

Scrofula does not exceed $1\frac{1}{2}$ per cent.* and then it must be recollected that nearly 2 out of every 3, so afflicted, have been under treatment for the disease before. And when it is borne in mind, that only about 1 out of every 4 of the gross population seeks medical relief annually, we find that the proportion which new cases of Scrofula, requiring treatment, bears to the general population, does not amount to 1 per cent.

Tried, then, by such tests as I have been enabled to apply, which though not strictly accurate, are the best we possess, and which, when used with caution, constitute a fair body of evidence on the point, the conclusion seems a fair one that Scrofula is much less prevalent in the present day than it was in the seventeenth and eighteenth centuries.

* The Returns I have collected from Metropolitan Dispensaries include the cases of 46,800 applicants for medical relief; of these 538 are registered Scrofula, scarcely 1.2 per cent.

I have good reason to think that but few of the persons who were presented to the Dispensary District. It was necessary that an entry should be made in the register when an individual sought a certificate to enable him to be treated, and if the register is that time were preserved, the evidence that he had been treated would be conclusive as to the fact, but many of them are gone, and it is therefore, less satisfactory. Still, I have had access to many registers which included the period during which Charles II. reigned; but in these, the entries of certain cases granted, did not exceed six. It seems, then, fair to assume as I have done, that the bulk did come from the district around London, and I think the estimate I have made from the number actually touched, of 23,035 existing cases is not an unreasonable one; and supposing we strike out 1000, which multiplied by 3 gives 3000 for the contingent coming from a distance, we have remaining for the Metropolitan District, 20,035 scrofulous cases existing at one time. The population of the metropolis at that time may be estimated at 600,000; we therefore find that 1 person in 30 was suffering from Scrofula so as to require relief. The registers of Dispensaries in London to which I have had access, show that at the present time the number of cases entered

CHAPTER IX.

CAUSES OF SCROFULA.

THE alleged causes of Scrofula are so many, and their action is said to be so constant and so efficient to produce the disease, and so few human beings can be wholly protected from their influence, that it is wonderful so many persons should appear to be exempt from the affection. It is equally surprising how slender usually is the proof offered by the advocates of a particular cause, in support of its complete efficiency, to induce the development of the disease. The consequence of such vague assumption is, that those who are not satisfied with the sufficiency of one alleged cause, are prepared to advocate as conclusive the influence of another, and it may be, a very opposite one, with no stronger evidence in support of the latter theory than was furnished in favour of its predecessor.

One person advocates the opinion that the *hereditary* is the only cause; another contends that the disease is *always acquired*, and never inherited; one regards *contagion* as an efficient cause; another maintains that the disease is never thus communicated. One points to the *bad air of towns* as the cause; another finds the disease more prevalent in the country; one refers the evil to *farinaeous*; another, to *animal food*. It would be easy to enlarge this catalogue, but it will be sufficient to mention, that hereditary influence, syphilis, bad air, bad food, and a cold and damp atmosphere are the causes to which have been most frequently assigned the production of Scrofula. The error of each theory is its exclusiveness; and when we reflect upon the difficulty of estimating the unmixed influence of any single cause, and when it is made probable that many causes are in action, we can scarcely comprehend

how it happens that able inquirers should maintain, with so much pertinacity, not alone the efficiency, but also the universality of one.

The difficulty of estimating the force of any of the so called causes of Scrofula, is owing to the fact that the opportunity of observing a single agent in action alone is very rarely afforded; where one cause exists, another is, almost certainly, intimately associated with it; and to assign to each its proper influence is rarely possible. This is particularly the case with bad food, bad air, and bad clothing; the existence of one almost implies the presence of another. He who is too poor to buy good food, is also too poor to procure good lodging; and although there may be instances where we find much privation associated with the casual occupation of good lodgings, usually it is not so, and we have not had opportunities of observing such cases with sufficient frequency to make any useful deduction from them. As far as it can be accomplished, however, we must attempt to estimate the power of the many influences which are said to be efficient to produce Scrofula, because it may be easier to avoid the causes of the disease than to effect its cure when once developed; and therefore if we can indicate the sources of evil with sufficient clearness, much may be done to withdraw people from their influence.

We will commence with the consideration of those agents which are more or less independent of external circumstances—hereditary causes; and we will then endeavour to estimate the effects of agents whose influence may be independent of the parent.

