mild character. It was a misfortune of which they thought no more shame than they would of scrofula or cancer, and they sought no concealment. This led to my first publication in the *Medico-Chirurgical Transactions.* Mercury in excess and long continued had even led to exfoliation of the facial bones, and for these exfoliations we gave more mercury. Now we wonder at the number of victims, as we then thought, of the disease, but in fact of the remedy. The Portuguese, I may almost say, had no phagedæna. I cannot call to mind a single instance similar to ours, with the exception of a camp follower, but he was as highly fed and sanguineous as any of his English fellow-servants."

In a work entitled *Observations on the Treatment of Syphilis, with several cases in which a Cure was effected without the use of Mercury,* by Thomas Rose, A.M., Baliol College, Oxon., Surgeon to the Coldstream Guards, read at

the Medico-Chirurgical Society of London, January, 1817, Mr. Rose says, *Transactions*, vol. viii, page 337: "Lastly, I have tried the same system in the Coldstream regiment of Guards during the last year and three-quarters, and have constantly succeeded in curing all the ulcers on the parts of generation which I have met with, with the constitutional disorders to which they gave rise, without the exhibition of mercury. I may not be warranted in asserting that many of them were venereal; but undoubtedly a considerable number of them had all the appearance of the primary sores produced by the venereal virus; and arose under circumstances likely to produce it." In page 360, he says: "Meeting with complete success from this plan of treatment, and satisfied that the ideas I had formerly entertained were erroneous, I ventured to lay aside mercury entirely, with a view of observing for a time the progress of the virus when not interfered with by this specific. The result has been very different from what I had expected; and the cure in every case has been effected without the necessity of having recourse to any mercury whatever. Dr. James Forbes, Physician to the York Hospital, Chelsea, informs me, that upwards of 61 cases of ulcers on the penis were cured by simple dressings by Mr. Dease."

In page 363: "All ideas of specific remedies were entirely laid aside. The patients were usually confined to their beds, and such local applications were employed as the appearance of the sores seemed to indicate." Mr. Rose gives an account of a considerable number of the cases which he treated, in detail, and the secondary symptoms which followed them; all of which latter seem to have been of a mild and chronic character, not exhibiting any rodent ulceration of the soft parts, nor disease of bone; in fact, nothing more than enough to make the patient uncomfortable for a shorter or longer period, but not endangering life. In page 422 he says: "Without including many slighter ulcerations, and those of

which I lost sight immediately after their cures, I have, during the last two years, treated on the same system more than 120 cases, where I have been able to ascertain that my patients were in perfect health for many months afterwards, or where they have returned with secondary symptoms, similar to those already described. Upon an average, one out of every three of the sores thus treated, was followed by some one form or other of constitutional symptoms; this was, in most cases, mild, and sometimes it would have escaped notice if it had not been carefully sought for. The constitutional symptoms were evidently not such as would be regarded as venereal, if we give credit to the commonly received ideas on the subject. Caries of the bones and some of the least equivocal symptoms did not occur. In no instance was there that uniform progress, with unrelenting fury, from one order of symptoms and parts affected to another, which is considered as an essential characteristic of true syphilis. Even each individual symptom of that disease has been declared to be regularly progressive, and never to be checked, except by the influence of mercury. Mr. Abernethy inquired, he tells us, of the best surgeons in London, whether constitutional symptoms of syphilis do ever spontaneously amend. No one decidedly replied in the affirmative."

This last observation illustrates the fact that there is a tendency in the human mind to rely implicitly on authority, and shows how little we can depend upon the powers of observation of nine-tenths of men, when they have a foregone conclusion to bias them, and prevent their seeing the naked truth. Mr. Rose concludes his communication by the usual remark of all who have treated the disease rationally. "It is now generally admitted that the majority, and certainly by far the most serious diseases of the bone, as well as many other most distressing symptoms, which are met with in all these diseases, are to be attributed to the injudicious or excessive use of that remedy."

The next witness that I shall call, to prove the injurious effects of mercury in syphilis, is Mr. Guthrie. In his *Observations on the Treatment of the Venereal Disease without Mercury*, by G. J. Guthrie, Esq., read at the Medico-Chirurgical Society, London, January, 1817, he remarks: "On the continent, in general, little attention is paid to the appearance of primary sores; but this does not lead in general in Italy, or in the north of Europe, to the exhibition of mercury or any other specific; and Mr. Cullerier, the first surgeon in the Venereal Hospital, in Paris, demonstrates the possibility that every kind of ulcer is curable by common means; but, after the ulcers have healed, he puts each patient through the usual course, to prevent secondary symptoms."

By this time many surgeons had begun to perceive, what has lately been elaborated by M. Ricord, that some forms of ulcers were more inevitably followed by secondary symptoms than others. In page 556 Mr. Guthrie remarks: "In consequence of those opinions it became desirable to ascertain, at an early period, whether an ulcer was a chancre or not; and many surgeons prided themselves on their peculiar talent, in distinguishing these ulcers, which absolutely require the use of mercury for their cure, from those which did not; but the value of this prescience will be more duly estimated, now that it has been ascertained that every sore, of whatever description it may be, will heal without its use, provided sufficient time be granted, the constitution be good, the patient regular in his method of living, and that attention be paid to cleanliness and simple dressing, and to keep the patient in a state of quietude. During the last eighteen months, in the York Hospital, Chelsea, Mr. Dease, Dr. Arthur, Dr. Gordon and myself have been in the habit of treating all cases of ulcers on the penis, of whatever form or appearance, by simple mild means; that is, by dry lint, or by ointments or lotions, for the most part not containing mercury, in order to obviate the objection that might be made to the

application of it in any form; and of near 100 cases, which have been treated in this manner, all the ulcers healed without the use of mercury. Since Mr. Rose, of the Guards, began to treat his people without mercury, and the practice was adopted at the York Hospital, it has been followed at several of the Hospital Stations at Dover, Chatham, and Edinburgh, and in different regiments at home and abroad, especially in the 57th, and the Staff Corps of Cavalry in France. From these hospitals I have seen the reports of nearly 400 cases, which have been treated with the same results, as far as regards the cure of primary ulcers; each ulcer appears to have run a certain course. With us, when the ulcer had the characteristic appearance of chancre, dry lint alone was generally applied to it; when these signs were less prominent, a variety of applications were used. If they were ulcers, without any marked appearance, and did not amend in the first fortnight or thereabouts, they generally remained for five or seven weeks longer; and the only difference in this respect between them and the raised ulcer of the prepuce was, that this often remained for a longer period, and that ulcers, possessing the true characters of chancre, required, in general, a still longer period for their cure, that is, from 6, 8, 10, 20, or even, in one case, up to 26 weeks."

In page 559: "The great question, however, is, were these people, when ulcers were healed under this treatment, more liable to secondary symptoms than if they had been treated by mercury? But, of the whole treated, only six cases have been noticed in which symptoms strongly resembling those of syphilis made their appearance. Of these six cases, two had ulcerated throats, combined with eruptions. In one, the papular eruption appeared before two ulcers, one a raised ulcer of the prepuce, the other a chancre on the corona, had healed. Five of the six were cured by simple means, such as cathartics, antimonials, &c., sarsaparilla, and the warm bath; in none of these cases were the bones affected.

Dr. McLeod, out of 50 cases treated at Dover, without mercury, which he has been able to keep in view, has not had a larger proportion of secondary symptoms than I have. Staff Surgeon Munday, and Mr. Evans, of the 57th Regiment, and Mr. Brown, of the Staff Corps of Cavalry, have been equally successful in France. In the course of twelve months they treated 134 cases, and the proportion of secondary symptoms to the whole number has been under a tenth, and of the same description as my own. In Edinburgh, the result of 200 cases has been the same. It appears singular that, in the secondary cases, the symptoms should all have been of a mild character, in two instances only affecting the bones."

In page 562, he notices Dr. Fergusson's theory as to the Portuguese immunity from the ravages of the disease, depending on their having let it rage among them for centuries, thus: "Dr. Fergusson supposed that the Portuguese did not suffer from secondary symptoms, as they ought to have done, according to the ideas we then entertained, because the venereal disease was mitigated by means of a general and inadequately resisted diffusion of it among them, in consequence of their simple mode of treating it. There is not, however, any more solid foundation for this opinion, which has, I am aware, made strong impression on many persons in England, than there is for that which is commonly entertained, that the disease is more virulent in Portugal than in Great Britain." Mr. Guthrie points out that it was in reality the habits of the soldiery and the mercury they took, which gave rise to the phagedæna which they suffered from in Portugal. He then comes to the vexed question of the theory of secondary symptoms, as follows, page 575: "As the irritation of a prick in the finger only produces abscesses and general derangement, when the state of the constitution is not good; as derangement of the digestion may produce in many cases diseases resembling syphilis; as the irritation

of a transplanted tooth may do so in the same manner; so I am disposed to believe that an ulcer or a syphilitic chancre produces secondary symptoms, only in peculiar states of the constitution; but what this may be, or in what it may differ from a state of health, would be as difficult to describe as in any other of the instances to which I have alluded."

Professor Syme and others seem to hold the same views as to the theory of secondary symptoms; and certainly, when the disease is rationally treated, it would hardly appear worth while to make much of it as a grave poison. At any rate, the poison of syphilis, when the ulcers are treated by rest, antiphlogistics, and emollient applications, is really so mild as to put it completely out of comparison with the grave epidemics of variola, scarlatina, or measles.

Mr. Guthrie, page 576, concludes: "1. That every kind of ulcer of the genitals, of whatever form or appearance, is curable without mercury. This I consider to be established as a fact, from the observations of more than 500 cases, which I am acquainted with, exclusive of those treated in the different regiments of Guards, and which occurred in consequence of promiscuous intercourse. 2. Secondary symptoms (and I exclude trifling pains, eruptions and sore throat, that have disappeared in a few days) have seldom followed the cure of these ulcers without mercury; and have, upon the whole, more frequently followed the raised ulcer of the prepuce than the true characteristic chancre of the gland. 3. The secondary symptoms in the cases alluded to, amounting to one-tenth of the whole, which were treated on the antiphlogistic plan, have hitherto been nearly confined to the first order of parts; that is, the bones have in only two cases been affected; but they have been equally cured without mercury. 4. As great a length of time has elapsed in many of the cases as is considered satisfactory, when mercury has been used, namely, six to eighteen months. 5. The primary sores were of every description, from the superficial

ulcer of the prepuce and gland to the raised ulcer of the prepuce, the excavated ulcer of the gland, and the irritable or sloughing ulcer of other parts. In the inflammatory stage, attended by itching, scabbing and ulceration, they were treated for the most part by antiphlogistics and mild remedies. In the latter stage, when the ulcers were indolent, whether raised or excavated, by gentle stimulants. 6. The duration of these stages is very different; is often increased by caustic and irritating applications, and is much influenced by surgical discrimination in the local treatment."

I shall now take the evidence of Professor John Thompson, who has had, among his other merits, the honour of numbering among his pupils the first of modern surgeons, Professor Syme. In the *Edinburgh Medical and Surgical Journal*, January, 1818, appeared "Observations on the Treatment of Syphilis, by John Thompson, M.D., Professor of Surgery to the Royal College of Surgeons of Edinburgh, and Surgeon to the Forces." John Thompson was, it appears, appointed in 1816 to the care of the depôt in Edinburgh. "In this Hospital," he says, "open to the inspection of all the medical military officers attending the University, I have, since that period, carefully abstained from the use of mercury, not only in the treatment of secondary, but also in that of the primary symptoms of syphilis; and have found that chancres and buboes have in every instance disappeared under an antiphlogistic regimen, rest in the horizontal position, and mild local applications, as speedily as I have ever seen them disappear in similar cases where mercury was employed. Bubo has occurred, sometimes suppurating, and sometimes disappearing by resolution, in about a quarter of those affected with chancre; but in none was there any tendency to gangrene, as when mercury was used. Of the cases which I have seen, the number in which constitutional symptoms

have supervened does not exceed one in ten; and the only forms of these symptoms, which have presented themselves, are ulcerations of the throat and cutaneous eruptions, sometimes accompanied by inflammation of both eyes. The ulcerations of the throat have been few in number, and generally accompanied with cutaneous eruption. They have had an aphthous appearance, and sometimes aphthæ inside of the mouth, enlarged tonsils, and swelled lymphatics of the neck. The cutaneous affections, which have occurred, have been, in several cases, a reddish mottled efflorescence of the skin, resembling roseola, in others, papular, pustular, scaly or tubercular eruptions. These secondary eruptions have usually occurred in cases, where the primary sores had been long in healing, and when they had left behind them indurated cicatrices.

"The time at which they generally occurred has varied from four to twelve weeks, after the appearance of the primary ulcer. The affections of the throat have been slight, in comparison with those which usually take place in venereal cases, after the use of mercury. The cutaneous eruptions have been chronic in character, and have all, as well as the sore throats and inflammations of the eyes, gradually, though sometimes slowly, disappeared, without the use of mercury, and without seeming to have left any injurious effects behind them. I am inclined to believe, that if mercury had been employed, the cutaneous affections, in several of the cases might have been cured in a shorter period of time; but, whether, in accelerating the cure of the cutaneous eruption, that remedy might not have excited other constitutional affections, is a point which future experience alone can determine. Hitherto I have had no opportunity of observing among patients treated for the primary symptoms without mercury, any of these deep or foul ulcers of the skin, of the throat, of the nose and mouth, or of the painful affections of the bones, which are stated by every writer on Syphilis, as

the genuine products of the disease. Among the very great number of such affections, which have presented themselves to my observation, one, or more frequently more than one, course of mercury has been employed. The practice, however, of treating venereal sores without the use of mercury has now become very general in the British Army, both at home and in France."

