

sounds dramatic, but we must remember that at the Munich Congress Baginsky was pleading the cause of the antitoxine. In 1891 his contemplations were not so gloomy nor his results so bad as he has since depicted them. In his *Arbeiten aus dem Kaiser u. Kaiserin Friedrich Kinderkrankenhaus*, published in October, 1891, he thus sums up the work of the diphtheria pavilion for the first year of the hospital's existence: 244 cases were treated; the mortality was 40 per cent.; 37 of these cases were admitted with far advanced septic and gangrenous diphtheria and died soon after admission. "Subtracting these cases," says Baginsky (p. 246), "but including a larger number of those that were tracheotomized, we had a mortality of 23.1 per cent., a result in diphtheria with which we ought to be very well satisfied." In his recent book he reports 527 cases treated with the antitoxine, with a mortality of 15.6 per cent.

Much stress is laid by the upholders of the antitoxine on the fact that the sooner the cases are injected the better the prognosis; and the brilliant achievements of the antitoxine in this particular are above dispute. It is, perhaps, not useless to call attention to the fact that before the antitoxine period the prognosis was good in cases brought early for treatment.

F. Siegert gives his results in the treatment of diphtheria without the antitoxine in the children's clinic at Strasburg. He cites in detail 100 cases that required tracheotomy—hence all severe cases. Six were received on the first day of the disease—none died; ten on the second day—two died. After the second day the mortality ranged from 31 to 53 per cent. Siegert urges further that fatal complications do not arise, as a rule, until after the fourth day, and that, therefore, if cases are treated early the mortality will be reduced *eo ipso*. Of fifty fatal cases in his clinic, there died on the first three days of the disease none; on the fourth day five; on the fifth day eight, etc. Dangerous symptoms do not arise early; parents wait until death seems imminent and then hurry their children to the hospital. During the antitoxine period they take them early and hence the percentage of recoveries is greater.

Ritter states that in the two years preceding the use of the antitoxine he lost no case of pharyngeal diphtheria that was brought early for treatment, although he had had altogether ninety-one cases.

Baginsky, Kossel, Ehrlich, and others emphasize the fact that after the injection of the antitoxine the membrane never spreads into the larynx. Ganghofner, however, in an article friendly to antitoxine, cites his pharyngeal cases during 1893, and finds that in only two cases did the membrane spread to the larynx after treatment was instituted. The mortality among these pharyngeal cases was only 15.8 per cent.

We learn from all these observations that diph-

theria treated promptly under favorable conditions (hospital-hygiene, good nursing, food, and air) is by no means so fatal as we are taught to suppose, but that even in the pre-antitoxine-days the mortality was great only among neglected or improperly situated patients. In private practice, in Cincinnati, at least, the percentage of fatal cases is small, the mortality ranges here from 19 per cent. (in 1891) to 33 per cent. in (1888), but the death-rate among the upper classes is very much less.

It is not true, as was first supposed, that all cases treated on the first or second day with the antitoxine will recover. Ganghofner had two cases that were injected on the second day to prove fatal. Henbner reports failure in a few cases injected on the second or third day. Kohts injected a case on the second day; twenty-four hours afterward new and extensive membranes formed. In another case, injected on the second day, the larynx became involved later, and tracheotomy was required. In the Trieste hospital five cases died, though injected on the second day.

Soltmann had thirteen deaths among eighty-nine cases; six of the fatal cases were injected during the first four days of the disease; and in thirteen cases the membranes descended to the pulmonary aveoli, notwithstanding the antitoxine.

Vierordt reports eight deaths among fifty-five patients. Two of the fatal cases were injected on the second day and two on the third. Ritter details the following history: He saw a strong child, aged three years, that had been taken sick only a few hours before; on both tonsils circumscribed patches appeared; the temperature was 39.7°, the pulse between 110 and 120. Behring's antitoxine No. 3 was used. The membranes, nevertheless, spread, the larynx was invaded, tracheotomy was refused, and the child died on the sixth day.

We are compelled to admit that the antitoxine fails to cure a certain proportion of cases, notwithstanding the fact that all other conditions are favorable.

Finally, a few words are in order regarding the effect of the bacterial diagnosis on hospital statistics. Formerly, at least in American cities, though all the fatal cases were reported, many mild cases were not. Now, that bacterial diagnosis and municipal supervision render diphtheria cases in a measure public property, many more cases will be brought to the notice of health-officers than formerly, and the mortality rate will seem to sink. This is prettily illustrated in the recent health report of Boston for the year 1894. Boston has not only a Bureau of Bacteriology, but it also has an army of school-inspectors to examine school children. With these combined means an enormous number of cases of diphtheria are ferreted out, cases that formerly would have been called simple sore-throat. This statement is made in the report