THE HEREDITARY CAUSE.

The belief in the hereditary nature of particular diseases is so deeply rooted in the minds of a large majority of the people of our own and of other countries, and the importance is so obvious, of determining whether or not that belief be well founded, that it is a matter of surprise, that no means which could or ought to satisfy any rational inquirer, have hitherto been employed to solve a question so intimately connected with the happiness of families, and the welfare of communities. The subject is, however, surrounded with much to embarrass him who endeavours to attach

its fair value to the term; and it is possible that when he has carried the inquiry far enough to satisfy himself, he may have stopped far short of what is necessary to satisfy others.

The opinions which prevail on the subject of hereditary diseases are so wanting in precision, that we can obtain but little that is useful in considering them. At the same time, the very obscurity in which this doctrine is involved, renders it proper that we should shortly state the ideas which are most prevalent on the subject, inasmuch as the doctrine has a direct application to Scrofula. One author regards as hereditary any disease which the child presents at, or soon after, the time of birth, no matter whether either parent presents the disease or not; another thinks, although the disease should not be found in the parent, yet that it must be inquired for in the grand-parents. In this view of the case, a parent may *transmit* to his child a disease he never had himself.

Lugol says, "if we do not discover evidence of the disease in the present condition of the parents, we must ascertain what was their condition many years before the birth of the scrofulous child, and if we fail to make out any taint in them, then we must proceed to investigate into the condition of preceding generations. He says: "We shall, then, prove that Scrofula does not alone proceed from parents *actually* scrofulous, but that it may proceed, *first*, from parents who have been scrofulous, but who no longer appear to be so; *second*, from parents who think themselves exempt from Scrofula, but whose brothers and sisters are scrofulous, *third*, from parents who have not exhibited any sign of Scrofula until after the birth of the scrofulous child." And as if to show the inconsistencies of the human mind, this unflinching advocate of the hereditary origin of the disease says in the next page, "that scrofulous persons rarely reach the age to propagate the disease from which they suffer, for most of them die in the first months or years of life, rarely passing the age of puberty." And supposing no evidence to be discoverable that any of the family have suffered from Scrofula, M. Lugol would assume that the child still derived the disease by inheritance;—that he was the result of adulterous intercourse! He says: "Many times it has been necessary for us to take into account adultery, to complete

our observations upon the causes of Scrofula. But it will be understood, that we are disinclined to say much on this thorny subject, and that is why we shall leave it to the sagacity of the reader to fill up many lacunæ that he will find in this short sketch. Persons, the least observant, are often struck with likenesses to strangers, evidently originating in illicit intercourse; we have also occasion to remark the absence of Scrofula in a family where it ought to exist, the father being evidently scrofulous; at other times we see the first children born with symptoms of Scrofula; and those which come after, presenting all the attributes of a good organization. All those facts, rigorously analysed, flow from the hereditary law, and far from being exceptional facts, are, in truth, confirmations of that law."

But supposing no taint of Scrofula can be discovered in the parents, it is said they may induce it in their offspring under many circumstances. Thus, they may have debilitated constitutions; there may be disparity of age or of strength; excessive age, or youth; particular diseases, such as dyspepsia or syphilis, mental or bodily ailment during pregnancy, conception during menstruation. Take, for instance, as a means of illustrating the difficulty of the question, the following case; we have seen that many advocates for hereditary transmission will not admit the perfect freedom from taint of the father and mother as a proof that the disease is not hereditary. It may, they say, come from the grand-parents; but of all of these we cannot get any satisfactory account; we may, perhaps, on the father's side when we cannot on the mother's, and *vice versâ*. Is it fair then to assume, that in a case in which Scrofula exists in the child, but not in the father or mother, not in the paternal grand-parents, not in the maternal grandfather—but of the maternal grand-mother no satisfactory account can be obtained, except that she died young—is it fair, I say, to assume that she died scrofulous, or tuberculous, and that the transmission is, therefore, proved? I think not.

Again, in speaking of hereditary disease, are we justified in saying, that because a parent dies at forty of tuberculous disease, that therefore he had it twenty years before, at a time when the connexion took place from which a scrofulous child resulted? And if not, what ground have we for assuming that the child inherited the dis-

ease? Supposing again, that a parent were scrofulous at ten, and in robust health at thirty, when she gives birth to a child which becomes the victim of tuberculous disease, are we justified in recording that as a case of hereditary transmission of disease? I apprehend not.