Professor John Thompson adds: "An Abstract of the Cases of Primary Venereal Ulcers, treated without Mercury, in the Consolidated Depôt Hospital, and in the Regimental Hospitals of the 92nd and 88th Regiments of Edinburgh, from March, 1816, to December, 1817." There were 155 cases treated: of these, 54 had buboes, and were cured; 16 had secondary symptoms; 1 had ulcerated throat; 2 had ulcerated throat, with eruptions; 10, cutaneous eruptions only; 1, iritis; all of which have disappeared without mercury.

In the year 1818, Dr. Hennen, Surgeon of the Forces, read communications contained in the April and July numbers of the *Edinburgh Medical and Surgical Journal*, 1818, from which I make some extracts. In page 202, he says, "That these sores and also the species, which Mr. J. Hunter has designated as the true syphilitic sore, heal without the employment of any other means than rest, abstinence, cleanliness, &c., is perfectly demonstrable; and is daily to be seen in the wards of the Castle and at Queensbury House, appropriated to such cases. That ulcerations in the throat, cutaneous eruptions, and a combination of both, coupled in some cases with iritis, have disappeared, under the same treatment, is equally certain." In page 203, "I have not had occasion to see a single instance in which the bones of the nose have been affected; some cases of pains and swellings of those of the cranium and the extremities have been met with; but, except in two, I have not myself seen any nodes which

could be regarded as unequivocally syphilitic. In all cases, rest, in a horizontal position, is an important part of the treatment."

In page 331, "The facts are these, as ascertained at present; secondary symptoms occur more frequently and at an earlier and more determinate period, than when mercury has been used; but they in many cases have gone off as soon; never, as has been supposed, proceeding from bad to worse, or from one succession of parts to another, in unabated violence; on the contrary, they by no means exhibit themselves with the same violent and unrelenting symptoms, which have been observed in many instances, when mercury has been used. The eruptions have not run into ulceration; they have not run into large scabs, or extensive blotches, nor have the bones of the nose or other parts been in any instance affected with caries. I cannot take upon myself to assert that these events will not take place, but in some hundreds of cases which I have watched with the utmost attention, I can aver that they have not." Dr. Hennen gives a table, from which I find that the secondary eruptions, tubercles, exanthemata or pustules, got well under treatment, in periods varying from ten days to six weeks. In 1820, in his work on *Military Surgery*, he makes some further remarks. Speaking of the injurious effects of mercury upon many diseased conditions of body, he says, "But the most troublesome of all its effects is the phagedæna, which it often induces, both in chancres and open buboes. In the throat most severe ulcerations are effected by it. . . . . I have not seen a single instance of ulceration succeeding to a cutaneous eruption in the military hospitals, since the non-mercurial plan has been adopted, except where mercury has been long and irregularly used." In page 523, we find that Hennen has had to undergo the annoyance, which is the fate of those who disagree with the leading surgeons of the day upon any question, but especially in this, namely, a con-

siderable quantity of abuse; for, he says, "I shall not degrade myself by entering into disputes with those who have sheltered themselves behind the lecturer's chair, whence they have poured abuse upon the army surgeons, as unmerited as it was undeserved. No man could have been more firmly convinced than I was, some years ago, of the extravagance of supposing that this disease could, under any circumstances, be cured without mercury (to which alone I had trusted, in at least one thousand cases), until conviction was forced upon me."

Dr. Hennen gives a table of the cases treated and the results obtained, from which I gather, that of the 407 cases treated, iritis occurred only in 1; exostosis in 1; secondary symptoms in 46, some of them slight, and all healing in from ten days up to eighty days. He gives the average time for the cure of primaries, without bubo, as twenty-one days; with bubo, forty-five days; and for secondary symptoms, from twenty-eight to forty-five days; and adds, that the appearances most often observed in non-mercurial treatment were the return of the primary sore, and repeated attacks of the eruption. It would appear, that Dr. Hamilton, at that time professor of midwifery in Edinburgh, made an objection to the non-mercurial treatment of syphilis, that it would greatly increase the liability to infantile syphilis; an argument which Hennen meets, firstly, by observing that, in Spain, there did not appear to be any undue amount of infantile syphilis, and also by more exact statistics, as follows:—It appears that of 13 children, born of parents, treated without mercury, 11 were born alive; none of these had since their birth died, or manifested any suspicious symptoms, although some of them were then in their third year. In page 567, he says, "But, notwithstanding Dr. Hamilton's opinions to the contrary, so strongly expressed in his work, we have reason to believe that children have recovered from the disease, not merely without mercury, but spontaneously, and without any remedy

whatever. And Mahon, in his *Œvres Posthumes,* page 416, says, 'On ne peut nier, cependant, qu'il ne puisse arriver, que les symptômes veneriens disparaissent chez les enfans nouveau nés, à qui on n'a fait aucun remède. J'en ai eu plusieurs exemples."

Dr. Hennen concludes by remarking: "While the great mass of medical men believed that the syphilis of adults was absolutely incurable without mercury, it was natural for them to apply the same opinion to the disease, as the suspected appearance, in infants. But it is to be hoped that, in the present state of our knowledge of the natural history of syphilis, imperfect though it be, we will not withhold from the rising generation the chance of these benefits, which have proved serviceable to those of advanced years." The cases which I have recently published, and the fifteen cases published by W. Allingham, Esq., F.R.C.S., in the *Medical Times and Gazette,* October, 1863, have shown that Dr. Hennen was quite right in concluding that infants are treated more successfully without mercury than with it. The reader is referred to the last chapter for details.

In the *Journal des Progrès des Sciences Medicales,* of 1827, page 87, there is an article, entitled, "Traitement de la Syphilis sans Mercure, par le Docteur Th. Harris, Chirurgien de l'Hôpital de la Marine des Etats Unis, Philadelphia," from which I extract a few passages: "Having learnt, in the course of my medical studies, to repose with confidence on the specific properties of mercury, I followed this method exclusively during six years. Nevertheless, I had often to bemoan the want of success, and it was not rare to see the primitive affection complicated with new diseases. Among 57 patients treated by mercury on board the "Macedonian," in 1815, 6 men, who had at first only presented primary symptoms, became affected with secondaries, during the time even when under the influence of salivation. Reports of the Surgeons of the English Army

confirmed by the information I obtained in Spain, determined me for the soothing and alternative treatment which I employed with success, when a favourable opportunity occurred."

"In 1819, the Marine Hospital of Philadelphia was put under my care. With the exception of three cases, where I had ordered mercury in an alterative dose, I have not employed this drug against any form of the venereal disease during the last six years. At this epoch, I had to treat 164 cases of venereal disease, under all forms of the primary disease. 53 were patients of my private practice, 111 of the Sailors' Hospital. General medication was always regulated by the existing symptoms. As the disease was, in many instances, joined to a constitutional disorder, I found it several times necessary to bleed, and always to purge well. As I believe that the venereal disease never produces constitutional symptoms, except in a peculiar condition of the economy, I think it is very important to pay attention to the general condition of the constitution. From this idea, I order, with other suitable medicine, a warm bath once or twice a-week, with decoction of the woods. It is to this treatment that I am inclined to attribute the rarity of the cases of secondary symptoms." Dr. Harris used lotions of sulphate of copper, and also black wash, for the ulcers; and he says, "Among the 53 patients whom I treated in this manner for a primitive affection, there has been, to my knowledge, only one sole case of constitutional disease; and of the total patients treated at the Marine Hospital, two only experienced secondaries. The first was afflicted with a pustular eruption after gonorrhœa; the second with a button-like eruption of a moderate kind. These two were treated and removed, under the alternate use of decoctions of the sudorific barks, and of the nitro-hydrochloric and warm baths. None of the patients, when primary affections were treated without mercury, were afterwards affected with ulcers in the throat, or diseases of the bones."

Such is the evidence given by Dr. Harris, and it tallies with the opinion of some observers, that secondary symptoms are much more frequently observed when mercury is used. M. Desruelles, the next witness, seems to have had an experience very similar to that of Dr. Harris, and, like him, to have believed that ulcers produce secondary symptoms in constitutions either of a peculiar kind, or rendered sickly by means of mercurial treatment. I shall not as yet hazard any opinion of my own upon this matter, but shall allow the question to develope itself in the evidence of Dr. Hughes Bennett, &c.

"In a *Memoire sur le Traitement sans Mercure, employé a l'Hôpital Militaire d' Instruction du Val de Grace,* par M. Desruelles, Chirurgien Aide-Major, chargé de la Direction des services des Veneriens á l'Hôpital du Val de Grace, Paris, 1828," in the *Journal des Progrès des Sciences Medicales,* it appears that M. Desruelles had been entrusted, in the year 1825, with the charge of the venereal patients at the military hospital of the Val de Grace. "There he collected upwards of 1,500 cases, of which the results, which cannot be suitably developed, excepting in a large work, are now given in a short treatise."

"M. Desruelles," says the writer, "had great confidence in the employment of mercury. This confidence was only shaken very slowly, by perceiving the accidents and returns of the disease which accompanied the mercurial treatment. This consideration had struck him in 1819, when entrusted with the care of venereal patients at the hospital de la Garde. He was not long in perceiving that simple dressings, and, in the greater number of cases, scrupulous cleanliness, advantageously replaced the ointment, the powders, and the irritating lotions, and that the employment of simple antiphlogistics, in moderation, hastened much more than the means hitherto adopted, the cure of venereal symptoms. At the same time, it was unconsciously, and driven by the evidence

of facts, that he arrived at banishing the drug from his treatment, which had formerly entirely constituted it. He had, at first, only attributed the accidents which occurred to the bad diet of the patients. In 1825, convinced of the necessity of preparing them for the administration of mercurials, by a very regulated diet, and by the employment of antiphlogistics, he more than once saw the symptoms disappear during the preparation, and found himself then forced to allow the patients to go out without taking the specific, or to retain them, in spite of their wishes, to administer it. It thus resulted, that those whom he retained, took only feeble doses and were cured. To obviate this inconvenience, he had recourse to the plan of giving mercury as soon as the symptoms tended towards cure under the influence of the simple treatment; the cure then became longer and more difficult, and frequent accidents occurred.

"These new observations determined him to make, for each of the symptoms, comparative trials as to the proportionate duration of the venereal disease by the mercurial and the non-mercurial method; whether confining the patients to a vegetable diet, or permitting them a copious, substantial, and stimulating diet; whether the local treatment was complicated, irritating, nil, or antiphlogistic. He soon recognized that the ailmentary *régime* ought to be considered as the base of the treatment, and that mercury, always useless, is for the greater part of the time more or less injurious. He ceased entirely to employ it on January 1st, 1827."

"It is not without interest to note how, and by what means, M. Desruelles has acquired the conviction that he endeavours to make known. From the moment when he ceased to administer the medicine so long in use, all the symptoms diminished in gravity, and disappeared with the greatest promptitude. He ceased to see the secondary accidents, which were so frequent a short time before. It became evident that they were due, for the most part of the time, to

the medicine which was employed to cure them; and, in fact, the persons who were affected with caries of the bones, with exostosis, with periostitis, with pains, with skin diseases, ulcers on the tongue, velum palati, tonsils, and pharynx, with serpiginous ulcers, or suppurating pustules, had taken considerable doses of mercury, by friction, or internally. In the majority, these symptoms were aggravated every time that the mercurial treatment was given. A crowd of varieties, well described by authors, vanished under a more simple treatment; the progress of the disease was more uniform. The numerous variety of ulcerations, which used to be remarked, were the results of the means of cure. It became evident that this product was artificial, during the moment of incertitude and of comparative attempts in the second period. In the same ulcer we could obtain all the forms which constituted the species which have been described. If we violently irritate an ulcer, its base will become indurated, its edges callous, its bottom excavated and grey. It will be easier to obtain the product if we, in addition, irritate the internal organs by stimulating medicines. Treat, on the contrary, the ulcer by lotions; or apply baths and leeches to the surface; give the patient no medicine; confine him to a light, vegetable diet; you will shortly see the ulcer change its appearance; its edges sink, its bottom clear up, and the greyish slough disappear. It is to mercury that we must attribute the tubercles, the irregularities, the livid colour, the serpiginous character of the sores. They are united, whitish, and on the level with the rest of the skin, when this drug is not administered. Some dogs were submitted to its effects, some by friction, and others by liquids. Among those which had mercury rubbed in, salivation was observed, as in man. Among all were found alterations which are commonly attributed to the venereal disease; the teeth were shaken and almost all loose, the gums ulcerated, the buccal mucous membrane, the velum palati covered

with aphthæ, the pharynx red, the stomach more or less diseased."

In page 99, M. Desruelles explains that the non-mercurial treatment has long been in use in England; but it is far from there producing the good results we might expect from it, "because embarassed by a crowd of useless complications." He then gives the treatment used at the Val de Grace, and divides it into internal and external treatment. "Internal treatment: The use of rich soups, of meat, fish, and fermented liquors retarded the cure. Light soups, or milk, or fecula, with fresh eggs, &c., and with milk for a drink, and, also, sometimes for nourishment, such were the substances which constituted the diet up to the time when the symptoms begin to amend; after this time a more generous diet is allowed. Rest in bed is one of the principal means of cure, especially in winter. In this way the body remains always at the same temperature; the repose is complete, the local accidents are not liable to be rubbed, the external applications remain more constantly *in situ*. Simple tepid baths, once or twice a week, are often very useful. Warm baths excite the skin in too lively a manner, especially in summer. The efficiency and promptitude of action of this treatment, when rigourously carried out, has never disappointed us. If it appeared without effect, we have observed some inexactitude on the part of the patients; they have either caught cold or have made some errors in their diet. A more exact surveillance gives back all its power. The *régime* ought to be more severe and of longer duration for secondary accidents and mercurial symptoms, than for the primary symptoms; general and local blood lettings should be more frequently repeated."

