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Dissertation on the exanthemata

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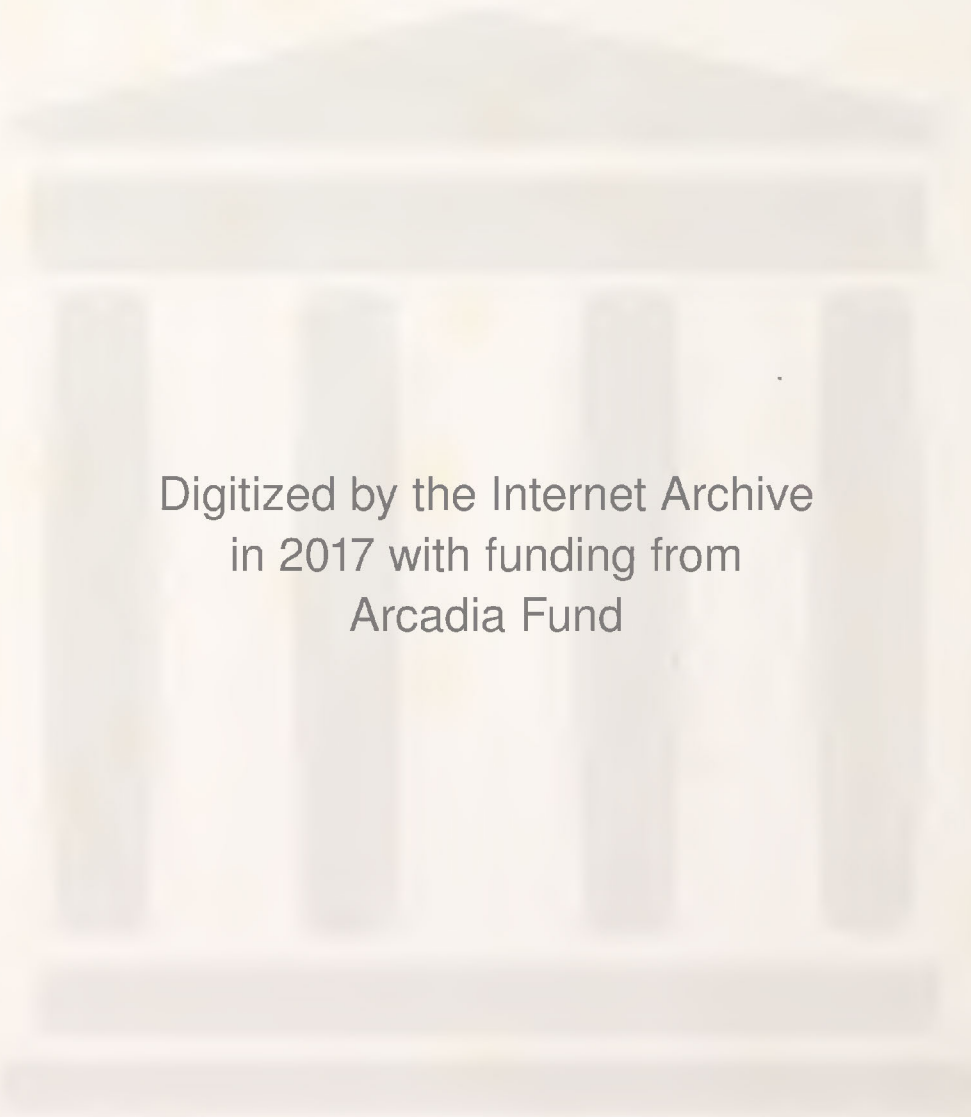
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The Exanthemata.

I am about to speak of a group of diseases which present many points of interest to the practitioner of medicine.

They have received their name the Exanthemata (derived from the Greek $\epsilon\gamma\chi\alpha\nu\theta\epsilon\mu\alpha\tau\alpha$ a flower) from an eruption, an efflorescence which appears upon the skin. This eruption although sometimes absent, is generally present, & its presence is often the cause of great & even fatal disorder in the system.

The diseases which constitute this group are, Variola, Vaccinia, Scarlatina, Rubella, Panchella, Pestis & Ignis Sacro. There are other diseases which might perhaps be classed with them. Typhoid fever is often accompanied by an eruption upon the skin. Typhus fever is accompanied by an eruption which was called by Dr Jenner, the mulberry rash. But the diseases first mentioned are those es

pecially denominated the Exanthemata.

The general characteristics of these diseases are as follows. They are all peculiarly contagious diseases. They rarely affect the same individual more than once. They are generally accompanied by fever; this precedes the rash & vanishes with its appearance except in some cases. They are Epidemic diseases: often committing great ravages in the provinces where they make their appearance.

I shall proceed to treat of the characteristics which these diseases possess in common, then of the methods which have been devised for guarding against them & finally of the treatment which from their general resemblance to each other would be proper for all.