To escape from the difficulties to which I have alluded, I had recourse to the celebrated work of Portal on "Hereditary Diseases," and after reading his Essay, I rose up in doubt whether in the strict sense in which alone I think the question should be regarded, there be clear evidence that almost any disease is hereditary, though with respect to syphilis and small-pox the proof may be sufficient. It is no proof that because certain family resemblances may be perpetuated, that therefore diseased conditions must be; or because a child is born with a nævus, does it follow that is more than connate? I do not regard the following aphorism of Van Swieten: "*Morbos ex parentibus propagari in progeniem, innumeris observationibus confirmatur,*" as any addition to the evidence favourable to this view of the subject. Who, for instance, in the present day is prepared to admit in extenso the doctrine of Hippocrates: "*Ex patuitoso pituitosus, ex bilioso biliosus gignitur, ut ex tabido tabidus; quid prohibet ut cujus pater et mater hoc morbo correpti fuerunt etiam posteriorum ac nepotum aliquis eo corripiatur; semen enim genitale ab omnibus corporis partibus procedit a sanis sanum, a morbis morbosum?*" Portal uses as evidence in favour of the doctrine, the following statements: "In a town in the department of Tarn, there is much Scrofula; the community was first infected by two or three bad marriages." The individuals resulting from those marriages intermarried, and thus this hereditary disease was successively multiplied. There can be no doubt, that in large towns the evil is from time to time arrested by the arrival of men and women from the country, by whom the race is in some measure renewed. In London, for instance, persons are generally persuaded of the truth of this opinion. I have heard many English physicians, and particularly Pringle, state that the Irish and the Scotch revivify the inhabitants of London; who, without that, would be reduced to the lowest depth of misery."

In the Commentaries appended to the Aphorisms of Boerhaave, by Van Swieten, we find the following opinion expressed: "*Uti externa corporis forma et magnitudine, ingenio animi affectibus, proles*

parentibus similes sæpe fiunt; sic videtur et intima partium corporis constitutio frequenter referre eandem similitudinem."

In the *Treatise of Laurentius*,* says Baudelocque, (I do not know the book myself), is the following opinion: "Esse autem hæreditarium, id est a parentibus in liberos transferri, certissimum est: quia et cerebri imbecillioris affectus, et capitis male conformati vitia, una cum semine in natos facile abeunt. Ut ergo ex macrocephalis, macrocephali, ex epilepticis, epileptici; ita ex strumosis strumosi generantur." Lemasson Delalande says: "Qu'il n'est point de scrophule acquise, qu'il est impossible qu'un individu bien organisé, mis dans telle condition qu'on voudra, fût-il enfermé dans un cachot pendant des années, devienne jamais franchement scrophuleux."

Cullen says, "Scrofula is commonly and very generally an hereditary disease, and although it sometimes may, yet it rarely appears but in children whose parents had at some period of their lives been affected with it. Whether it may not fail to appear in the children of scrofulous parents, and discover itself afterwards in their offspring in the succeeding generations, I cannot certainly determine; but I believe that this has frequently happened."

It has been maintained by some authors, that the transmission comes more frequently from one parent than the other; and it has also been remarked that the child may inherit the constitution of either parent; that in some circumstances, it gets the constitution of the father; and in others, that of the mother; and that the more the infant resembles in person either parent, the more it is disposed to the diseases of that parent. Thus Cullen says: "It appears to me to be derived more commonly from fathers than from mothers; but whether this happens from there being more scrofulous men than scrofulous women married, I am not certain. With respect to the influence of parents in producing the disease, it deserves to be remarked, that in a family of many children, when one of the parents has been affected with Scrofula, and the other not; as it is usual for some of the children to be in constitution pretty exactly like one parent, and others of them like the other, it commonly happens that those children who most resemble the scrofu-

* De Strumaram Natura et Curatione.

lous parent become affected with Scrofula, while those resembling the other parent entirely escape." Richard, (de Nancy,*) in opposition to Clark, Nasse, and others, thinks hereditary influence is more certain when the father is diseased. He says, "I have rarely seen infants born of phthisical fathers escape disease of the lungs; and on looking over my notes, I see many cases of children proceeding from phthisical mothers, who have already passed the ordinary period of development of the disease."