In page 112, it appears that "Ulcers were not submitted to any dressing; they were merely covered with a rag dipped in an emollient decoction, whose effect was to free them from the action of the air, and prevent them from touching other healthy parts or other ulcers. If their base was

swollen and tender, if the edges were hard and painful, some leeches, applied to the interior, calmed the pain. Painful ulcers and open buboes, when the seat of irritation, ought to be covered with lint, dipped in a concentrated solution of opium, over which emollient fomentations were spread. In inflammations of the velum palati and ulcers in that part, the patient should be put upon rigorous diet during the period of inflammation; and leeches may be applied to the upper part of the neck. Exostosis, periostitis, and caries of bones—sad results of the abuse of mercury, especially of the frictions—get well under the influence of local bleedings. 'It is easy to see,' says M. Desruelles, 'that the internal treatment is reduced to the greatest simplicity; the external treatment is not more complicated; and for the one, as for the other, the help of pharmacy is almost nil.' These conditions would, nevertheless, be valueless, had they not good results. The author assures us that by the aid of his treatment the cures are at once more prompt and more certain, the condition of the patient less injured. Physicians, who are not partizans of the method employed at the Val de Grace, forced at least to admit the curative action for the time, entrench themselves behind the question of the future, and would have us believe in relapses. The results obtained up to this time, says our author, furnish the proof that these are infinitely less grave than we observe after the mercurial treatment. The slight relapses, which M. Desruelles has observed, have only occurred to those indocile men who had indulged themselves in irregularities in diet during the treatment: what exposes them to such accidents is not the absence of mercurial courses, but the absence or inexactitude of the general treatment. This conviction, however, has only as yet been able to reach those who have witnessed the facts. This question may more surely be judged of in military hospitals than elsewhere, because the men, who are treated in them, are submitted to an active surveillance, before, during, and after the treatment."

"M. Desruelles speaks with considerable certainty as to the non-probability of relapses. In page 104, he says: 'The argument of presentiment of relapses appears to me to be analogous to that, which is opposed to vaccination, by saying that the future perhaps will prove its dangers.' We know now the rarity of syphilitic disease among convicts, when the prisoners are condemned to a very frugal life; and, notwithstanding this, these prisoners are from that portion of society, the most exposed to the disease. It was reserved for the new school—denominated at first the *Physiological School*, in opposition to the past condition of medicine, which made disease an exception, and not merely a modification of the physiological laws, and afterwards named the *Organic School* by others, to express better the idea of localization which distinguishes it—to generalize and spread abroad this simple and rational practice. The disuse of tonic medicine also, in affections of the digestive canal, has rendered disease more simple, and diminished the frequency of grave complications. At the Val de Grace, when mercury was employed, the mean duration of the treatment was two months; it is now (without mercury) twenty-six days." Such are the results of M. Desruelles, among the most decisive of the comparative experiments, that have been made upon the specific and non-specific modes of treatment.

In a work, entitled *Cours de Pathologie*, par F. Broussais, Paris, 1831, vol. iv. p. 243, the renowned author says, "For seven or eight years past, syphilitic patients are treated at the Val de Grace without mercury. All the cures are not indeed radical, and some are followed by relapses. But those obtained by the exclusive mercurial treatment, used in the other hospitals, besides being less speedy, present still more relapses. The advantage then remains with the treatment without mercury."

In a later work by M. Desruelles, entitled, *Lettres ecrites du Val de Grace,* Paris, 1840–41, he says: "A period of thirty years, more than 300,000 facts published in various works, the agreement of national and foreign practitioners, who have tried the new method, the advantageous results which they have obtained, if they cannot yet convince you of the possibility of curing almost all venereal diseases, by the employment of a simple and hygienic method, will make you at least doubt the specificity of mercury, and the utility of its employment in all cases." In page 13, he speaks of the satisfactory results of Dr. Fricke's treatment. "Dr. Fricke has already published more than 15,000 cases. Experiments prove that the non-mercurial treatment succeeds as well in cold as in warm climates." He informs us that M. Cullerier, chief-surgeon to the Venereal Hospital at Paris, had become a convert to the non-mercurial treatment of the disease, and quotes his opinions as given by M. Championnière. "First. That the relapses after the simple treatment, when regularly administered, are very rare, but that they occur at an early period after the primary affection. Secondly. These, after primary affections abandoned to themselves, are not rare; but, in general, they are not very serious. Thirdly. That the relapses after the incomplete mercurial treatment are very common, and that consecutive symptoms, of all degrees of severity, manifest themselves at every period. Lastly. That the relapses among individuals who, at the appearance of the primary symptoms, have undergone a mercurial treatment, even most completely, amount to a fourth part in the sum total of those he has observed; that these are very rare, and almost always consist of affections of the fibrous and osseous systems, chronic tubercular affections of the skin, or extensive ulcerations of the mucous cavities."

It appears that M. Desruelles' brother was also surgeon-in-chief to the Military Hospital at Rennes, and both of these gentlemen kept detailed accounts of their treatment

from the year 1826 up to 1838. They thus collected 25,000 cases in Rennes and Val de Grace. Their conclusions are as follows:—

"1. After all treatments there are relapses.

"2. These relapses consist in diseases of the anus, skin, mouth, throat, nasal fossæ, and osseous system.

"3. It is doubtful whether pains or serpiginous ulcers are manifested after the simple treatment.

"4. The bone diseases, the ulcerated buboes, affections of the throat or nasal fossæ, are extremely rare after simple treatment.

"5. The relapses are generally more frequent (in the proportion of 3 to 1) after the mercurial, than after the non-mercurial treatment.

"6. The mercurial treatment does not determine all the diseases which are attributed to it by the exclusive partizans of the simple treatment; but it accelerates their development, it increases their intensity, and gives them always a character of gravity, which the same affections lose when they succeed to the simple treatment.

"7. These morbid phenomena treated without mercury, get better generally in a shorter time than when mercury is employed. But in certain circumstances the mercurial medicines are of use, to assure the success of the cure, which, nevertheless, in different organisms, do not put them out of danger of relapses, or development of other consecutive diseases.

"8. It is almost always after mercurial treatment, many times repeated, that we see appear the phenomena which are known by the name of verole, constitutional syphilis; deep and grave diseases, which offer an assemblage of different affections, and constitute a diathesis, which we must combat by mercurials in excessively rare cases.

"9. There are some idiosyncrasies, which do not escape from consecutive disease, whatever be the means of treat-

ment employed for curing the primaries, and, as then the use of mercurials is almost always dangerous, we must take the greatest care in giving them to such persons. It is more rational, in such cases, to trust to simple hygienic treatment."

The next witness, whom I shall bring forward is Dr. Fricke, whose name is well-known as a surgical authority, both in Germany and in France. In a work, entitled *Annalen der Chirurgischen Abtheilung des Algemeinen Krankenhauses*, in Hamburg, von E. G. Fricke, Doctor, Hamburg, 1828, there is a most detailed account of this gentleman's carefully-made experiments. From this work I intend to make copious extracts; and, as Dr. Graves has, in his *Clinical Medicine*, volume second, translated a portion of the above work, I shall avail myself, in some places, of his text, and refer the reader to the original work, or to Dr. Graves' translation, if he desires fuller information upon these decisive experiments of Dr. Fricke.

"The treatment of syphilis in the Hamburg Hospital was divided into two epochs, the mercurial period and the non-mercurial. The former period was, for males, 18½ months, from January, 1824, to July, 1825; and for females, 21 months, from January, 1824, to October, 1825. The non-mercurial period lasted, with males, two years and five and a half months; and with females, two years and two months."

1*st Period. With Mercury.*

"The forms of disease observed during this period may be seen in the annexed tables. On looking over them, a considerable difference will be seen between them and those of the second period; syphilis having exhibited itself in a

much more malignant form in the first period. Nocturnal pains, caries of the nasal, palatine, and other bones, obstinate and extensive cutaneous eruptions, general lues, syphilitic cachexia, &c., were among the most ordinary phenomena; while in the second period they were of rare occurrence, and observed only in those, who had been subjected to long and injurious courses of mercury. That which commenced with superficial ulcers of the genital organs, appeared as bubo, then as ulceration of the throat, next as extensive cutaneous eruptions, which often gave rise to ulceration, then harassed the patient with nocturnal pains, caries of the bones of the face, and loss of the hair, until it terminated in syphilitic cachexia, general and incurable lues, consumption, emaciation, and dropsy. The mode of treatment employed during this first period was various; and regulated by the peculiarities of each individual. No undue predilection was shown for any particular form of mercury. The soluble mercury of Hahnemann was chiefly employed, in doses of a grain twice a day; in a number of cases calomel was used, in like doses. Corrosive sublimate was given in solution, three grains to eight ounces, generally with a little opium; one ounce was given three times a day. Thirty-three cases were treated with mercurial inunction. The latter, which was employed in thirteen women (in some persons twice), was had recourse to only in obstinate and extensive forms of the disease. When syphilis was inflammatory, an antiphlogistic regimen was at first employed.

"With regard to the duration of treatment, a remarkable difference will be perceived on inspecting the tables of both periods. I have taken an average of the number of days spent in hospital, as well by patients labouring under the different forms of syphilis, as by the general class, and added it to the tables. The relative proportion of this cannot always easily be stated, for no general law can be deduced from a few cases; but, in comparison, a difference in favour

of the non-mercurial plan is readily perceived. With regard to the certainty of cure, so far as the mercurial treatment is concerned, we must say, with many of our unprejudiced colleagues, that we are convinced, by bitter experience, that syphilis very often returned in the secondary form, after the most cautious use of mercury, the most careful selection of the preparations, the strictest attention to diet, and all proper precautions. Of 573 patients treated during the first period, one-third were attacked with secondary symptoms; all of them were treated with mercury for the primaries, although it is to be observed that the smallest portion of these had been under our care. Of those patients treated during the second period, who were attacked with secondary symptoms, by far the greater portion had at an earlier period and before admission, or whilst in hospital, used mercury for the cure of the disease. Many patients, in whom the disease was supposed to be eradicated, came back (particularly after the mercurial frictions) with caries of the bones of the face; some of them were afterwards cured without mercury, others are still under treatment.

"On examining the bodies of those who had died under treatment, particularly under the use of mercurial frictions, and while the mouth was affected, we did not find the parotid, sublingual, or pancreatic glands enlarged. They were, however, larger than usual, and, when slit open, had in a remarkable degree, the odour peculiar to salivation. In one case the submaxillary glands were enlarged; but, with the exception of some slight indurations, otherwise unchanged. In the case of a young woman, who had frequently used mercury, and who died twenty-two days after a protracted course of friction, on boiling some portions of the thigh bones and tibia for an hour in water, we found somewhat more than half a drachm of mercury."

Second Period.—Treatment of Syphilis without Mercury.

"When this mode of treatment was introduced into our wards by Dr. Fricke, he at first submitted only a small number of patients to it, and chiefly selected those whose future prospects depended on their being cured in the speediest way. Having afterwards discovered, contrary to his expectations, that the disease was cured more rapidly in this way, and relapses much fewer and slighter, it was extended to all cases, with such modifications as experience suggested. At this time, February, 1828, after a trial of two years and a-half, and the successful treatment of more than a thousand patients, the results of this treatment have proved so favourable that there appears no reason for lightly abandoning it, or returning to the former plan of treatment. As already stated, patients are cured in a much shorter time than before, and leave the hospital with much healthier looks. All the unpleasant phenomena, attendant on salivation, no longer harass them. Formerly, notwithstanding the greatest attention and cleanliness, it was impossible to remove the foul smell from the venereal wards, or to keep the rooms or beds clean. The air was tainted with the offensive odour of salivation, or syphilitic caries, and filth was the order of the day in all the wards occupied by patients under full salivation. At present, there is not a trace of this air in wards containing sixty, seventy, or sometimes a hundred patients; and the venereal department of the hospital rivals the other divisions in purity of the air and cleanliness. Syphilis seems, too, gradually to become more simple; at least it never appears in the same malignant forms as before, when little or no mercury has been used. As every medical man is allowed to visit the hospital, any one may convince himself of the truth of the statements. From the surveillance observed by the public over prostitutes, the attention and experience of the surgeons appointed by the Government

to inspect them, and from the circumstance that such females come to our hospital for the relief of all diseases under which they may happen to labour, we are enabled to keep a strict control over their diseases.

"Those who live in the town, constituting three-fourths of them, under the jurisdiction of Hamburgh, and those who live in the suburb named Hamburgsberg, are examined twice a week by two Government surgeons. Every female is obliged, each time, to bring a book, in which her state of health is entered. Those who are found diseased are immediately sent to the hospital. Unfortunately, we cannot exercise the same control over males, and with the same accuracy and precision. A large number of the males under our care leave Hamburg, and many of them, when they get fresh infection, or secondary symptoms, apply elsewhere, and are usually treated with mercury. Hence, of course, in these cases the accuracy of the result is disturbed and rendered uncertain. Many who are cured and remain well do not keep the promise which is exacted from all who are dismissed—to let us see them again. Some, in fine, lose patience and leave the hospital before their cure is entirely completed; this, however, has not occurred for the last half year. All these considerations combined, render it extremely difficult to ascertain the truth in each individual case. There remains, however, a number of male patients who are kept constantly under observation."

General Treatment.

"We endeavour to fulfil four conditions, viz.: cleanliness, rest, a strict diet, and (in a therapeutic point of view) an antiphlogistic plan of treatment. Cleanliness is of the greatest importance towards a speedy and successful termination of the cure. Several patients were cured by the use of warm-baths and ablutions. On the other hand, a neglect of these precautions has been the cause, either of the origin,

or of the deterioration of many forms of the disease. On entering the hospital, all syphilitic patients, unless perfectly clean, are put into a warm-bath. This operation requires to be looked after more carefully in men than in woman; the latter being naturally more cleanly. Again, places on which ulcers, condylomata and exanthemata are seated, the glands and prepuce in gonorrhœa, and all carious bones are cleansed from pus, mucus, and dirt, by frequently washing and sprinkling, rinsing and sponging with warm water. Pus is never allowed to collect on ulcers, or on the prepuce or glans in gonorrhœa. A most important rule is to prevent the excoriation, chancres, and condylomata from coming in contact with the healthy mucous surface or skin. To accomplish this, we put pieces of lint soaked in lead lotion, water, or black wash, into the folds, &c.

