

we will now proceed to examine the circumstances under which it is deposited.

DIFFERENCE AS TO THE PERIOD WHEN SCROFULA AND
PHTHISIS DESTROY LIFE.

Mortality Tables prove that the generally received opinion is correct, that the ravages of Scrofula, where it destroys life, are most severely felt before, those of Consumption after, the period of puberty.

In the British Metropolis, the Reports for 1840—I show, that the deaths from Consumption were 21,667; of those, 4653, or 21 per cent. died before fifteen. The deaths from Scrofula, during the same period, were 347, of those 208, or 60 per cent. died before fifteen. In the twenty-four districts of England and Wales, selected by the Registrar-General, the deaths from Consumption, in the same time, were 8550; of those 2543, or 29 per cent, were under fifteen. The deaths from Scrofula were 106; of those, 61, or 63 per cent. were under fifteen. In Birmingham, the total deaths from Consumption are stated at 668, of which 278, or 41 per cent. were under fifteen. The deaths from Scrofula amounted to 3; of which 2, or 66 per cent, were under fifteen. At Liverpool, the total deaths from Consumption were 1396; of which 540, or 38 per cent. were under fifteen. The cases of Scrofula amounted to 10; of which 8, or 80 per cent. were under fifteen. At Manchester, the deaths from Consumption are returned 1124; of which 421, or 37 per cent. were under fifteen. The deaths from Scrofula were 10, of which 6, or 60, per cent. were under fifteen. The following Table will show these results at a glance.

DEATHS.

CONSUMPTION.

	Total.	
Metropolis	21,667 of which 4653, or 21 per cent. were under 15.	
24 Districts	8,550 " 2543, or 29 " " "	
Birmingham }		
Liverpool }	3,188 " 1239, or 39 " " "	
Manchester		

SCROFULA.

	Total.	
Metropolis	347 of which 208, or 60 per cent. were under 15	
24 Districts	106 " 61, or 63 " " "	
Birmingham }		
Liverpool }	23 " 16, or 69 " " "	
Manchester		

In Ireland, during the ten years ending in 1841, the total deaths from Consumption are stated to be 135,590; of which 10,779, or under 7.9 per cent. occurred before they attained the age of fifteen. The deaths from Scrofula in the same period are stated to have been 3149; of which 1363, or 43 per cent. occurred before fifteen. It will be seen that in both cases the proportion is under that of England and Wales. It must, however, be borne in mind, that in the Irish Returns a very large number of deaths under fifteen are described as Marasmus—68,650; being more than half the total deaths from Consumption. Some of those cases were, no doubt Consumption, some Scrofula, and some Tabes Messenterica. But as we cannot state the real proportions, it will be better not to assume them.

The researches made by order of the Count Chabrol show that in Paris, the greatest number of deaths from Consumption happen between 20 and 30; then comes the period between 30 and 40; then 40 and 50; then 50 and 60; then 0 to 10.

The proof, then, seems to me ample, that the period of life when the deaths from Phthisis are most numerous is not that when the ravages of Scrofula are most keenly felt; and this constitutes another distinction between these diseases. I know that it is said that the registered deaths from Scrofula are no proof of the extent to which it prevails, but such reasoning would also apply to Phthisis. Complete evidence they may not furnish; but as approximate evidence, they are unexceptionable. If the deaths from Scrofula in a given district be 100, and in another district of similar population, 50, I conceive it would be abundant proof of the greater prevalence of the disease in the former district than in the latter; though it might not show how far enlarged glands could be detected in either case.

DIFFERENCE AS TO THE SEX OF THE VICTIMS OF PHTHISIS
AND SCROFULA.

