

There is a moment following inoculation in which the resistance to infection is not only not increased, but actually lower. So that if during that moment a person came in contact with infection he would be more likely to contract the disease than an uninoculated person. If ever one should encounter that phase anywhere it would have been in this asylum. Here vaccine was employed in large doses and the result was that in the inoculation of nearly one hundred attendants in the asylum, among others going down every day with the disease and a good many dying, not a single inoculated person contracted enteric. This made on me a strong impression, confirmed since, that there is no practical danger of the negative phase with typhoid inoculation with dead typhoid cultures. That argument against inoculation is brought forward even now. Many colleagues in England inoculated when there is no typhoid about, but never dream of inoculating in the presence of an epidemic. Many are of this opinion. This has been the hardest argument to fight down. Of course, if this had really been the case it would have limited the use of typhoid vaccination largely in India, as enteric is found in every State of the country and we could not have dared to inoculate there if this statement had been true.

We believe that there is no such thing as the negative phase. We advised inoculation in India, with the results I will show you.

On Sir Almroth retiring, his mantle fell on my shoulders. We had a larger opportunity of testing typhoid vaccination in the Boer War, where we tried to get good statistical information. In war it is very difficult to get that information, from the fact that in active service statistical information is impossible to get. Documents get lost, the men responsible for them die, and your figures are in chaos, and such figures as do come to light are contradictory. Some of the figures we got were good, some were not very good, and some were actually bad. That being so, the Army Council decided that typhoid inoculation must be discontinued in the army until we knew more about it.

For the purpose of learning more about it, there was appointed a commission of experts, so called, for I happened to be one of them. Their function was to get information in regard to all that was known of the subject, and to conduct further research with a view to the improvement of the vaccine. This committee is now dissolved, having presented their final report. Their report recommended the universal adoption of typhoid vaccination in the army. This was gratifying to me because it was an extraordinary uphill fight, as vaccination had fallen into bad repute. The war officials, however, did not make it compulsory. I hope the day will come when our army, following the example of the American army, will make it compulsory for the soldier to be inoculated either in peace or in war. It is a many sided question. The nature of the vaccine we employ is a sterilized broth culture of the typhoid bacillus, sterilized, that is, killed, and we employ as a sterilizing agent heat. You must not parboil the bacteria as we used to do in the olden days of the Boer war, that is, you must not overheat. We have learned that this overheating destroys the effectiveness of the vaccine as an immunizing agent. We employ the lowest temperature at which we are certain of killing the bacteria in one hour, and that is 53 degrees Centigrade. The organism we have selected for that purpose is the strain alluded to by Dr. Hamilton. We selected this haphazard at first. I remember the post-mortem at Netley from which I isolated that bacillus. It was from the spleen of an undistinguished soldier called Rollins, who died there many years ago. I was on sufficiently intimate terms with a clergyman as to suggest to him a subject for a text of his sermon, and thought he could have no better one than the case of that soldier, Rollins. He died of a preventable fever, but his death has been the means of saving hundreds and perhaps thousands of lives. This strain from Rollins, though selected haphazard, happened to be a good one. Strains differ in their property of giving life to anti-bodies. This one is excellent for that purpose. It is more suitable than a great many others we have tested against it. We always added a certain amount of antiseptic to our vaccine,