"Rest is necessary; particularly during the first period, and when the disease exhibits inflammatory characters. Hence all patients, when admitted, are confined to bed. With regard to diet, each patient was allowed at first four ounces of bread a day, three pints of gruel, and six spoonfulls of vegetables at noon. They were not allowed to drink beer, brandy, or water, but only thin gruel. As soon as the characteristic appearance of the ulcers began to vanish, or an improvement took place, the diet was gradually made more nutritious, according to the state of the constitution, and the wants of the patient, and when other matters went on favourably, meat was allowed. In the case of females, who seldom remained in hospital longer than three or four weeks (some not more than fourteen days), and who require less food than males, the first kind of diet was generally continued until the end of the cure: in males it was usually changed in a fortnight or three weeks. The appearance of those who were dismissed after a long stay in hospital, was that of persons in perfect health, and, when strict diet had not been too long continued, not at all deficient in bodily strength. The

therapeutic means employed were by no means complicated, and have been latterly rendered more simple. Venesection is at present confined to cases of plethoric habit, or high local inflammation, and consequently is not very often employed. Leeches are sometimes used."

In cases of secondary syphilis, particularly when the disease came on after the non-mercurial treatment, venesection was occasionally employed. The treatment commenced with a drachm of sulphate of magnesia to an ounce of water, *ter die*, so as to produce several stools, and afterwards one in the course of the day. The decoction of woods and nitric acid were also employed, in doses of half a drachm of nitric acid to twelve ounces of water; an ounce, three times a day. Soap baths, an ounce of soap to each bath were employed; also baths containing salt or mineral acids, or corrosive sublimate, or caustic potash. Many kinds of lotions were used for moistening the lint in the dressing of the sores.

"With respect to the prognosis of chancres, we were always able to make it invariably good. None of the species extended to any remarkable degree, either in depth or in extent, when submitted to treatment. Even phagedænic chancres, which had in many cases committed great ravages, before the patient's admission, were healed in such a manner, that a great portion of the devastation was supplied by healthy granulations. Hunterian chancres, so small as to measure but a line, were extremely slow in healing. So were ulcers on the frenum in males. Chancres made by art required as long a time for cure as Hunterian chancres of the same size. In the folds of the organs of generation, as for instance between the labia and nymphæ, the parts were separated and the angles cleaned and frequently washed and dressed with lint, and the dressing changed several times a day. If the ulcer suppurated freely the dressing was used oftener. If there was no advance in the healing process the lotion was changed and lime water, aqua phagedænica nigra,

&c., were applied, or recourse was had to ointments, which were used chiefly in cases where the chancres had become very small, and suppurated sparingly. An ointment composed of unguentum zinci half an ounce, balsam of Peru a drachm, potassa fusa a scruple, and called the black ointment, was found very useful when the ulcer was healed up to a certain point, but would not scar. The ointment was allowed to remain unchanged for two or three days, until it was thrown off by the pus or by a scab. If the new skin exhibited any roughness or chafing, so as to threaten to break and become raw again, we used the ointment for several days in succession."

"Spongy ulcers were treated with a lotion called "the green lotion;" composed of sulphate of copper half an ounce, alum half an ounce, to water, a pint. A very large deep phagedænic ulcer, with or without phymosis, required from three to four weeks, to eight weeks and sometimes more to heal. Ulcers on the posterior walls of the pharynx had always an ash-coloured base; altered the voice greatly; were in general covered with a greenish-yellow mucus, a portion of which flowed down when the mouth was open, so as to render it a matter of difficulty to recognise them. Ulcers of this kind always appeared after long mercurial courses, and healed very slowly, but with certainty."

Syphilitic Eruptions.

"Pimples, at first discrete, of a bright liver colour, generally appeared after non-mercurial treatment, and disappeared completely and quickly. In cases where mercury had been taken, brown spots, first light, afterwards darker, appeared on the back. Large purple spots also, seated on the extremities and shoulders, raised above the surrounding skin, partly raw and partly covered with crusts, frequently turning into deep ulcers, were seen. This form of eruption was remarked only when large quantities of mercury had

been used. . . . . The treatment of eruptions was extremely simple. It commenced always with ablutions, with soap and warm water, and the purging mixture of Epsom salts. By such means alone the non-mercurial eruption was generally cured. When the eruptions were bad, then nitric acid baths, a fluid ounce to each bath, were used; and spots on the face were bathed with a lotion, containing one grain of the bichloride of mercury to an ounce of water. In some cases ulcers had to be blistered, and then treated with zinc ointment, after mercury had been employed. In general we considered the use of baths as the most valuable means of cure in syphilitic cases. Sometimes we are able to draw a tolerably fair conclusion from their influence upon the eruption, as to the quickness of its course, and sometimes we are able to effect a cure by its means alone." Six to eight baths were found sufficient in some cases. During 1827, the syphilitic patients took 14 saline baths, 38 zinc baths, 103 warm baths, 302 corrosive sublimate baths, 314 nitric acid baths, 330 soap baths. In page 272, et seq., of Dr. Fricke's work, we have the recital of a number of cases, treated without mercury, and I shall give a few of them in a condensed form.

Johanna B., aged 20, entered January, 1826, with deep ulcer on right tonsil; was cured in 26 days without mercury. In July, 1826, she came in again, with Hunterian chancre on the right nympha and condylomata. In 14 days she was cured. She returned to hospital in December, for a contused foot, and was found to be perfectly free from symptoms of syphilis.

Dr. Fricke remarks, what I have always perceived in cases not previously interfered with by mercury, that the natural eruption is at first discrete, of clear brown colour, at first like the skin, afterwards somewhat elevated and obstinate; usually appearing at first on the forehead, extending to the breast and back, and but rarely seen on the

extremities. Sometimes little pustules were seen, seldom as large as the head of a large pin; such were the common eruptions of patients who had been treated without mercury, and they disappeared completely in a short time. The following cases, condensed from the originals, will illustrate this :—

Ernestine G., entered March 27, with conical condylomata at the anus, and at the lower part of the belly a very thick exantheme, like that above described. Some nitric acid baths, a fluid ounce to the bath, were given. The eruption disappeared in thirteen days.

Emma K., age 18, entered 26th November, with condylomata on nymphæ, swelling, and inflammation of both tonsils. Liver-brown scurfy stains on face, especially on forehead. Cured in eleven weeks. The eruption disappeared of itself.

Maria R., entered November, 1825, with Hunterian chancre on right nympha. During treatment, without mercury, there appeared the above-mentioned eruption on forehead and thighs. A few soap baths cured her, and she left the hospital in ten weeks, quite well. In the winter of 1826, she was for some time in hospital, without any symptom of syphilis.

Anna G., age 19, had Hunterian chancre in September and October, cured in four weeks. Fourteen days after going out, she returned with ulcers and eruptions. The exantheme was like that above described. In two months she was perfectly cured. She took 30 nitric acid baths.

Dorothea J., age 30, was treated, January, 1826, for ulcers and condylomata. March 26, treated for two ulcers for nine weeks. August, 1826, ulcers on nymphæ and exantheme of arms. Was cured in seven weeks.

Doris L., December, 1825, was twenty days in hospital for primary sore. April, 1826, four weeks for excoriation. July, 1827, had three ulcers. During her stay in hospital, an eruption broke out on the thigh and left arm. She left

perfectly cured in three weeks, after using thirty-four nitric acid baths.

G., glove maker, age 18, in July and August had suppurating bubo and ulcers. Treatment, for five weeks, without mercury. Fourteen days after leaving, came back with condylomata and exantheme on forehead. Constant use of soap baths cured him in five weeks.

Dr. Fricke mentions, that alopecia was found only among those patients who had taken mercury. He found the best remedy to be moving about in the fresh air, and observes that the hair grew again when the symptoms had disappeared. Nor did he ever perceive iritis among patients treated without mercury, a disease which we so frequently see in London in like cases after interference with mercurials. In some cases cited by Dr. Fricke, death seems to have been rapidly caused by the use of inunction. The following condensed cases may illustrate this :—

Anna C., was, in 1824–25, for fourteen months in hospital, for ulcers and scrofulous disposition. She used inunction, and left uncured. In February, 1827, had dropsy and died.

Catherine S., age 28, entered July, 1824. Had taken much mercury. Was anointed with mercury, and died suddenly after the fifth inunction.

Sophia B., age 24. Had from May to August, 1824, taken mercury for primary sore. In October, 1825, was anointed. After twelve inunctions, died with universal dropsy.

W. N., age 42. Much treated with mercury. December, 1826, caries of nasal bones and phthisis.

Christina M., age 21, June to November, 1827. Treated with mercury for syphilis, and died five months after of hectic fever.

The following are some cases also not ending in death :—

Magdalen H. was anointed in the years 1824–25. In autumn, 1827, entered, on account of chronic bone ulcer and diarrhœa. Had no nose, and scars over her face.

N., a tailor, was twice anointed for a lengthened period. Lost thereby his nose and part of upper jaw, and part of temple bone.

Dr. Fricke's just quoted observations appeared in 1828; and Dr. Graves, in a lecture delivered in Dublin in 1838, *Clinical Medicine*, vol. ii., page 430, says: "As ten years have elapsed during which Dr. Fricke has continued to conduct the treatment in the Hamburg Hospital, I took the liberty of writing to him, for the purpose of ascertaining, whether subsequent experience had induced him to alter his views. His answer was, that instead of altering his views, experience had confirmed them." And in page 431, "Dr. Fricke has had no reason to abandon his new method of treatment; on the contrary, further experience has not only confirmed his previous observations in every instance, but also a series of cases, now amounting to several thousands, have forced upon him the conviction of the superior efficacy of what has been called the antiphlogistic treatment." As before quoted, Dr. Desruelles mentions that Dr. Fricke had treated 15,000 cases.

Dr. Graves states that Dr. Strunz, in the *Berlin Medical Gazette*, in an article entitled, "On the Non-Mercurial Treatment of Syphilis in the wards of the Charité, Berlin, observations made during twelve months," says:—

"Among patients, some of them greatly neglected, Dr. Strunz has not met with a single case in which the non-mercurial plan has not succeeded, when instituted with a clear understanding of the peculiarity of the local disease. On the other hand, he has seen many out-patients treated with mercury for weeks and months together, without any advance being made towards the healing of the primary

sores, or, in many instances, without any effect in arresting their destructive progress. In the Charité Hospital, not only primary sores have been treated for the last half year without mercury, but all forms of the disease. It might be objected to the non-mercurial treatment, that it does not afford any protection against the recurrence of the disease, that it does not ward off secondary symptoms. This may be true, but neither does mercury.

"If mercury, then, will not secure the patient from secondary symptoms, it is not unreasonable to have recourse to another plan, which at most, cannot be attended with more unpleasant results, and is free from the disadvantage of a double poison of the system. Both modes of treatment were followed at the Charité, and it was found that, under a similar management of the local affections, the patients, who were treated with mercury could not be discharged for one, two, three or four weeks after those treated without it."

In a work entitled *Die Behandlung der Lustseuche ohne Quecksilber*, von Dr. F. Oppenheim, Hamburg, 1827, the author gives an exhaustive catalogue of the numberless plants, minerals, &c., which have been used as specifics, in the cure of syphilis, and ends with a description of the so-called "hunger cure," to which he gives the preference over all the others. He also gives an analysis of some of the cases treated by Dr. Fricke, from July, 1825, to January, 1827, with 101 men and 301 women. It appears that 51 men and 257 women had primaries, 36 males and 18 females secondaries in the throat, and eruptions without complications; 14 males and 26 females had secondaries when first seen. And it appears, according to Dr. Oppenheim, that these patients remained on an average fifty days in hospital; whilst, when mercury was used, almost double the time was needed for the cure. Dr. Oppenheim writes as follows to Dr. Graves,

in 1838: "In Hamburg, the number of non-mercurialists increases daily; among the young physicians, who have been practitioners for the last eight years, there are only two or three mercurialists." And, in a work on prostitution, by Dr. Sanger, published in 1860, I find that, "The treatment of syphilis adopted in the Hamburg Hospital was introduced by Dr. Fricke, one of the first to introduce the non-mercurial system. Ricord's system is also followed, and hydropathy has been tried."

In the *Lettres ecrites du Val de Grace,* by Dr. Desruelles, Paris, 1840–41, I find an account of the great national experiment made in Sweden, by order of the Government, during fifteen years, in which time 46,687 cases were recorded. The following are some extracts from the "Circular Letter of the Royal Council of Health to the Medical Officers employed in the Civil and Military Hospitals, concerning the Venereal Diseases, which are there treated by different methods, from the year 1822 up to 1836, a period of fifteen years." . . . . .

"1. Ulcers were the most common form of the disease; about one-fourth of the patients had ulcers. In this form the Council has arranged ulcers of the mouth, of the throat and nasal fossæ, which are frequently observed among patients to whom mercury is given, in Sweden. Disease of the bones are more common in Sweden than in France; but it is in these especially that you will remark how happy has been the influence of the simple treatment; for, on comparing the cyphers of different epochs, we see a remarkable diminution of the number of cases. Thus, in 1822 twelve per cent. had diseased bone, and in 1836 only seven per cent."

"During the fifteen years, half of the cases have been treated by mercury, or forty-six per cent. by it, and fifty-four

by the 'hunger cure.' In the year 1822, 61 per cent. were treated with mercury; in the next five years 55 per cent. were treated with mercury; in the next five, 40 per cent.; and in the next five, ending 1837, 25 per cent. were treated with mercury.

