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DISINFECTION AFTER INFECTIOUS DISEASE

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Not many years ago the etiology of epidemic diseases was wrapt in mystery. It was known that their propagation depended on the diffusion of a virus, but the exact nature of this was uncertain. Bristowe says that formerly these diseases were believed to be due to some mysterious influence which diffused itself like a vapor over the surface of the infected region, involving equally the whole population, modifying the already prevalent diseases, and causing the specific troubles in those who were liable to them. Of late years, increased knowledge, arising from the study of the germ theory of disease, has given us new, more exact, and, we hope, more correct information concerning etiology.

Recent investigations would appear to show that certain of the specific infectious diseases are caused by micro-organisms. These are anthrax, diphtheria, typhoid, relapsing fever, erysipelas, cholera, pneumonia, glanders, tuberculosis, pyæmia, septicæmia, malaria, tetanus, leprosy, and actinomycosis.

In other diseases of the infectious class, the propagation of which is dependent on a virus of some kind, analogy would indicate that micro-organisms are also the cause. The similiarity in contagiousness, the existence of a period of incubation, the prodromal symptoms, regular course and protection for a time in certain of these diseases against another attack would pre-suppose that the nature of the contagion in the doubtful diseases is similar to that of which we are more certain. These diseases are typhus, variola, vaccinia, scarlatina, measles, mumps, varicella, pertussis, influenza, dengue, cerebro-spinal meningitis, yellow fever, dysentery, rabies, syphilis.

In disinfection after any of these diseases, they must be all treated on the supposition that they are caused by micro-organisms.

The diseases which we will specially consider on account of their very frequent occurrence, are scarlet ever, measles, diphtheria, tuberculosis, pyæmia, septicæmia, erysipelas, typhoid, variola, cholera.

In scarlet fever the contagion is especially to be feared during desquamation. There is a difference of opinion amongst authorities as to the exact period of infectiousness of this disease. Dr. Squire, the writer in Quain's Dictionary, states that the infection exists during the whole duration of the disease. Eustace Smith and Bristowe state that it is not to be feared so much during the first few days. Osler questions whether the contagion is ever developed before the eruption appears. It must remain as an undecided point until the germ of the disease is discovered.

In regard to measles, a German investigator and Dr. Booker, of Johns Hopkins, have each discovered a germ which was constantly present in the throats of the cases of the disease examined. This germ was cultivated and inoculation experiments performed on animals, but with negative results. It may be that the animals used were insusceptible to the disease, and that the germ found was really the specific germ. But so far the chain of reasoning is not complete.

In diphtheria, it has been proved experimentally, that the Klebs-Lœffler bacillus is the cause of the disease. This organism is thrown off in the mucus discharges from the throat and nose, and in the membrane, which may be expectorated. It is not thrown off in the breath, hence the extent of contagion during the disease is limited to a few feet. The bacillus in the active state cannot be carried by the air, but when discharged from the throat in mucus and membrane, and allowed to dry, may then be carried about freely.

In typhoid the germ is found in the stools, and it may also be carried in the air when dried. Some observers claim that it does exist in the blood, the urine and the rose-colored spots.

Erysipelas, pyæmia, septicæmia are infective diseases due to the presence of micro-organisms in some form, or of their poisons. Different organisms