It has been stated that the transmission occurred from fathers to daughters, from the mother to the son; but at present, we have no proof of the correctness of the statement. Baillarger's evidence as to Insanity is in opposition to this opinion; of 274 insane women, 85 seemed to inherit it from the father, 189 from the mother. Piorry gave as the result of an examination of 49 tubercular patients, a preponderance derived from the mother. Briquet deduced from 29 cases, that a majority came from the father.

In 1748, it would appear that the Academy of Sciences of Dijon admitted the hereditary transmission of disease, for they proposed as a prize subject, "To determine how this transmission is effected." Instead of admitting the existence of hereditary influence in the production of disease, the French surgeon, Louis, wrote a Thesis to prove that no disease is hereditary. In 1787, the Royal Society of Medicine did not regard the question as settled, for their prize subject in that year was the following: "If hereditary diseases exist, what are they? And is it in our power to prevent their development, or to cure them when they are declared?" In neither of the Essays sent in at the time, do I find anything, for or against the question, which I could profitably transfer to these pages. And although our own Mead is equally positive in declaring for the hereditary transmission of particular diseases, I find nothing to justify the dictum: "Eo autem terribilius est hoc malum quod a parentibus ad parentes sæpe transit, et hæreditate, quum cæpit, haud facile se privari sinit."†

Such are the statements which have been made to prove that Scrofula is an hereditary disease. Some of them we admit—they are matters of daily observation. No one would deny family

* *Traite Partique des Maux des Enfants*, Introduction, p. 11.

† De Strumia.

likeness, but many would deny that its transmission is the ordinary rule; no cautious person would, however, admit that because such resemblances were frequent, particular diseases must be communicable from parent to child. If, however, it were admitted that diseased peculiarities were as often impressed upon descendants as certain personal resemblances, the case in favour of hereditary transmission would still not be a very strong one.

An opinion, hostile to the belief in hereditary transmission, has been stoutly maintained, but the advocates of the opinion that no diseases are hereditary, though able men, are few in number. Among them are the French surgeons, Louis and Faure; our own Thomas White, who wrote an admirable Treatise on Scrofula at the latter end of the last century; Dr. Henning and Baudelocque.

Faure says: "Elle passe pour être héréditaire; mais outre qu'il n'est pas démontré qu'il y ait des maladies de cette espèce, nous tâcherons de faire voir, en parlant des causes, que nous n'avons pas besoin d'embrasser cette opinion pour expliquer la succession et la propagation de cette maladie." Again, "Mais doit-on admettre la succession héréditaire de cette maladie? Elle ne paraît pour ordinaire que vers la quatrième ou cinquième année; elle n'attaque pas tous les enfants d'une même famille; le nourrisson ne la communique point à sa nourrice, ni la nourrice au nourrisson, comme la maladie vénérienne, qui malgré cela, ne peut être regardée que comme acquise. Enfin, les écrouelles ne commencent que lorsqu'on se nourrit d'aliments solides, &c."

As I cited, some of the views of Portal on the hereditary transmission of disease, I shall exhibit some of the reasons of Henning in opposition to that theory as applied to Scrofula. He says: "What constitutes this strange material which children thus inherit, and which, according to Pemberton, may be suppressed, if not extinguished, merely by a regimen continued during a very inconsiderable period, but according to Mead and others, can rarely, if ever be dispossessed? If it be some particular conformation of part, or of the whole of the body, some deviation from the usual structure of it, how can that be corrected by these, or by any means? It cannot be maintained that the actual disease is born with us, because unless it be evinced by its appropriate symptoms, which are swellings of the superficial glands, there is no evidence

of it. If these be present, they must be manifest. If, then, there be no local affections, for these are not only the diagnostic symptoms of Scrofula, but constitute its very existence, it is not present; and to contend that it is, is but to support a contradiction; for to use the old saying of the schoolmen, 'De non apparentibus, et de non existentibus eadem est ratio.' If a fomes, or vice in the fluids of the body, and congenital with it, be the *materia morbi* of the scrofulous, why does it so generally delay to show itself during the weakness of infancy? Or, why does it so often fail to show itself at all at any other period of life?