"During the fifteen years which have passed, the relapses after the mercurial treatment have been 33 per cent.; after the simple treatment 16 per cent. To the advantages which we have just related to you, you ought to add the amelioration remarked in the aspect of the relapses, of which the character has been less intense, and the dangers almost nil. Thus, we have rarely remarked ulcers of the nasal fossæ, of the throat, of the mouth, or diseases of the skin; a notable diminution has been especially remarked in the frequency of the affections of the fibrous and osseous systems; being 12 per cent. in 1822, and 7 per cent in 1837, and chiefly appearing in men who had taken mercury."

Conclusions.

"1°. The number of persons admitted into the hospitals, to be treated for venereal diseases, has diminished since 1822, while the population has increased.

"2°. Non-mercurial treatment has gained more and more on public opinion, and is employed more each year in the cure of syphilis.

"3°. The relapses, or falling back, have been rarer after the non-mercurial than after the mercurial treatment.

"4°. Thus, it appears evident, that mercury should no longer be considered a specific indispensable for venereal disease. In the most cases a simple *régime* and local treatment suffice. This result is very important, if we consider the accidents which the employment of mercury brings with it, even when employed in the manner most conformed to the end proposed.

"5°. There are cases where mercury is useful; but then we ought to administer it in small doses, and make patients take a soothing diet.

"Signed at Stockholm, &c., &c., June, 1837."

The natural history of venereal ulcers and their secondary symptoms, when treated by rest, diet, cleanliness, and common rational treatment, which prevails in other complaints, and not interfered with by the poison of mercury, is, almost universally, so comparatively trifling an affair, as to have induced a physician in Paris, in the year 1827, to question the existence of the poison syphilis. In the *Journal Général de Médicine*, Paris, 1827, is contained a paper by Dr. Richond, entitled "De la Non-existence du Virus Vénérien, prouvée par la raisonnement, et demontrée par l'Expérience." The author again gives his testimony, "That these evils may be easily cured without the aid of mercury, and by the common method of antiphlogistic (French antiphlogistic) medicine. Nearly three hundred cases, observed by the author, demonstrate the efficacy of this method of treatment. According to Dr. Richond, it results from these, that all the primary venereal accidents, grave or slight, may be cured perfectly, and more speedily, without mercury than with it. M. Richond, resting again on numerous facts in his own practice, or in that of others, demonstrates that the appearance of secondary symptoms is less frequent after the treatment by antiphlogistics than after that by mercury. Thus, of 1442 patients, treated by M. Richond by mercury, 63 were affected with secondaries; and of 947 by the simple method, only 24 were so affected. And, what is worthy of remark is, that those secondary symptoms treated again without mercury, were cured, in general, from the twenty-fifth to the forty-fifth day."

The reviewer of M. Richond's work, although by no means

agreeing with his author, as to the non-existence of a poison of syphilis, yet adds: "M. Richond has thought it necessary to consecrate a half-volume to prove that both the secondary venereal phenomena are cured without mercury, and that sometimes the metal remains inefficacious, or even aggravates the disorders, which is a fact with which every one will agree."

CHAPTER VI.

REACTIONARY PERIOD.—M. RICORD AND THE SO-CALLED ECLECTIC SCHOOL.

I HAVE now carried the evidence against the use of mercurials in syphilis up to the year 1838, about which period M. Ricord, as appears in his *Lettres sur la Syphilis*, obtained, by competition, the post of medical officer to the venereal hospital called "Du Midi," in Paris. This gentleman has published many interesting facts with regard to the sequences of symptoms in syphilis, and, although he has, in my opinion, been one of the retrograde influences which have served to maintain the mercurial treatment longer in fashion, we may give him credit for the ingenious experiments devised, for diagnosing between the various kinds of syphilitic ulcers, and also for having given up mercury in the treatment of gonorrhœa, and of a large number of cases of ulcers. I cannot say that his method of mercurial treatment has done much to raise any emotion of admiration in my mind, for, on the whole, I think there can be but little to choose between Astruc, John Hunter, and Ricord, in the cases where they use mercury. Six months of a daily dose of iodide of mercury, followed by three months of iodide of potassium, produce, in my experience, sometimes all the horrors that have been described among the most classical authors of the time of Astruc and Hunter (and testimony to this effect will be adduced by Professor Syme, and also by M. Diday), and, that, not in France only, but in London,

in the practice of those who have adopted the treatment of M. Ricord. Were I not to give a short outline of M. Ricord's views on pathology and treatment, it would probably be objected by many of his disciples, that I am guilty of the fallacy of *ignoratio elenchi*, when using the term syphilis. If I make any error in stating the views of this gentleman, it is not because I have not read enough about them, nor because I have not witnessed the practice and the results both frequently in M. Ricord's own wards, and also in the hospital practice of his disciples in London.

In his *Lettres sur la Syphilis*, Paris, 1858, M. Ricord commences by stating that syphilis always arises from an ulcer, or by hereditary transmission alone. He has proved, by inoculation, that cases of urethritis, which cannot be inoculated, will never be followed by secondary symptoms; and that they are simply inflammations of the urethra, and ought to be treated without any of the mercury and iodine which, in his opinion, are absolutely necessary for true syphilis; but when inoculable, he considers that these drugs should be used. Dr. Fricke observes in his *Annalen*, that no particular advantage was found in separating the *treatment* of cases of urethritis from those of ulcers, &c., for they both got well by means of topical treatment, rest, and low diet; and, as far as common urethritis goes, M. Ricord's treatment is identical with that of Fricke. M. Ricord says that he has inoculated on the same patient, in hundreds of cases, pus from chancre, from balanitis, from urethritis, and from simple phlegmons of other regions; and, whilst the pus from the chancre inevitably reproduced the disease, the others remained inactive. M. Puche and he commenced a series of experiments on the subject, and made inoculations with pus from rupia, from tubercles, and from ecthyma, and secondary symptoms; but all these inoculations gave negative results. He thus has proved that secondary symptoms are not contagious, nor did he believe in the contagion of infantile syphilis at the time when the letters were written.

The inoculated sore assumes, he says, the form of ecthyma. "In the numerous inoculations I have made, things have always gone on as follows: immediate evolution of the puncture, constant production of an ecthyma, whose ulcerated bottom presents the classical and typical character of chancre, *i.e.*, ulceration, with tendency to increase or to remain in a special *statu quo*." In his 16th letter he observes: "We find so frequently, I will say even so regularly, that the indurated chancre is derived from the indurated:" but further on he says: "Up to the present it is permitted to us to believe in the existence of only one poison, and to admit that the chancre is always due to an identical cause; and that its varieties of forms and consequences are determined by the conditions in which the individual is placed, on whom it develops itself, or by other accidental causes."

M. Ricord's division of the chancre is much like that of all authors that have written minutely on the subject. He divides the ulcers into simple, inflammatory, phagedænic, and indurated. On the first three of these varieties he holds precisely the same doctrines, as to treatment, as Desruelles, Fricke, Syme, &c., acknowledging that they are all better cured without mercury; and requiring rest, topical applications, and aperients alone. He insists, with Hennen and Fergusson, upon the fact of alcohol-drinking being a prominent cause of the phagedænic sore. The great point of divergence in his doctrine from those of the physiological school lies in the treatment of indurated ulcers. He says: "The knowledge of induration of this character, which some ulcers put on, is nothing new; some persons assert that we can find traces of it in Galen, which would not surprise me, who believe in the antiquity of syphilis." His doctrines, with regard to the indurated sore, are very categorical; thus he asserts that, "A patient, who has once had an indurated sore, will never have another," and "when chancres indurate, secondary symptoms will certainly arise." "The indurated sore is to syphilis,

what the true pustule of variola is to variola." He says that the non-indurated sore "is a pseudo pustule; it is a false vaccination. . . . . The disease, once contracted, can no more be again contracted, than variola can be so twice."

This induration, he observes, never occurs before the third day after inoculation, and it may be imitated by corrosive sublimate applications, by liquid acetate of lead, or by the actual cautery. The sore after being indurated sometimes becomes phagedænic; and, again, the induration is in some cases but ill marked, and like a piece of parchment under the surface. Sometimes this induration soon disappears, in less than a month, sometimes it lasts for months, and even for years. Induration is the passage of the primary into the secondary symptoms; and, hence, lasts but a short time with the power of being inoculated. It has no particular microscopic appearance by which it may be known.

The knowledge that induration does not come on for some time after inoculation, has enabled M. Ricord to state, that, if deep cautery be practised on an ulcer before the fifth day, no secondary effects will ever appear. For this purpose he uses Vienna paste, of which one application is sufficient, and also a paste composed of strong sulphuric acid and powdered charcoal. He considers this "cautery as an admirable method and, in the social point of view, the most powerful prophylactic, since it destroys promptly and securely the contagion and extinguishes the focus of infection."

With regard to prognosis, M. Ricord's doctrines concerning buboes are interesting. In his 27th letter he says: "The bubo which we observe with non-indurated chancre, not only never precedes it, but shows itself after the first week." In such cases, he says, the bubo is most frequently mono-ganglionic, it only effects the superficial glands; it most certainly tends to suppuration. There are cases also, where a deeper gland has absorbed the poison, and on being

opened its pus may be inoculated. Buboes which succeed indurated sores, he says, come on soon, about the second week, and are invariable. The affection is rarely limited to one gland, but is multiple, and the glands are rarely larger than a hazel nut. No bubo that suppurates specifically, or which furnishes inoculable pus, is ever followed by constitutional symptoms, and the multiple, or indolent bubo, is one more proof, sometimes the only one, that the constitution is infected. Non-specific buboes rapidly heal when opened; the others turn into chancres. When the disease is not interfered with, he says, and when there has been a hard sore with multiple glands, "six months never elapse without manifestations of syphilitic poisoning taking place." Generally they appear from the fourth to the fifth week, and about this time are found, what he denominates, secondary adenopathies; that is, induration and enlargement of the glands of the neck and posterior cephalic region.

Alopecia is, according to M. Ricord, one of the earliest symptoms in the natural history of the disease. It will be remembered that Dr. Fricke did not observe this symptom among any of the cases in his report, when not treated with mercury; so that, at any rate, it cannot frequently occur in the natural disease. According to MM. Puche and Cullerier, exanthemata, of a roseolar or erythematous character, are almost always found among the secondary symptoms, when we know how to look for them. M. Ricord next describes induration of the testicle, iritis, diseases of the bones, which, he says, rarely come on before six months after inoculation, and also tumours in the cranium, lungs, liver, &c.; all of which, he asserts, are among the catalogue of the natural sequences of the indurated sore, when untreated.

M. Ricord confesses that indurated sores heal very well without any mercury. "Some specialists," he says, "convinced, like myself, that the majority of the primary accidents heal by themselves, quickly and well, by the cares of hygiene

and simple medication, wish to avoid having recourse to any specific treatment, until we have proofs of general poisoning, and that the treatment should only be commenced against accidents of a secondary character." He commences a daily dose of mercury whenever an ulcer becomes indurated, and says: "for myself, when I have before me an indurated chancre, I have recourse, as soon as possible, to a specific medication, that is to say, to a mercurial treatment." He is opposed to salivation, but says: "six months of treatment, with a daily dose, which influences the accidents we have to combat, and which indicates, after their disappearance, that the remedy still acts, by its well-known physiological effects; followed by a three months' treatment by iodide of potassium, destined to prevent the manifestations of the distant affections of the diathesis; such is, gentlemen, the course of treatment, which is attended by the happiest results, and which is followed, in the greater majority of cases, by the complete neutralization of the poisonous virus." I may add that M. Ricord's favourite form of the metal is the protoiodide of mercury, which he administers in doses of one, two, or three grains a day for six months, followed by large doses of ten, twenty, and even thirty grains of iodide of potassium, three times a day for three months.

A more mistaken system of slow and destructive poisoning of the human frame, it appears to me, has never been employed in the annals of medical art. Such horror does it excite in my mind, who have already related cases which have come under my own observation, as well as those of others, of death caused by a few grains of this treacherous mineral, that I cannot refrain from here quoting the very energetic denunciation of this practice, given by Professor Syme in his *Principles of Surgery*, edition, 1856: "A fearful system of scientific quackery has in recent times been founded on the ruins of the old mercurial delusion; and, although the so-called modified use of mercury, which is at present so

much the fashion at Paris and elsewhere, may not be so speedy in its effects, I can testify, from what has frequently fallen under my observation, that it empties the pocket, and injures the health no less effectually, than the process of poisoning, which it professes to have so advantageously superseded . . . . . In cases where mischief has been done by the administration of mercury, it is sometimes necessary to employ an antidote, and, for this purpose, iodide of potassium, in small doses, has rendered the most valuable services."

My own experience fully corroborates the above remarks, for it has been my lot both in Paris, whilst attending M. Ricord's Clinique, and in London, in the patients of his disciples, to observe the most melancholy instances of what, in my opinion, were the injurious effects of his treatment, in universal eruptions, large ulcers of soft parts, and caries and necrosis of the bones of the nose, &c., &c. One of the most striking examples of false reasoning, anywhere to be met with in the records of medicine, appears to me to be found in M. Ricord's account of tertiary symptoms and their treatment. Thus, he says of mercury, "More powerful against secondary, than against tertiary symptoms, mercury sometimes hinders the first to appear, whilst it permits the others to come on. Thus, after a chancre is treated by mercury, the first symptoms may consist in exostosis, &c." That is to say, when translated into the language of Fricke, Syme, Desruelles, Bennett, &c, a poison, like mercury, given to a person with ulcers, which have themselves a peculiar influence on the general health, produces so rapidly a deterioration of the tissues, that tumours arise, with caries of the bones, &c., instead of a slight chronic eruption, with sore throat, usually disappearing in six weeks. Truly a great triumph of art!