And, first, these diseases are the result of a peculiar poison, introduced into the system from without. We have the most abundant evidence to prove that for each of them there is a specific poison. The history of small pox & of vaccination goes far to prove this. Small pox was

not known in North America before its discovery by Columbus & yet within a generation three millions of people perished in Mexico from this disease alone. Its introduction then is accounted for by the visit of a negro, at the time suffering under the disease - Again, when vaccination has been introduced the disease has been almost wholly eradicated. What a prospect does this offer to the successors of Dr Jenner: the whole world may be freed from this disgusting pest, which is the destroyer of health, of beauty & of life.

Then again these diseases do not degenerate into each other. He who has been exposed to the contagion of small pox will be affected by small pox & not by any other of these allied diseases & hence we conclude that for each of them there is a specific poison -

The method by which this poison is introduced into the system is not known. It is in its nature so subtle, that, though evidence enough of its existence may be obtained, it cannot itself be discovered by any of the means which we possess -

The microscope shews nothing in the blood of persons affected by the disease, which can be considered the peculiar poison causing it. We only know that it may be conveyed from an infected person in every conceivable way & that it is often so conveyed when we cannot possibly discover the vehicle by which it is borne.

For instance: a sporadic case of scarlet fever occurs: we cannot learn that the patient has been exposed to any contagious influence & yet the disease may run through all its stages & communicate itself to the whole neighborhood. We know the disease to be eminently contagious when it has once made its appearance; we can conceive of no cause which shall account for its appearance unless it is contagious: for the disease is now caused by a specific poison & it is impossible to prove in any case that this specific poison has been generated in the system. What more reasonable inference, than, than this: that the disease is the product of some unsuspected contagion & that it now arises spontaneously.

The physician himself may be the poison bearer & instances enough have occurred in other diseases when

this has been the case.

We do not know how long a time this poisonous principle will retain its power. It is said that the vaccine virus may be kept unimpaired for years if properly protected from air & light. We do know that under the influence of free ventilation, of delution with the external air, ~~that~~ it may be made almost innocuous - And this is one of the points to be regarded in treating these diseases. The poisonous atmosphere of the pest house, shut in from all contact with the external world, is sufficient to prostrate the strongest constitution.

There is perhaps, another source of contagion or rather another means by which the contagious poison may be borne. May not these diseases, originating in a specific poison be caught & given by our domestic animals. Not that a cat or dog might be affected with Scarlatina, but may not this disease in a human being be transmitted through a similar affection in the animal, to others of the human species. The probable method by which the poison gains admittance to the system is through the pulmonary mucous membrane; here the blood has immediate communication with the external air & here it

becomes contaminated. Now in our domestic animals the mucous membranes, perform the same functions as in ourselves: the circulation is carried on in the same way; what more probable than that they may be affected with diseases of the same type as our own maladies - The theory has been advanced that the vaccinia disease is in reality small pox, modified in its character & lessened in its malignity by passing through the system of the cow. This may not be true: yet it seems a reasonable supposition; for if not why should it prevent an attack of variola which may otherwise be prevented by inoculation with the variolous virus itself.

After the introduction of the poison into the system a certain interval seems necessary for the full development of the disease. This period during which the malady seems to lie dormant, has been called the period of incubation, as if the germs of the disease having found a proper nidus had during this time been rendered fruitful. This period varies in length from ten to twenty days; the mean appears to be about two weeks - During this time there are no peculiar symptoms: although it would seem when so powerful

a malady is to make its appearance as though it wd be heralded by some of those signs which mark the onset of disease.

A knowledge of this fact is of value in our diagnosis of these diseases. Most of them come on with fever which makes its appearance at the end of the periods of incubation. Now if the patient complaining of fever, be in a district where any of these diseases are at the time epidemic & he have within two or three weeks been exposed to any contagious influence, we may rationally consider him as threatened by the form of disease at the time prevalent & treat him accordingly. If the precise time of exposure is known our diagnosis is rendered more certain: since the precise period of incubation, for each of the Ex - is pretty well established -

What is the condition of the body during this period? As we have said no visible change makes its appearance: yet the seeds of the disease are there.

We cannot account for it: but we find that the end of this time the whole system is more or less involved. It seems as though during this period that the whole mass of the blood had become contaminated

Dr Watson's idea is that the poison introduced in small quantity acts as a ferment in the circulating fluid & that the eruption is a process by which this mass of disease is eliminated from the system.

From the time when the disease makes its appearance to the time of the eruption the malady makes constant & persistent progress. The constitutional symptoms are severe & the local malady the eruption often of great extent. The surfaces of the body are all affected with more or less severity at some period of the complaint. The skin is sometimes wholly disorganized: so that ^{even} if the patient recovers, the whole epidermis comes off in scales, or crusts or in sheets, so that the whole of the skin of the hand may be taken off as a glove. The mucous surfaces too are affected. In both Rubella & Scarlatina the disease of the mucous membranes lining the nasal passages & fauces is one of the most distressing symptoms.

