

I regard as conclusive evidence that the case was really diphtheria. When the clinical diagnosis is positive I think that even after negative bacterial results, samples should be taken at intervals of a day or two in case of a re-infection. In any case, a negative result shows that the exudate is not at the time in a state likely to spread infection.

It was not found, as a rule, that the taking of duplicate samples at the same time gave any additional information, though in one case bacilli were absent in one sample and present in a duplicate taken at the same time. Additional samples taken after an interval of 12 to 24 hours were more often of service.

In any case where the patient has been ill for four or five days the absence of bacilli in the cultures, even from visible membrane, should not be considered as proving that the case is not one of diphtheria. When the sample is taken from cases with no visible membrane the negative results are less trustworthy, but as a rule in cases of croup the posterior wall of the pharynx gives an abundant growth of diphtheria bacilli. Some throat swabs taken from fatal cases of croup not diagnosed during life were found to give positive results, a method which might be made to yield valuable statistical information in a properly managed system of death certification. The fact that so-called simple croup is credited with causing in Montreal double the number of deaths due to typhoid should make this question worth investigation.

*Doubtful Results*—In 11 per cent. of the primary cases the results of the first culture were not decisive; of these 1 per cent. showed entire absence of growth, due to the use of antiseptic applications shortly before taking the sample. Sometimes organisms, apparently characteristic Klebs-Löffler bacilli, were present in such small numbers that they did not correspond with the known tendency of diphtheritic bacilli to rapid growth as compared with other organisms. In such cases a second culture was uniformly asked for and obtained, but it was just as uniformly negative, except when obtained in the late stages. If one is sure that the sample, properly taken from visible membrane in an early stage, gives negative results, there is very little danger of the case being diphtheria. With regard to the late cases in which few bacilli are met with, it is likely at all events that the danger of infection will be as slight, so long as the bacilli are scanty in the exudate.

The routine advice has been to keep such cases isolated and send further samples. In case they are exposed to danger of infection from undoubted cases of diphtheria, or removed to an infectious