His views as to iodide of potassium also, I think, exhibit the same fallacy. He says, "Thus I may say, that the iodide of potassium, at first advised as a general medicine

for syphilis, and which gave such uncertain therapeutic results, has been definitively, by my clinical studies, reserved for that series of accidents named tertiaries, on which its action is all powerful." Now, it appears to me that, after a six months' course of iodide of mercury, which has caused ulceration of the bones of the nose, or secondary ulcers of soft parts, &c., we need not wonder much, that doses of iodide of potassium, which is an excellent remedy in mercurial, as it is in lead poisoning, should do valuable service; and, again, we need not wonder at the assertion, that iodide of potassium is not of much use before mercury has been given.

Mr. Acton is one of the exponents of M. Ricord's views in London; and in his work, entitled *On the Urinary and Generative Organs*, London, 1859, he gives very nearly the identical opinions of that gentleman. Thus, in page 49, he says: "Practice tells us that we can cure the simple ulcer locally, by water dressing; the phagedænic and irritable ulcer by iron; sloughing phagedæna by opium. We thus reserve mercury almost exclusively for some forms of indurated chancre, which require the mineral." The whole of Mr. Acton's doctrines, with regard to induration, &c., are so precisely identical with those quoted from M. Ricord, that I come to what he says about treatment. In page 352, I find, "But I presume there are few in the present day who dare to treat indurated chancre with local treatment only . . . Certain northern surgeons teach their pupils that mercury is not necessary for the cure of syphilis in any form. While the patient is in hospital and confined to bed, no very serious ill consequences may follow; but, in private practice, the after-consequences of neglecting the use of mercury will convince most medical men, as they have myself, that, whatever hospital surgeons, with European reputation, may do or omit, a private practitioner cannot admit syphilis to go unchecked,

unless at the sacrifice of his reputation. It is my deliberate opinion that mercury is absolutely necessary for the general treatment of indurated chancre; nor do I stand alone in this. Whatever difference of opinion may exist on the mercurial or non-mercurial treatment of simple or phagedænic chancre, authors, almost without an exception, agree as to the necessity of mercury in the treatment of indurated chancres, either for the treatment of the local affection, or for the prevention of secondary symptoms."

Readers of the voluminous evidence of Fricke, Desruelles, Hennen, Rose, John Thompson, &c., will know what value to set on Mr. Acton's "private practitioners'" argument, against the carefully recorded hundreds of thousands of cases where mercury had been dismissed.

In regard to the question whether mercury should be given to scrofulous persons when attacked with indurated chancre, Mr. Acton remarks: "In cases of genuine indurated chancre, when the surgeon thinks it necessary for the cure, I do not know of any counter-indication to its use . . . . . Ought not a phthisical, or a strumous diathesis, or general great debility, to counter-indicate mercury? The answer is, that the indurated chancre is the primary disease, yielding to no other in the import of its effects on human life and health. Clinical experience has taught me that no patient labouring under the syphilitic diathesis can recover his health till the specific disease, which is poisoning every vital solid and fluid, is eradicated." So that we are recommended by Mr. Acton, in cases, where every false move may produce a deposition of tubercle in the lungs and thus cause death, to administer a long course of a drug, which has always been admitted to be the most dangerous of all poisons to the phthisically inclined, to cure a disease which, in adults, without mercury, would probably never cause a single death.

Mr. Acton quotes Mr. Holmes Coote as follows: "My

friend Mr. Nesbitt, who has had charge of convicts at Gibraltar, for some years, informed me that, although such persons have, at the time of their committal, almost invariably some form of the venereal disease, yet they scarcely ever suffer from the disease, while undergoing their punishment. He could not recollect a single case of secondary syphilis." Those who have read the evidence of Fricke, Desruelles, &c., will not be disposed to doubt this result of careful and frugal diet and hygiene. In page 420, Mr. Acton says: "I believe we should continue mercury for six weeks to three months, even six months if it should be required, during which the mouth should be kept slightly affected," and he concludes his observation upon treatment by saying: "The day is however passed for the discussion of the non-mercurial doctrines." Such is the dictum of Mr. Acton; but he merely asserts, and we want large and accurate returns from mercurialists, which they have not yet, as far as I can learn, furnished. We cannot now believe because Mr. C. or Mr. D. asserts a dogma. Fricke and others have given long and careful records of their comparative experience; let M. Ricord, Acton, &c., do likewise.

With regard to iritis, an affection which Fricke, in his work, mentions only to have been met with in mercurial cases, Mr. Acton is a witness to the same effect, for he says: "I have been sometimes induced to think that a course of mercury predisposes to this affection of the eye." . . . . "It may be that mercury renders the system more liable to the rheumatic diathesis." In page 470 Mr. Acton contradicts Fricke, &c., without a word of counter-evidence to prove his assertions; for he there says, that persons who have of late years watched the disease, where no mercury has been given, have found it severe. "Daily observations prove," he says, "that if constitutional syphilis is treated without mercury, tertiary symptoms may occur." Where are these daily observations? I cannot find them published anywhere.

We have the results, too, of Fricke's experiments. Why not impeach their veracity?

In page 505 Mr. Acton again attacks the non-mercurialists thus: "It has been held that these pains in the bones are the effects of mercury; but, to prove this to be untrue, we need only recollect that these were described during the epidemic of the 15th century." Now this is a very feeble argument, for Mr. Acton, the pupil of M. Ricord, must remember that that gentlemen holds that epidemic to have been one of farcy and not of syphilis. Mr. Acton mentions that one-half of the surgical out-patients of Saint Bartholomew's Hospital are cases of venereal disease. Fortunately for these patients, in my opinion, this great hospital is now a house divided against itself, in the matter of the treatment of these diseases, for I am informed by Dr. Kidd, that in some clinical lectures of Mr. Skey, lately delivered, that gentleman abjured the use of courses of mercury for the disease; and, as appears from a quotation, hereafter to be given, from Mr. Holmes Coote, he also is nearly a non-mercurialist.

I extract another passage from Mr. Acton's work, to prove that the ordinary treatment of infantile syphilis is not very satisfactory: "Out of 85 infants, who in the year 1854 were born at the *Ourcine* Hospital of Paris, or, being under two years, entered with their mothers, I find that not less than twenty-four (*i.e.*, 28 per cent.) perished by the disease." M. Trousseau, a mercurialist, says that the disease almost always proves fatal, if it appears before 21 days after birth; and Mr. Acton, although sanguine as to the success of mercury in the form of inunction, thinks that mercury given internally may add to the danger by producing diarrhœa, to which I can also testify. Bringing up by hand is an additional danger, for Mr. Acton tells us that "of 127 foundlings so fed, only 29 remained alive at the end of the year." I am, myself, disposed to believe, from the facts related by Hennen, &c., that were mercury not used by the

parents, we should seldom, if ever, be witnesses to these dangerous infantile eruptions, so comparatively frequent at present; and I have also no doubt that abortions, which I believe to be due to syphilis and mercury, would be much rarer.

CHAPTER VII.

RECENT EVIDENCE AGAINST MERCURY IN SYPHILIS.

In the *Principles of Surgery*, by James Syme, Professor of Surgery, Edinburgh University, edition 1856, there is contained most decided and categorical evidence as to the injurious effects of mercury in syphilis. I have already quoted several passages from this work, and shall now add a few more. Speaking of the length of time required in the healing of sores on the penis, which he says is far longer than might be expected from their size, the author criticises the belief that there has been a new poison introduced into Europe, at the time of the discovery of America, which he denies. He also treats it as a fable, still credited by many, that this poison, when absorbed into the blood, has the power of afterwards producing all sorts of destructive action on the skin, and also on the bones, such as caries, necrosis, &c.

He adds: "It is now fully ascertained that the poison of the present day, although producing local effects in all respects similar to those arising from syphilis, does not give rise to the dreadful consequences which have just been mentioned, when treated without mercury. The case may be tedious, and the skin, throat, and periosteum may be slightly affected, but none of the serious effects, that used to be so much dreaded, ever appear; and even the trivial ones just noticed comparatively seldom present themselves. We must therefore conclude, either that the violence of the

poison is worn out, or that the effects formerly attributed to it, depended on the treatment. The latter of these opinions is supported by the fact that secondary symptoms of the utmost severity, embittering the patient's existence, and ultimately destroying it, are still met with in the practice of those who employ mercury profusely and indiscriminately. And it is a circumstance which cannot either be explained or denied, that the medicine produces these effects, more especially those on the bones, only in persons who are suffering from venereal ulceration of the genital organs."

The author mentions, what all who are not blinded by preconceived notions must have remarked, that a very different amount of mercury is requisite to produce these dreadful effects in different constitutions. Thus scrofulous persons and those who have previously taken much mercury, fall easy victims to this misguided treatment. He has no belief in the value of sarsaparilla, and uses iodide of potassium as an "*antidote*" in cases where mercury has produced severe ulcers, in persons who have had ulcers on the organs of generation. He treats the primary sore by nitrate of silver, as soon as possible after the appearance of the disease, and afterwards with black wash or sulphate of copper lotion. For phagedæna he recommends bread and water poultices, at first; and subsequently a strong solution of sulphate of copper, a scruple to the ounce. Also, sometimes leeching and opium fomentations, with aperients. In mercurial sloughing he uses caustic potash applications.

"If secondary symptoms appear," the author observes, "they should be treated merely by the ordinary principles, which guide the practice in regard to them when arising from other causes. In affections of the skin and throat, it is much better to abstain from mercury altogether, and either trust entirely to local means, together with suitable regimen, or to employ iodine in some of the forms in which it is usually procured. In affections of the periosteum and bones,

which, as already mentioned, never occur in a severe form, except when the patient has suffered from the mercurial influence; iodine is also found generally useful, the appropriate local treatment, and especially the regulated application of blisters, being at the same time employed." The author adds some expressions of so hopeful a character, that I can scarcely believe him to be aware of the extent to which M. Ricord's practice has been adopted by some of the most eminent London surgeons. "If mercury were never used improperly, the treatment of venereal diseases, both primary and secondary, would be very easy; and as its abuse is every day becoming less common, there is reason to hope that the formidable class of venereal diseases, on which volumes have been written, and particularly ulcers of this origin on the genitals, skin, mouth, and throat, will soon cease to be met with in practice." In a recent communication to the *Edinburgh Medical and Surgical Journal*, vol. xxxiii, p. 21, on mercurial ulcers of the lower extremity, Professor Syme says that "such ulcers used formerly to be treated with mercury anew, which delusion too frequently led the patient by progressive steps of emaciation, weakness, and disease, to the grave. The enlightened views of the late Dr. Thompson gave Edinburgh a distinguished place, in reforming this department of medicine. . . . . It was long since abandoned in this school, and succeeded by treatment of a local kind." The author recommends iodide of potassium internally for the cure of these ulcers.

I find that Mr. George Critchett, in his classical *Lectures on the Ulcers of the Lower Extremities*, London, 1848, after informing his readers that such ulcers come on after constitutional treatment has been long tried in vain, says, in page 99: "Under these circumstances the ulcer will maintain its original form and specific character; but yet is capable of

being cured by local means only." He recommends black wash or chloride of zinc paste to be inserted beneath the edges of the sore by means of pieces of lint.

Professor Hughes Bennett, in his *Principles and Practice of Medicine*, 1860, page 498, et seq., completely gives in his adhesion to the doctrines of John Thompson, Fricke, Syme, &c. After detailing a frightful case, which was in his wards, of ulceration of the face, after treatment of the primary sore by mercury, he mentions that it is now very rare, in Edinburgh, to see a similar case; and observes how immediately, in the history of the case, the symptoms had become aggravated when mercury was used. "So far as I know," he says, "we have no specific for any kind of animal poison; for you will remember that Jenner was of opinion, and there can be little doubt that he was correct, that in giving vaccination to man he was merely giving him small-pox in a modified form. The idea that mercury is a specific for the syphilitic poison, and the incalculable mischief it has occasioned, will constitute a curious episode in the history of medicine, at some future day. It is now well known, that the poison of mercury produces a cachectic disease and secondary sores in the body, &c." . . . . . "Syphilitic poison is no exception to the general rule, which informs us, that all contagious diseases of the blood run a certain course, and that we have not yet discovered a specific for any one of them." The author remarks that the disease is gradually becoming much milder in its aspect, because less interfered with by mercury; and he advises the profession to treat it on the same principles that they treat scarlatina. "The treatment of syphilis," says Professor Bennett, "may be said to be of two kinds, namely, the simple and the mercurial. The profession are rapidly deciding in favour of the first." I am glad to have this said by a gentleman who is well

acquainted with the practice of so large a number of the profession; my experience in London and Dublin, however, convinces me that the spread of mercurial views is both wide and deep, among the majority of the leading physicians and surgeons of these cities.

The author describes the simple method of treating syphilis precisely as Fricke, Desruelles, &c. "The simple treatment is divided into internal, or medical; and external, or surgical. The first consists in the observation of certain hygienic rules, and the employment of general therapeutic means. The diet must be light and mild; meat and stimulating viands retarding the cure. Even with the lightest diet, the hunger should not be quite appeased. Regimen must be more diminished and rigid, in proportion to the youth and vigor of the patient. Diluent beverages, decoctions of barley, liquorice, or linseed, alone, or mixed with milk. . . . . Perfect rest must be observed, by confinement to bed. Constipation must be obviated by emollient clysters, or mild laxatives." Such is the treatment recommended, identical with that of Fricke, in the Hamburg Hospital. After describing the mercurial treatment, Dr. Hughes Bennett adds: "Both kinds of treatment have now been extensively tested." He refers to Fricke's experiments as conclusive of the injurious nature of mercurial treatment, and mentions that that gentleman had published 5,000 cases treated without mercury; in which cases, "he has never observed caries, loss of the hair, or pains in the bones follow, and in all such cases as have come under his care much mercury had been given."