"But instead of inheriting a disease, it is said a predisposition may be inherited. Can we regard the alteration as any thing more than the substitution of one term for another, without obviating any of the objections? For that a peculiar propensity to Scrofula is inherited, is a position quite incapable of being proved or disproved; because children may be attacked by it, though not descended from scrofulous parents, and they certainly may pass through life without being attacked by it, although they are. It is quite as presumptive that all mankind, if alike exposed to the proximate or exciting causes of Scrofula, under the circumstances which enable those causes to act, are alike susceptible of its influence. It may also be urged, that if either the disease, or the predisposition to it, be hereditary, it should be constantly, not occasionally inherited; upon the principle that the operations of nature are for the most part uniform and constant, and that the same cause is usually productive of similar effects. From this principle, it ought to follow that all the children of the same bed, should alike inherit and possess the same predisposition.

"It must be either hereditary in this full sense, or never can be inherited. There can be no middle course. In the accurate and well defined language of the law, an hereditary estate of necessity devolves on the heir; and so, in strictness of language, should be the devolution of hereditary disease. Here all the children are heirs alike, and that which constitutes the primordium of disease ought to descend to all of them in common, or to none. All must participate in it, or all must be exempt. If to this reasoning, I can imagine an objection, it is that children derived from a father, scrofulous himself, or descended from scrofulous progenitors; and

from a mother altogether exempt from it, both in her person and descent, may be supposed to inherit or escape the disease according to the stronger resemblance of their constitution to the first or last. If, however, both parents be contaminated by it, there is then no ground left for denying that the whole of the issue should exhibit symptoms of the disease, if indeed it be impartible by inheritance. But these suppositions, however plausible they may appear, far from being verified by experience, are perpetually refuted by it; even if we take gout, and every person will refer you to abundant proof of its being hereditary. Many years ago, Dr. Cadogan, however, made these very sensible remarks on that subject. "Our parents may undoubtedly give us constitutions similar to their own; and if we live in the same manner as they did, we shall very probably be troubled with the same diseases, but this by no means proves them to be hereditary. Those who insist that the gout is hereditary, because they see it so sometimes, must argue very inconclusively; for if we compute the number of children who have it not, and women who have it not, together with all those active and temperate men, who are free from it, though born of gouty parents, the proportion will be found at least 100 to 1 against that opinion. And surely I have a greater right from all these instances to say that it is not hereditary, than they have from a few to contend that it is."

Kortum says: "Fuere e recentioribus varii qui similes progeniei et parentum morbos a simili dietâ et vitæ genere potissimum reputerent."* Henning concludes in the following words: "If, then, it be allowable to doubt, whether Scrofula be at all derivable from parents, how much more reason is there for disputing the position that it is obtainable in no other manner; or, in other words, that none, but the children of scrofulous persons are susceptible of scrofulous complaints. That Scrofula often occurs to individuals whose predecessors were never known to have it, is so abundantly proved by every day's experience, that it would be quite superfluous to adduce more evidence in support of it. There is, however, one fact which furnishes irrefragable proof of it, and that is, that the natives of the temperate climates, where Scrofula is unknown,

* Vol. i. p. 281.

upon migrating to the cold and fluctuating regions of the North, are there invariably attacked by it."*

Such are the arguments which have been used in support of, and in opposition to, the opinion that Scrofula is an hereditary disease. It will be observed, (whatever truth there may be in either opinion), that beyond assumption and stray facts, nothing has been urged by any, even by the latest advocate of the doctrine—Lugol—to settle or unsettle the prevailing impression on the subject.

Before I proceed to make my own observations on the influence of hereditary transmission in the development of disease, let me clearly define what I mean by an hereditary disease. The meaning which I attach to the term I thus explain. Any disease which affects either parent at the time of the sexual intercourse from which the conception resulted, or the mother during any period of utero-gestation, and is manifested in the child born under those circumstances, in a greater number of instances than if one or both parents were free from the taint of the particular disease, I regard as hereditary. It matters not, in this view of the subject, whether the preponderance be to the extent of 1 or 20 per cent. All that I conceive necessary to be proved is, that the parents—the tainted on the one hand, the healthy on the other—shall be living under as nearly as may be, similar circumstances, that their offspring shall be similarly situated, and that the children proceeding from the tainted stock shall suffer from the disease which is present in the parent to a greater extent, than those children who have proceeded from the untainted source. In fact, I entirely put aside the notion that has been regarded as a *sine quæ non* of the hereditary nature of a disease, that it should affect equally every child of a family. "Si vere hæreditarium esset malum omnes fratres sororesque invadere deberet," is a position which I do not maintain, because I conceive that one can inherit as well as one thousand. Neither do I think it necessary that the child, proceeding from scrofulous parents, should present the ordinary signs of the disease at the moment of birth, because the character of the disease is, usually, to manifest itself after the second year of life.

