

be first a superficial hyperæsthesia, secondly a deep pain as of a bruise. Movement of the underlying muscles is also very painful and for this reason the breast may be considered better than the back as there is less movement when the patient sits up, which posture has to be assumed frequently for the employment of local treatment. This condition lasts for about 18 hours. We have tried various means to prevent or allay this pain but without much result. Camphor chloral painted on the skin relieves the hyperæsthesia, but not the bruising pain.

When the breast is selected the needle should be inserted not lower than the second space and pointing upwards and outwards. Lower insertions are often followed by pain shooting down the inner side of the arm, due most likely to disturbance of the intercosto-humeral nerve.

The proper dosage is the most important question. As different preparations of the serum are made to possess different degrees of anti-toxic power, it will be confusing to speak of absolute quantities, therefore I shall designate doses as half, single and double; a single dose of Schering's being 5 cc., while that of Roux's is 10 cc.

The ideal dose is just that amount, and no more, which shall entirely render inactive the amount of diphtheria toxin absorbed by the system. But this amount can only be guessed at.

If at the first injection a quantity be given which neutralizes the effect of only two-thirds of the toxin absorbed the remaining one-third will continue to invade the system, while at the same time more toxin will be produced by, and absorbed from, the only partially cured local lesion, and in a short time the amount of toxin in the body will be as large as was at first present. For this reason it is better to give an overdose rather than an underdose.

Certain crude rules for dosage are given, but the results are most uncertain.

Given a case of ordinary faucial diphtheria—in children under one year where the disease has lasted not more than thirty-six to forty-eight hours half a dose will usually suffice. From 1 to 10 years a single dose must be given and over 10 a double dose, although from 10 to 18 a single dose can first be tried and will very often prove successful.

In laryngeal diphtheria it is not always necessary to increase the dose, in fact not at all when there is only very little laryngeal stenosis. When the labour of respiration is great, however, a double dose should immediately be given, or if the child were under two years a single dose and repeated within six hours.