He mentions, that in 1833 there were reports published by the French Council of Health, and from the physicians and surgeons attached to the military hospitals in various parts of France. "They all agree in stating the cures by mercury to be a third longer than by the other method. Between 1831 and 1834, 5,271 patients had been thus treated,

and the number of relapses and secondary symptoms calling for the employment of mercury was very small. No cases of caries occurred; only one or two of exostosis had been observed. In the various reports thus published, more than 80,000 cases have been submitted to experiment, by means of which it has been perfectly established, that syphilis is cured in a shorter time, and with less probability of inducing secondary symptoms, by the simple than by the mercurial treatment." And yet, Mr. Acton says that, "the day is, however, passed for the discussion of the non-mercurial doctrines."

Professor Bennett, speaking of the Edinburgh Infirmary, says: "Seventy years ago the most frightful secondary and tertiary symptoms were met with, and the usual treatment was profuse salivation. Abroad, owing to wise police regulations, the disease is infinitely more innocent than it is, even at present, in Scotland; and, under the salutary influence of a mild and simple treatment, its virulence is daily abating." After reverting to the deep gratitude which the world owes to Drs. William Fergusson, Hennen, John Thompson, and others, he adds: "In England, the Hunterian theory and practice has been deeply rooted; and in Ireland has been supported by the writings of Carmichael and Colles. Mercury, in consequence, is still very generally employed in these parts of the kingdom. The gigantic experiments made abroad, however, ought to convince the most sceptical. If not, let them compare what syphilis is in Scotland with what it was."

In his chapter on Skin Diseases, I perceive that Dr. Bennett never once mentions any necessity for treatment by means of mercury; and, indeed, he only once, as far as I could find, recommends specific treatment in these diseases—in the case of psoriasis, which he treats by means of arsenic and pitch ointment. Those who, like myself, frequently see cases which have gone through courses of

bichloride of mercury, at some skin disease hospital, for the cure of some trifling lepra, &c., will perhaps have noticed, as I have, the bad effects of this treatment in injuring the general health, and often rendering a simple complaint inveterate and severe.

Of rupia, Dr. Bennett says: "This disease I have never met with, but in individuals who have been subject to mercurial poisoning;" and he adds: "the so-called syphilitic diseases of the skin are, in my opinion, the various disorders already alluded to, modified by occurring in individuals who have suffered for more or less time from the poison of mercury." Such is the evidence of the most scientific physician in this country, and I hope it will prove one of the most powerful antidotes to what Professor Syme so truly calls the "mercurial delusion." I may add, that I believe that Professor Bennett considers mercury to be simply a poison, and injurious in the treatment of disease.

I shall now give some extracts from a work, entitled *On the relative influence of Nature and Art in the Cure of Syphilis*, by B. T. W. Cooke, Surgeon to the Royal Free and Cancer Hospitals, President of the Harveian Society, London, 1861.

The author, in his capacity of Surgeon to the Royal Free Hospital, has had perhaps the best opportunity that any English hospital affords, for treating the disease of which he writes. He commenced his practice by mercury; but, "driven by failures and frequent relapses from this scholastic course, I passed to the other less injurious mode of treatment, and had the satisfaction of finding that, under these circumstances, the disease never assumed those frightful forms which were seen when it was treated by mercury."

Mr. Cooke adverts to Ricord's statement, that indurated sores are always followed by poisoning of the system. He

appears to doubt this sequence, and denies altogether the necessity for mercurial interference in indurated chancre, any more than in the soft variety. "The Hunterian chancre may be treated without mercury, and in many instances no constitutional effects may result. . . . . This may perhaps be the most favourable opportunity for demonstrating also that, when secondary symptoms do follow this chancre, they are less severe when mercury has not been administered, and do not return time after time, as is constantly the case in those patients who had been treated with mercury. . . . . I know now, and have watched for years, several persons who have had unmistakeable Hunterian chancre, who have taken no mercury, and who have enjoyed a perfect immunity from any syphilitic constitutional symptoms." In page 40: "I have amongst my notes of cases, very numerous instances of cures effected without mercurialization, and, as far as I could trace the patients, without any secondary symptoms. Of course, it is impossible to be sure that no farther symptoms have occurred in some cases, and that the patient has not taken other advice; but, in many instances, I have been able to verify the fact of the continuance of the cure, by the attention of the patients to my wishes, to show themselves again and again, until there was no longer any doubt of their immunity."

The treatment recommended by Mr. Cooke is similar to that of Fricke, Desruelles, and others, "which excites the secretions, without diminishing the vital powers, and by giving such support to these powers that they shall themselves be enabled to throw off, by increased excretion, the animal poison, which is destroying the natural healthful reproductive influence." After referring to a fact, which I can well believe, that Mr. De Meric has often "bemoaned the insufficiency of mercury in syphilis," he adds, what has been the universal experience of non-mercurialists, page 46: "In no case of bone disease in a syphilitic patient, and I

have seen a great many, did I ever find that mercury had been omitted in the early treatment."

The next quotation appears to me to be of high scientific value. It corroborates almost completely the observations of Fricke: "By abstaining altogether from mercury, I observed that, although some persons were exempt from any constitutional affection, others had cutaneous eruptions, sore throat, and falling off of hair; but in a remarkably modified form. I remarked also that, this process having been gone through, and no mercury having been administered, the patient recovered; and no relapse occurred, except in those whose habit of spirit-drinking prevented the restoration of the tissues to their normal condition. A long-continued observation of the results, produced in nature's own workshop, could not fail to convince any one, whose mind was not biassed by a foregone conclusion, that the cutaneous eruption was the natural means of relieving the blood of the venereal virus, with which it had been inoculated, and that, by suppressing this purifying process, the virus was retained in the system, to spend its venom upon deeper seated and more important tissues. Hence the fundamental error of the mercurial treatment, which suddenly checks the natural cure of the disease by cutaneous elimination; but adds to the tissues, already poisoned, a metal, whose influence tends most unquestionably to increase the dyscrasia already existing."

Mr. Cooke has great faith in chlorate of potash, as a remedy in this state of the system; he says that under doses of the salt, "the eruption will subside, the chancre heal rapidly, with the assistance of a little black wash or solution of sulphate of copper." He uses large doses of chlorate of potash, fifteen grains for a dose, with twenty drops of dilute hydrochloric acid in infusion of oranges. Like Mr. Syme and others, Mr. Cooke believes the advantage of iodide of potassium to be confined to the function of acting

as an antidote to the mercury, and also in cases of periosteal pain. He treats alopecia by means of white precipitate ointment, used as a pomade. Fricke found the best remedy to be exposure of the scalp to fresh air. Ulcers of the throat are treated by chlorate of potash gargles, and touched with sulphate of copper.

The Turkish bath he considers useful in secondary symptoms, and also uses aperient medicines. To a certain extent, Mr. Cooke differs in his dietetic treatment from some authors; for while Fricke, Desruelles, Bennett, &c., recommend what is familiarly denominated the *hunger cure*, Mr. Cooke advises a generous diet. He forbids, with great justice, tobacco-smoking and spirit-drinking; two habits, which complicate almost all diseases among males in this country to a very great degree. For phagedæna he advises, as local application, a lotion composed of two grains of permanganate of potash to the ounce of water, and in sloughing, nitric acid.

In the *American Medical Times* of April, 1863, there is a review of a work, entitled *Recherches sur la Syphilis*, supported by statistics drawn from the hospitals of Christiania, by Professor Boekh, of the faculty of medicine of that city. This work is published in French, by order of and at the expense of the Norwegian Government. The reviewer says: "Professor Boekh has recently again made some comparative experiments on the treatment of syphilis, in order again to test the well-known results of the different treatments in Norway. He experimented with different substances."

By Hahnemann's soluble mercury, were treated 348 males, 100 females, for the first primary symptoms; average time of treatment, males, fifty-eight days; females, sixty-eight days; giving an average time of treatment for all cases of sixty days. For second primary affections by the same

remedy, twenty-four were treated, giving a mean time of treatment of fifty-one days. Taking first primary and first secondary affections together, 473 persons required a mean-time of fifty-nine days, when treated by Hahnemann's solution.

Calomel was used on 385 males, and 81 females, for first primaries. The mean time of treatment was sixty-one days, and when calomel was used for first secondaries, 33 were treated for an average time of fifty-three days. Total number of cases treated 499; mean time, sixty days.

By protoidide of mercury were treated 46 males and 20 females, for first primaries. Mean time of treatment, sixty-six days. 10 persons were treated for first secondaries, with a mean time of treatment of fifty-four days. Total number treated by protiodide of mercury, 76. Mean time of treatment, sixty-five days.

"It will be seen that in every instance where mercury has been employed against the second primary affection, the duration of treatment has been much shorter, than when used for first primary; and, therefore, it may be taken as a rule that, when mercury has been adopted for treating the first primary affection, the time of treatment for the second primary affection, will be shorter. Now let us see how the disease can be managed without mercury."

149 cases treated by Epsom salts, conjoined with external applications, took forty-nine days for their mean treatment. For the first secondary accidents there were treated 26 cases; mean duration of treatment, thirty-one days. Total number treated, 175 cases. Mean time of treatment, thirty-five days.

Twenty cases of first primaries were treated by iodide of potassium, for a mean time of forty-four days; and for the first secondaries, two were treated with a mean time of twenty-eight days. Total number of cases treated, 22; mean time of treatment, forty-two days.

344 cases treated with external remedies for first primaries took forty-two days for their treatment; 72 cases treated for first secondaries, mean time, thirty-one days. Total number treated, 416; mean time of treatment, forty days.

"Professor Boekh has also wished to find whether any treatment is capable of preventing secondary symptoms. In 1,008 cases treated by mercury, 242, or 24 per cent., became affected; and in 522 treated without it, 77, or 14 per cent., became affected. It is to be inferred from this statistical synopsis, that mercury, far from doing good in primary syphilis, has been positively hurtful. The time of treatment under its influence is longer, and the influence of secondary symptoms can in no way be prevented, checked, or modified."

The present war between the free and slave-owning regions of the United States, has brought out some additional evidence against mercury; and proved also, that there has of late years grown up in the States a conviction, among some persons, that all diseases can be better treated without mercury than with it. In the *Medical Times and Gazette*, June 2nd, 1863, is contained the following proclamation to the army medical officers of the United States:—

"*Surgeon-General's Office,*
"*Washington, May 4th,* 1863.

"1. From the reports of the inspectors and the sanitary reports to this office, it appears that the administration of calomel has so frequently been pushed to excess by military surgeons, as to call for prompt steps by this office to correct this abuse; an abuse, the melancholy effects of which, as officially reported, have exhibited themselves, not only in innumerable cases of profuse salivation, but in the not un-

frequent occurrence of mercurial gangrene. It seeming impossible, in any other manner, to properly restrict the use of this powerful agent, it is directed that it be struck from the supply table, and that no further requisition for the medicine be approved of by the medical directors. This is done with the more confidence, *as modern pathology has proved the impropriety of the use of mercury*, in very many of those diseases, in which it was formerly unfailingly administered."

In a recent meeting of the London Medico-Chirurgical Society, February, 10, 1863, I find, from a report in the *Medical Times and Gazette*, that "Mr. Holmes Coote said that there was difficulty in replying to an essay, which embraced so many points, as the paper which had just been read. He begged, however, to record his protest against the prevailing practice of including so very many diseases, without further and more stringent proof, in the category of constitutional syphilis. He had never met with cases of syphilitic pericarditis, or peritonitis; nor did he understand syphilitic inflammation of the lungs. That persons, who had suffered from syphilis, might be the subjects of such affections, there was no doubt; but he saw no relation between the two. Respecting the treatment of primary syphilitic sores, he entertained no doubt in the first place, that mercury was unnecessary in by far the greater number of cases; in the second place, that when administered, even in the best selected cases, that mineral afforded no security against the occurence of secondary symptoms. He thought that the use of mercury was, to enable the surgeon to expedite the healing of an indurated chancre. It mattered not at all whether it was administered by the mouth, or, as in the fashion of the past times, by inunction. The occurrence of secondary symptoms, or rather he should say of

constitutional symptoms (for secondary and tertiary symptoms by no means invariably preserved their numerical relations), was greatly influenced by the habits and position of the patient. The immunity of the convicts at Gibraltar from such disease was only an instance of what temperance and healthy avocations would effect. Among the people of the Levant, who are certainly abstemious, syphilis, in any form, is uncommon. He had taken some pains to ascertain, at St. Bartholomew's Hospital, the relative frequency of constitutional syphilis among those who had, and who had not, taken mercury for the treatment of the primary sore; and he should say that, *cæteris paribus*, the returns were equal."

"Mr. Spencer Wells defended his old associates in the navy, and their brethren in the medical department of the army, from the charge implied in the remarks made by Mr. Solly. It would be most unjust, if a statement were to go forth from that society, without contradiction, that the prevalence of secondary syphilitic disease in the public service was the fruit of the disuse of mercury by army and navy surgeons, in the treatment of the primary sores. There was no foundation for any such charge. It is to the army and navy surgeons that we are indebted for much of the knowledge we possess of the pathology and treatment of syphilis. Soldiers and sailors are under the observation of their surgeon for many years, and the rules of the service require that records of all cases of illness must be preserved; so that army and navy surgeons have far better opportunities of observing the final result of their treatment than can often be found in private practice or in civil hospitals. Thus, as syphilis is so common a disease in the services, a greater number of facts has been collected to determine the true influence of mercury upon syphilis than can be obtained with regard to any other medical question, with the exception, perhaps, of vaccination. These facts, carefully observed and

accurately recorded, and numbered by many thousands, prove, not only that mercury is unnecessary for healing primary sores, but that it actually retards the cure of the common, or non-indurated sore, although it hastens the healing of the indurated sore, or true Hunterian chancre. And they prove, not only that mercury is no preservative from secondary symptoms, but that the frequency and severity of the secondary symptoms are increased in direct proportion to the quantity of mercury; and that many of the more formidable varieties of tertiary disease are caused, not by syphilis, but by mercury. The true use of mercury, in small quantities, in the treatment of the primary indurated sore, and in some forms of secondary disease, is well understood in the army and navy, its failure in preserving from secondary symptoms is better known than it is in civil practice; and it would be most unjust to blame gentlemen because they had ceased to follow a mode of treatment which ample experience has proved to be, not only useless, but injurious."