If there be, as is maintained, identity between Scrofula and Phthisis, they should surely fall with equal severity upon both sexes. And yet, what is the fact? If we refer to the Registrar-General's Reports for 1839—42, we find the deaths from Phthisis to be as follows:

	1839.	1840.	1841.	1842.
Males	28,106	24,519	24,329	24,408
Females	31,453	28,168	27,937	28,098
	$\frac{28,106}{31,453} = 59,559$	$\frac{24,519}{28,168} = 52,687$	$\frac{24,329}{27,937} = 52,266$	$\frac{24,408}{28,098} = 52,506$

being a preponderance in female mortality from Phthisis of 15 per cent. From the same Tables we extract the deaths from Scrofula for the like period:

Males	679	658	616	678
Females	472	547	472	508
	$\frac{679}{472} = 1151$	$\frac{658}{547} = 1205$	$\frac{616}{472} = 1088$	$\frac{678}{508} = 1186$

Here the results are reversed; the mortality of males from Scrofula exceeds that of females by about 24 per cent. In the Irish Report a similar proportion prevails; the deaths from Phthisis are Males 63,635 those from Scrofula Males 1920 Females 71,955 Females 1229. In the former case the excess of female deaths is 13 per cent. in the latter the excess of males is 35 per cent. From this evidence it is, therefore, clear that in England, Wales, and Ireland, Phthisis carries to the grave an excess of females; while Scrofula is more exclusively fatal to the male population. It is proper to state that evidence has been adduced to shew, that in particular places, the mortality from Consumption has been greatest among males, but it is more satisfactory to my mind to use our own Returns for both diseases.

DIFFERENCE IN RELATIVE FREQUENCY OF TWO
DISEASES.

If the circumstances under which the two affections are developed be similar, then, where the tuberculous disease of the lung is

frequent, scrofulous disease should also be frequent. Let us inquire what is the fact.

The Registrar-General's Tables for England and Wales, if we take a period of four years, show that the deaths from Consumption amount annually, on an average, in round numbers, to 59,500; those from Scrofula to 1200; the proportion which the one bears to the other, is as 1 to 50; and the proportion they severally bear to the gross population as 1 to 265, and 1 to 13,255 for England and Wales. If the causes of the two diseases be the same, that proportion should obtain in each district; let us see whether it does. In the north-west district, the deaths from Consumption are 9976, those from Scrofula are 116; the proportion which they bear to each other is as 1 to 86, and to the gross population as 1 to 206, and 1 to 17,782. Here, then, we see that, at the same time, the causes of Consumption are in action with more whilst those of Scrofula exhibit 20 per cent. less intensity than the average of England and Wales. If we take the town population selected by Mr. Farr, in page 198 of his fifth Annual Report, including four years, ending in 1842, we find a population of 3,759,186. The deaths from Consumption are to the population as 1 to 235, while those from Scrofula are as 1 to 20,000. If we take his Counties, in the same page, we get a population of 3,446,501. The deaths from Consumption amount to 1 in 286, those from Scrofula to 1 per 10,000, or 100 per million. The deaths from Consumption being 19 per cent. greater in the Town than in the Country Districts, while those from Scrofula are 100 per cent. less.

The evidence to be obtained from the Mortuary Tables of our own country, proves, therefore, that if the causes of the two affections are the same, the effects differ most widely; that where there is a large mortality from Consumption, there is a small mortality from Scrofula, and *vice versa*.

I am assured that in India, Consumption is much less frequent than in our own country. The evidence of Mr. Martin, as well as that of the Army Returns, in so far as they affect the troops, confirm this fact;* while it is clearly shown that scrofulous disease

* Deaths from Consumption in India 1 per 1000.
Great Britain 6.2 „ „

is very frequent.* It is stated by Sirs A. Crichton and George Le-fevre and others, that pulmonary diseases, and particularly Consumption, are much less frequent in Russia than with us; whilst the Returns, which I have obtained from that country, show that Scrofula prevails among the living to nearly three times the extent it does with us; Sir A. Crichton says, "Nowhere in Britain are such dreadful effects of Scrofula seen as in Russia." And that no necessary connexion is believed to exist between those diseases is shown by this circumstance, that those who bear about their necks ugly badges constituted by the scars from scrofulous ulceration, are supposed to be almost exempt from Consumption. A similar opinion prevails in Austria and Bavaria. In a Report made to the French government by M. Jolly, on the sanitary state of the district known as the Landes near Bordeaux, containing 19,000 "hectares,"† or about 48,000 acres of marsh-land, he distinctly enunciates what he considers a remarkable fact, namely, "the frequency of strumous affections coinciding with an excessive rarity of tuberculous affections of the lungs, in the whole of the Oceanic district extended from La Teste to Mimigan." Every element of wretchedness, except over-crowding, seems to be accumulated in the district, and if there be this remarkable exemption from Consumption, it may be a question how far it is owing to the marsh exhalations which so largely prevail there. At Martinique, an opposite state of things prevails. There, according to M. Ruz. Consumption is the most frequent disease of the colony; while from 1834 to 1839 he had seen only one or two cases of white swelling; no case of Potts Caries, and rarely a case of glandular enlargement.

