

serum, and it would seem that measles does away with all resistance to the diphtheria bacillus, rendering useless the small amount given in the ordinary prophylaxis, and this is in agreement with the findings of many other observers.

Since the occurrence of these cases it has become the routine to give 2,000 units to every case of measles when first seen, and if the anginous symptoms keep up to repeat the injection on the fourth day. Following this change no diphtheritic poisoning has occurred, though many of the measles patients showed free-growing diphtheria bacilli in cultures from the throat.

The only exception to the uniform results recorded was this year (1907-1908), when one of the services, consisting of 35 to 40 beds, discontinued the use of the serum for three and a half months, with a consequent development of 29 cases of nasal carriers. Of these 29 carriers, 19 belonged to that service and 10 to other services whose patients were associated in the same wards. Among the 29 carriers, 13 showed clinical signs of prolonged temperature, increasing pallor, weakness and pulse rate; 10 belonged to the unimmunized service, and 3 to the immunized services.

As soon as the routine administration was resumed the clinical cases ceased to arise, though many of individual cases and carriers remained as carriers for many weeks.

In contrast to the marked reduction in clinical cases due to the general administration of the serum, the number of carriers remained practically the same, never for any one set of swabs going below 11.3%, and I have never seen any carrier clear up because of the administration of serum in large or repeated doses, locally or subcutaneously. The clearance being rather a matter of time, with more relation to the local condition of the nose and throat than to the state of general health. I have not seen that any of the applications in common use had any effect in getting rid of the bacteria: rather is the opposite effect suggested by our results.

Up until this winter there had never appeared any serious or alarming symptoms among the 4,084 children to whom the serum had been administered from once to thirty times during their stay in the hospital. There have occurred since then two cases in whom death seemed imminent shortly after the administration of serum: one was a case who had had repeated injections, and in the other the symptoms followed immediately upon the initial injection of serum into the thigh; a dusky hue was noticed widely around the site of injection, rapidly becoming swollen and red. Within ten minutes the patient became wildly excited,