When we have such evidence as the above from two distinguished London Surgeons, I think it fair to assume, that the dawn of the recognition of the injurious effects of mercury is breaking in the metropolis. A couple of quotations, from one of M. Ricord's most distinguished pupils, shows also, that his influence is already beginning to disappear in France. In a work, entitled *The Natural History of Syphilis*, by M. Diday, of Lyons, Paris, 1863, I find the following remarks: "I have seen syphilis, though treated methodically by specifics, last for a long time, give rise to after affections of the skin, to iritis, disease of the testicle, and then to the so-called tertiary affections, relapse under this form almost indefinitely; or, even though the disease was apparently cured, a tendency to the generation of infected children remains. I call this state of matters severe syphilis. On the contrary, and more frequently, I have seen syphilis, though treated without specifics, limit itself to superficial lesions, to

two or three crops of cutaneous eruptions (the severity of which gradually diminish); then the health completely re-established, as proved by the procreation of healthy children. I call this state mild syphilis."

M. Diday is also a witness to the injury done by mercury in syphilis in many cases, even when the form of the drug used is no longer calomel, or inunction, but protiodide, which is said to be much less injurious than the other forms of the mineral by some of the highest authorities. Thus he observes: "On the other hand, mercury has its inconveniences and dangers. While absolving it from the production of imaginary evils; while declaring it innocent of certain syphilitic lesions, which Germany still persists in laying to its charge, I impute to it positively, and on sufficient clinical evidence, the following disadvantages:—1. Rendering the ulcer phagedænic. 2. Occasioning stomatitis and necroses of the alveolar borders. 3. An acute affection of the gastro-intestinal canal and dyspepsia. 4. Trembling of the extremities. 5. Apoplexy (this is rare). 6. Insanity. All these accidents I have seen supervene, as the results of treatment, ordered and superintended by most competent and most attentive practitioners. As, moreover, I have seen syphilis, when treated without mercury, in general recover; as I have collected numerous observations when the persistence of this cure has been determined at the end of four, five, six, or seven years, and even fourteen years, I believe, that I act in the interest of my patients, in not prescribing mercury indiscriminately, in every case."

During a recent visit to Paris in August, 1863, I took the opportunity of conversing with several members of the staffs of the different hospitals, upon the subject treated of in the preceding pages. My first visit was to the "Hôpital du Midi," where I found that Docteur Cullerier has charge of the

wards formerly under M. Ricord's care. M. Cullerier is nephew to the gentleman whose opinions I have quoted in Chapter V. On requesting that gentleman to inform me what was his practice in regard to the administration of mercury in syphilis, he replied, that he does not, as M. Ricord advises, commence to give it when the sore becomes indurated; but waits until the sore throat and eruption appear. He then administers small doses of bichloride of mercury to the in-patients, and pills of protoiodide to out-patients, until the symptoms disappear.

On mentioning to him that I believed that all forms of syphilis were better and generally more speedily cured without mercury than with it, he replied, that several of his private patients would not take mercury, and yet recovered. M. Cullerier also observed that tertiary symptoms are now becoming rarer than they used to be; and, indeed, whether from accidental circumstances, or otherwise, I did not see, in my visits to the "Hôpital du Midi," any cases of bone disease, which used to be commonly seen in M. Ricord's time. I am tempted to ascribe this to the change in treatment; for, whereas M. Ricord began at once and administered a six months' treatment of iodide of mercury, and M. Cullerier and others (for I found all whom I spoke to, did the like) only commence to give the mineral when secondaries appear, it is evident that patients in Paris now take much less mercury, than formerly.

My next visit was to the "Hôpital du Val de Grace," the scene of Docteur Desruelles' long-continued and most successful non-specific treatment of syphilis. On my informing the chief-surgeon, whom I found there, and whose name I regret I did not ascertain, that I was desirous to learn whether the non-mercurial treatment of Desruelles' had continued to prevail in the hospital, he replied in the negative. His own practice, he informed me, was to wait

until the secondary eruption appeared, and then to use mercurial frictions. He had not had, he observed, any experience of non-mercurial treatment.

On visiting, on several occasions, the "Hôtel Dieu" and other hospitals, I was informed by numerous gentlemen in office, that the use of mercury is all but completely abandoned in the treatment of peritonitis, pericarditis, pleurisy, and other inflammatory attacks; and that it is only administered in Parisian practice in iritis and syphilis. In a prolonged conversation at the "Hôpital Beaujon," with Docteur Fournier, who is known to English readers by his work on the Chancre, translated by Mr. Maunder, upon the subject of the Mercurial Treatment of Syphilis, I found that that gentleman also has abandoned M. Ricord's practice, of commencing to treat when induration appears. He waits until the roseola goes off and until pains arise, before administering mercury. On my requesting him to inform me, whether he had any notes of severe cases of syphilis which had been uninterfered with by mercury, he replied, that so general was the use of the mineral in the Parisian treatment of the disease, that he could not remember any such case.

At the "Hôpital des Enfans Malades," I was informed by Dr. Roger, that he never uses mercury in children's cases of pleurisy, of peritonitis, pericarditis, or in acute hydrocephalus. On my observing how strong the prejudice in favour of calomel in acute hydrocephalus, was among some London practitioners, he asserted, that he had never seen any case of this disease recover, although he had seen every variety of treatment employed. The only case in which he used mercury, he said, was in infantile syphilis. My visit to the "Hôpital St. Louis" disclosed the fact, which I had expected from London experience, that those gentlemen, who make skin diseases their speciality, are frequently the staunchest friends of the mercurial treatment of syphilis. Thus, I found Docteur Hardy unwilling to admit that

any harm may ensue from long-continued courses of small doses of the protoiodide of mercury.

With regard to Docteur Cazenave, his views upon syphilis and its treatment are so peculiar as to merit some notice. M. Cazenave is of opinion, like Mr. Acton, that the question of the mercurial or non-mercurial treatment of syphilis is now set at rest; himself deciding in favour of mercurial treatment; not to the extent, however, of M. Ricord, *i.e.*, not for six months, but for about six weeks. In a long discussion with one of his *internes* which I listened to with interest, Docteur Cazenave maintained, that in nineteen-twentieths of the cases of syphilis which occur in females, the first or primitive symptom is mucous tubercles, and not chancre, as asserted by M. Ricord. After this M. Cazenave asserted that there is no such disease as non-virulent urethritis, and that all cases of urethritis arise from virulent contagion, and *may* give rise to secondary symptoms. On hearing this, I asked Docteur Cazenave, whether his theory led him to treat all gonorrhœas with mercury. He replied: "Certainly, I treat all gonorrhœas by small doses of mercury." Such are the singular views of M. Cazenave, and, although as yet he has but few followers, we must remember that John Hunter held the same views and treated gonorrhœa by small doses of mercury.

The above facts, however, may show that M. Ricord's influence is already beginning, like that of so many other giants of the empirical school, to decline, even in Paris, where but a few years back, when I visited his wards, his opinion reigned supreme. Even two of his own pupils, Docteurs Diday and Fournier, have already departed widely from his practice, and I hope are destined ere long to depart still more widely, until they, as well as others, who do not belong to M. Ricord's school, shall end, both in London and Paris, in entirely abandoning so dangerous a drug in the treatment of syphilis.

Two of the following cases were published by me in the *Medical Times and Gazette*, November 22, 1862, and, with the addition of fifteen others published by W. Allingham, Esq., F.R.C.S., they may serve to complete the evidence against specific interference in all cases of the disease; even in the infantile form where it has been hitherto held as perfectly essential by the great body of mercurialists.

Case 1. G. D., age 11 weeks, was seen by me at the Farringdon Dispensary, May 17, 1862. The child has now, and has had for four weeks past, an eruption on the greater part of its body. Has snuffled also during the last fortnight. The eruption is of the papular order, and is copper-coloured; is most profuse over the buttocks. There are fissures around the mouth and anus, and mucous tubercles in the latter situation. Child's aspect is wizened and aged. Mother says that it is wasting away. It suckles freely; but is very fretful and cries much.

History.—Child's father, a bootmaker, is in delicate health; and the mother says he drinks and is dissipated. Mother has had three children at full time. First child lived six weeks; the second two hours; the third four weeks. Mother is healthy; nor does she seem to have been infected by the children.

Treatment.—Child to take, four times a day, a teaspoonful of the following mixture:—chlorate of potash ʒi, aq. Oj. Great care to be taken that the child be kept scrupulously clean, and the bowels to be kept open by castor oil.

May 24. The papular eruption on the arm is now tubercular in character. Suboccipital glands much enlarged. Rep. med.

31st. Eruption fading away.

June 18. Eruption almost gone.

July 23. Child hearty; almost quite well. No symptoms.

October 16. Met mother in street, with child in her arms. Child is in perfect health. No return of the eruption.

September 2, 1863, a year after last note, the mother returned to ask advice for the child, which had a cough. It was then a fat and robust-looking infant, without any symptom of syphilitic taint, that I could discover.

Case 2. Infant, age 12 months, seen at Farringdon Dispensary, May 3, 1862. The child has copper-coloured discoloration in patches over different parts of its body; left elbow and right knee inflamed and hot. Child has coryza and is fretful.

History.—The child was born at seven months. The mother suffered from sore throat during pregnancy. Child had snuffles soon after its birth. This child was treated by Mr. W. Allingham, with chlorate of potash and hydrochloric acid; and recovered perfectly in about six weeks.

Case 3 is interesting, from the fact that the child was brought up by hand, and yet recovered. James Reed, 5 months old, seen February 4, 1863; a nurse child. Its mother is at service. Covered over the body with a squamous syphilide, and with occipital glands much enlarged. Very emaciated; snuffles.

Treatment.—Ung. zinci for the sores about the anus. Rj. pot. chlor. ʒij; aq. Oj. ʒj quater indies. Child to be kept scrupulously clean. Milk alone, for diet.

11th February.—Appetite good. Takes plenty of milk.

18th.—Drinks five bottles of milk per diem. Rep. med.

11th March.—Child looking well.

April 1.—Bowels confined. Rep. med.; and take a little castor oil to open the bowels.

15th.—Abscess of navel. Poultice. Omit medicine.

22nd.—Doing well. Two lower incisors cut.

May 6.—Child getting fat; eats a little meat and bread.

September 2, 1863.—Child fat and thriving; no longer a patient at the dispensary.

In a contribution to the *Medical Times and Gazette*, October, 1863, by W. Allingham, Esq., F.R.C.S., Surgeon to the Great Northern Hospital, there is given a detailed account of 15 cases of infantile syphilis, treated by that gentleman, without mercurial interference. His own experience of the treatment with mercury had been very unsatisfactory; and this induced him to make some statistical researches, which resulted in the discovery that 29 per cent. of deaths occurred under mercurial treatment, which has been considered so infallible by Sir Benjamin Brodie and others. The result of the 15 cases treated by Mr. Allingham, with chlorate of potash was, that one died, one remained without benefit, and 13 were cured. The author does not insist upon any special virtue in the chlorate of potash, merely using this drug in the belief that it fulfils the general indications of treatment. We may thus conclude, from these observations, that a much larger percentage of cases of infantile syphilis will recover, when treated by means of chlorate of potash, topical applications, and hygienic remedies, than where mercury is used; and this adds another link to the evidence that mercury is, not only not a remedy, as has been asserted, but very frequently a cause of disease, and even of death.

After a careful survey of the evidence contained in the preceding pages, I have come to the conclusion that the whole weight of testimony is opposed to mercurial interference, both in syphilis, in iritis, and in all the inflammatory diseases in which it has been the practice to administer it. I believe that the evidence against its use in syphilis is particularly strong; that the opponents of the non-specific treatment have no case to lay before the profession, as has been done by Fricke, John Thompson and others; and that, consequently, the whole onus of proof for the necessity of mercurial interference lies with the adherents of the empirical

mode of treating the disease. I am, moreover, of opinion that the evidence adduced is quite sufficient to convince any person, who has not yet used mercury, that it is a drug he need never make use of in the treatment of syphilis. And I am inclined to believe that if the disease were carefully treated by hygienic remedies and topical applications, it would extremely rarely present any features of gravity; indeed, I question whether any very severe symptoms would ever appear in adults. Of course this is the most difficult point to assert categorically. Almost any disease, in persons of extremely feeble health, either produced by congenital influences or by bad habits, may lead, in rare cases, to severe accidents; just as a slight bruise may lead, in a spirit-drinker, to erysipelas and death. Severe cases, however, if they may occur under careful hygienic treatment, are extremely rare; but, even were they common, it would evidently be a most illogical conclusion to imagine that, therefore, they ought to be treated by so treacherous a drug as mercury. For the evidence contained in the previous pages proves most conclusively that, whatever syphilis may be when treated hygienically and topically, it is infinitely severer when interfered with by the mineral.

Were mercury entirely abandoned in the treatment of syphilis by all practitioners in any country during the next ten years, we should then be able to judge what the disease really may lead to; and all that we are now warranted in saying is, that all the cases which have been treated without mercury by Fricke, John Thompson, Syme, &c., have recovered, without the serious complications we so constantly observe, even to this day, in the patients of mercurialists. I cannot help, then, conjuring my brethren of the medical profession, to reconsider their opinions as to the value of mercury in the treatment of syphilis and other diseases.

THE END.