I know it is said that Scrofula does not commonly destroy life; that some other disease cuts down the victim of the disease; and that therefore the Register does not show the amount of Scrofula prevailing in any district. Whatever force there may be in that observation, it should follow, that if, as is alleged, the sufferer from Scrofula usually dies of Phthisis, the ordinary marks of Scrofula should be apparent in the bodies of a large number of those who die of Phthisis.

Now for some time I kept a register of the cases of Phthisis ex-

* See the Returns of Drs. Stewart and Spry, in the Appendix.

† A measure equal to 2.417 acres.

amined at the St. Marylebone Infirmary, and the number included in that register is 332; of these seven only presented scars resulting from Scrofula. In seven instances there was tumefaction of the cervical glands, but in only two instances did we discover that they contained scrofulous matter. To my own experience I may add that of Louis, who has published the result of the careful examination of 350 bodies of persons who died phthisical. He discovered a tuberculous condition of the cervical glands thirty-five times. That of Lombard, who examined a hundred phthisical cases, and found the cervical glands affected seven times; and in seventy-three cases of children, seven times. That of Papavoine, who examined fifty tuberculous children, and found the same glands affected twenty-six times, and that of M. Cless, of Stuttgart, who lately gave the results of the careful examination of 173 tuberculous patients, from which it appears that he only detected tuberculous matter in the cervical glands six times. Here, then, we have the examination of 1078 phthisical patients, of whom it is said, 84, or 8 per cent., presented tuberculous disease of the cervical glands. There is so much discrepancy between these results, that it must very much detract from their value, unless there be some satisfactory mode of explaining that discrepancy. Lombard examined seventy-three children, and found seven enlarged cervical glands, or 10 per cent. Louis examined 350 phthisical bodies, and found a tenth with tuberculous cervical glands; now in the same country, and actually in the same city, Papavoine found 52 per cent. with tuberculous cervical glands, whilst out of 332 cases in which the patients died of Phthisis, I have only found three instances in which scrofulous matter was contained in the cervical glands. As far as my own cases are concerned, I know that the results are accurately stated, and I am inclined to think that Papavoine—and the remark may possibly apply to others—has regarded a sensible enlargement of those glands as scrofulous, and has assumed that the characteristic deposit was present without careful examination.

From these observations it results, that in the cases of those who die of Tubercular Phthisis, numerous as they are, the proportion which those who exhibit any marks of having suffered from Scrofula bear to the total deaths from Phthisis, is very small.

Such results must certainly leave doubts on the mind as to the identity of those conditions of the system which determine Phthisis and Scrofula. We see in those cases where the tuberculation of the system is most complete, that not only is the lung studded with those deposits, but that in six-sevenths of the cases, the other thoracic and abdominal organs present them, whilst in not more than one-twelfth of the cases, and in my own experience the proportion is very much smaller, could a similar condition be detected in the subcutaneous lymphatic ganglia. Surely if Scrofula be so rife, and if Phthisis be the culminating point, the maximum of development of Scrofula—if, in other words, the reason why the apparent mortality from Scrofula is comparatively so small be, that he who suffers from Scrofula dies from Phthisis, surely the phthisical patient should more frequently than is found to be the case carry with him to the grave scars or scrofulous glands—the marks of having suffered from the former disease.

DIFFERENCES DEDUCED FROM COMPARATIVE PATHOLOGY.

Again, evidence which I regard as important for the elucidation of this question may be obtained from Comparative Pathology, from observations made upon the diseases which prevail among brute animals. Whether tubercular diseases are commonly found among them in a state of nature, is a doubtful question; the opportunities for determining this question are not many, and we have not very extensively availed ourselves of those which occur. But whatever may be the fact as to brute animals in their natural state, certain it is that when more or less completely domesticated, tuberculous deposits are often found in their bodies. And this more especially among the Quadrumana, Rodentia, and the Ruminantia.