* I might here ask, which are the temperate climates where Scrofula is unknown?

It is true, the difficulties of proof that a disease which is not usually manifested during the earlier years of life is hereditary are much increased, because it is no easy matter to make out how far causes, whose action has not commenced during intrauterine life, have contributed to its production. There are but few who are prepared to maintain, that Phthisis, or Insanity, Cancer, or Scrofula, is never seen except in those persons who have proceeded from families similarly affected. It will, therefore, be admitted, that any of those diseases may result from the influence of the circumstances in which the individual is placed, and the difficulty of estimating the relative value of hereditary influence and surrounding circumstances must be increased in proportion to the length of time which has elapsed between the birth of the individual and the manifestation of the disease.

I now propose to consider, *first*; whether any disease existing in one or both parents at the time of the connexion from which the pregnancy resulted, or in as far as concerns the mother, during any portion of the uterine life of the fœtus, is manifested in the child, at or soon after the moment of birth. *Secondly*, whether under similar circumstances, the disease, though not presented in the child, at or soon after birth, may be manifested at an after period of life, and this in either event, in a larger proportion of cases than in the children of parents not thus afflicted. Upon those two questions, according to my views, the subject of hereditary disease hinges.

There are, however, other questions, very nearly connected with hereditary influence which we must not overlook, viz.: Supposing the father or mother to suffer from any particular constitutional disease, is there any proof that their offspring are likely to become the victims of particular diseases, unlike those of their parents? In other words, whether any disease, other than Scrofula, existing in either parent, tends to develop Scrofula in the child?

Have we reason to believe, that when parents are otherwise healthy, conception occurring at a later period, that of menstruation for instance, is likely to occasion any disease in the child resulting from that conception?

Is there any reason to conclude, that the relative age or strength of the parents exercises any influence in determining particular diseases in their offspring?

Have we any proof that intermarriages tend to the development of Scrofula in the child?

All those questions have reference to the influence supposed to be exerted by the parent upon the child; but there is another question intimately connected with them, namely:

Have we sufficient reason to conclude, that a child suckled by a person, either its mother, or its foster-mother, may with the milk it takes in from the breast of its nurse imbibe the germs of any particular constitutional disease, such as Scrofula, which may pervade the system of that mother or foster-mother?

Have we then positive proof, that any constitutional disease affecting either parent at the moment of the connexion from which conception has resulted, or the mother, during any period of intra-uterine life, is manifested in the child at the moment of birth, or soon after? I think it must be admitted, that both in Syphilis and in Small-pox, this may happen with sufficient frequency to prove that the child can in this way inherit the disease by which the constitution of the mother is tainted. And in Syphilis, it is a question if it may not happen, whether the tainted parent be the father or the mother. Although difficulties often occur in verifying the truth of the statements made by parties under such circumstances; "Yet," says Lallemand, "when I see a father and mother, who have not at present any symptom of Syphilis, the father having previously suffered from it, give birth to four children, who all died from the effects of constitutional Syphilis; when I see a fifth covered with pustular Syphilis, and infecting two nurses; when I cure this child with sublimate baths and the mercurial treatment; and lastly, when after an anti-venereal treatment, administered to the parents, I see four children born to them perfectly healthy, how can I refrain from admitting that the virus has existed in the spermatic fluid of the father, and that it has passed from the child to the nurse?" It is under these circumstances, when the disease is transmitted through the spermatic fluid of the father, or the blood of the mother, that the nutrition of the fœtus is so seriously compromised; and if it do not determine abortion, the child comes into the world offering all the characters of age and decrepitude, and dies in the last stage of Marasmus. Some persons conceive that this stain may be impressed on succeeding generations; though it may be manifested under different conditions, scrofulous or otherwise. Hahnemann, and others, appear to think the stain is indel-