The mucous membrane lining stomach & bowels is sometimes so severely affected as to carry off the patient.

The serous membranes too are liable to inflammation: perhaps from their intimate sympathy with the skin.

The nervous system too, is also implicated & death

sometimes occurs from shock before the disease has made any great progress.

The sequelae of these diseases are often as disastrous as the diseases themselves. Anasarca, Deafness, a tendency to phthisis, inflammation of the bronchial membranes often follow attacks of Scarletina; Rubella &c. To guard against these sequelae is a most important part of the physician's duty. This we can do to a greater or less extent, by attention to the diet & regimen of our patients.

Another great peculiarity of the Exanthemata is this: that one attack of disease is almost a certain safeguard against another attack of the same malady & this leads us to the second division of our subject: namely the methods which have been devised for guarding against the attacks of these diseases -

Advantage has been taken of the fact before-mentioned. This was first done with reference to variola. The process of inoculation was the first step made in the right direction. In this process the disease is engrafted on to a healthy body

& allowed to run its course in the natural way. This practice, although not unattended with danger was still in vogue until the time of Jenner who introduced what is now so well & so favorably known, the system of vaccination. Its history & the benefits which it has conferred upon the human race are well known. But inoculation is not confined to variola alone: it has also been tried in the other diseases of this class.

In the others it is not to be depended upon as in variola; yet time may teach us how to protect the community from the ravages of the exanthemata as it already has done with reference to variola.

The fact that diseases of this class rarely occur more than once to the same individual is well known to the public as well as to the profession; and we sometimes hear a mother say that she is willing to expose her child while young, to some of these complaints rather than to live in constant dread of their attack at a more advanced period of life. It is a fact that some of these diseases are much more

fatal when they attack adults than when they attack children, hence there may be some philosophy in the reasoning of the mother -

Of the treatment which is peculiarly applicable to these diseases - When their attack is apprehended it seems to me that we should direct particular attention to the general health so that if our patient must go through a course of disease, the shall, & through it under as favorable circumstances as possible. Exposure should be prevented, the body should be warmly clad: good food & of sufficient quantity should be allowed & if there be any disorder of the general system it should be removed by the proper remedies -

When the irritatory fever has commenced it is often advisable to give an emetic - or an antispasmodic, which shall remove all irritating substances from the alimentary canal. Then perfect cleanliness should be insisted upon: after a warm bath is of infinite service in removing the dry & harsh skin so constant an attendant upon fevers. We are then to watch for symptoms & treat them

as they make their appearance. The common cooling diaphoretics: Spts Nit. Aeth. Spts Nundereri, or the effereasing draught are all appropriate at this stage of the disease. Attention must be paid to the ventilation of the sick room: pure air in sufficient quantities must be admitted in order that the poisonous exhalations from the patient may properly diluted & all offensive odors must be removed or corrected. In mild cases these means may be sufficient; but sometimes these diseases assume a malignant form & the shock to the nervous system is so great as to break down the physical strength at once: In these cases we must remember that the patient is about to go through a course of rapidly exhausting disease & that we are to fit him if possible to contend with it. Tonics & Stimulants may be given here from the beginning: Quinine in large doses: wine: beef tea with Carb. Am.

When the eruption has made its appearance the fever generally subsides: then we need only to care for the regimen of our patient: to prevent undue exposure to cold or heat.

If the eruption be profuse, causing great irritation

we must guard against this if possible by the exhibition of narcotics - opium, hyoscyamus &c. If the eruption be so profuse as to cause a debilitating discharge, we must support the strength as in the malignant cases before mentioned.

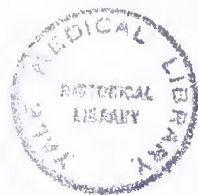
It is sometimes the custom, when the eruption is delayed after the usual time, to force it out if possible by warm drinks &c. This is never necessary; we may trust this process to nature: for we believe it be her method of cure; but if we find any retrocession of the eruption or any complication of internal disease we may use such methods to bring it back to its proper seat the skin. In such cases the mustard foot bath may be used or sinapisms applied externally, -

The treatment of the Erythematata resolves itself into this formula: obey the laws of hygiene: watch for symptoms of approaching danger & attempt to ward it off: but trust the greater part of the cure to nature, "which healeth all our diseases"

After the eruption has passed off the same care for the regimen of the patient is requisite as during the treatment of the disease. For sudden exposure to cold or damp is apt to bring on some of the

sequelae of these diseases which we have already mentioned. Too much care cannot be taken under these circumstances. These dangers are not passed with appanant return to health: but they sometimes come on after the lapse of weeks & they sometimes cause as much trouble as the original disease. E. D.

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