In 1840, Rayer examined, after death, 242 dogs, of which only two were tubercular. A sheep driven into and fed in marshy ground, where the food is watery, soon becomes the victim of tubercular deposits. Mr. Bakewell ascertained, that all that was necessary to produce those deposits, was during summer to submerge a meadow, and drive the sheep into it in autumn. Without this submersion, the same animals would do well on the same pastures.

A rabbit fed in a damp, dark cellar, on watery vegetable food, soon becomes the victim of tubercular deposits. But in all brute animals, the occurrence of any similar deposit in subcutaneous glands, is comparatively rare. The disease known vulgarly as "measles" in the pig, or as termed by the French "ladrerie," has no real resemblance to Scrofula. It is a deposit caused by the irritation of the Echinococcus, of the genus *Cænurus*, and is not often larger in size than a pea. Its principal seat is the thigh. And although it seems to be the affection from which Scrofula has obtained its name, it bears no real resemblance to that disease. But whatever tendency those animals, as well as others, may manifest under those artificial conditions to become phthisical, they do not become scrofulous. In answer to my queries on this subject, Professor Sewell says: "Before replying to your questions respecting Scrofula in domesticated stock, I waited until I had an opportunity of seeing Mr. Simonds, our lecturer on Cattle Pathology, who has had several years' extensive country practice. He says he has never seen it in the Ruminants."

I apprehend it has now been shown, by abundant evidence, that with the exception of the deposit itself, which, whether found in the lungs, or in a cervical gland, whether examined by the naked eye, by the microscope, or by chemical analysis, is very similar, the circumstances attendant upon the development of Scrofula and Phthisis are widely different. In Scrofula the gland undergoes considerable change, inflammatory in its nature, before the matter is deposited in it; in the lung we commonly find the tissue around a recent simple tubercular deposit unchanged by inflammation. We find, further, that in districts where the causes of Phthisis act with most intensity, those of Scrofula fall lightest; that the age when the ravages of Scrofula are most keenly felt is precisely that when the visitation of Phthisis is least to be apprehended; that the sex which suffers most severely from one of those diseases is least affected by the other. And beyond all this, there is the fact that among the numerous victims of Phthisis, at least eighteen out of every twenty exhibited no marks of having suffered from Scrofula. It seems to me, therefore, that these facts constitute so clearly marked a difference between the two affections, that it will be most convenient, most conducive to scientific correctness, to consider

them as affections possessing a certain general similarity of character, but no identity. It may be that they belong to the same family, as do Pleurisy and Pneumonia; but every one deems it desirable to make as clear a demarcation as possible between those diseases. I say the same of tubercular disease generally and Scrofula, between which the points of resemblance are strong, in so far as concerns the deposit; but in all else they are weak.

CHAPTER VII.

PREVALENCE OF SCROFULA IN GREAT BRITAIN.

AN opinion is very generally entertained, that Scrofula is pre-eminently an English disease, that very few families are wholly free from its taint, and that it is a scourge by which a large portion of the people of this country are afflicted. And this opinion is not confined to Scrofula such as we have defined it, but is extended to all those affections in which a tuberculous product is deposited in any of the tissues of the body. It has seemed to me, therefore, proper to inquire if that opinion be well founded, even should no practical benefit be derived from establishing as a fact, that the disease is more or less prevalent in this than in other countries.

The means which I have taken to ascertain how far the disease prevails in our own country, are the following: I have examined myself, or by the aid of others, a large number of children, in Schools, in Union Houses, in Factories, and elsewhere. I have taken a similar course with adults; I have availed myself of a large number of Hospital and Dispensary Returns, which may fairly represent the prevalence of the disease when it comes under treatment; and as correlative evidence, I have procured from the Army Medical Board, Returns of the prevalence of marks of Scrofula among Recruits; and from Dr. Baly and others, like Returns respecting the inmates of prisons; and I have taken the Reports of the Registrar General as evidence of the destructive effects of the disease.

The result of the examination of children is to show, that of 133,721 examined, in many districts,* 24 1-2 per cent. presented

* See Appendix.