

cocaine, in the dose of 3 cg. [=gr. ss] per day, were administered with excellent results. Rumpf found no benefit from nitro-glycerin, oil of camphor, and other respiratory stimulants. Trussewitch¹ advocates the use of nitro-glycerin—two drops of the centesimal solution at a time placed on the tongue—and the hypodermatic injection of ammonia. As the mucous membrane is desquamating, it were better, no doubt, to inject the nitro-glycerin or amyl nitrite beneath the skin, or administer the amyl nitrite by inhalation. From *a priori* considerations, it would appear more useful to administer these agents after the operation of infusion by either mode; for there is apparently little utility in forcing the organs of circulation when the blood is so thickened.

For the cramps which ensue when the muscles are no longer supplied with blood, small doses of morphine subcutaneously are recommended by Rumpf and others. In the last epidemic preceding the present, chloral by hypodermatic injection was highly extolled by some observers. I have no doubt from my personal experience that it has great value, especially when combined with morphine and atropine. As the solubility of chloral is limited, ten grains at a time are all that can be given, unless several punctures are made. The following is a suitable formula:

R.—Chloral hydrat.	ʒiij.
Morphin. sulph.	gr. j.
Atropin. sulph.	gr. ¼.
Aquæ chloroforma	{	aa ʒss.—M.
Aquæ		

Sig.—Twenty minims, repeated in ten minutes, and subsequently *pro re nata*.

It is usually better to give the chloral separately—ten grains dissolved in sufficient water—and the morphine and atropine together—from $\frac{3}{8}$ to $\frac{1}{4}$ grain of the morphine and from $\frac{1}{120}$ to $\frac{1}{60}$ gr. of atropine. The effect of chloral on the muscular cramp of cholera is highly satisfactory. The pain ceases at once, the pulse rises, and the breathing gains in depth and volume. The last case of cholera treated by me, and one of the most severe, seemed to be rescued from a fatal ending by chloral injections. In this case, with the coming on of the cramp, the pulse became imperceptible at the wrist, and the respiration almost ceased. When the action of the chloral was felt, the surface grew warmer and pulse and respiration became more active. As, however, morphine and atropine had been given, some share in the result must be ascribed to them.

There are many other methods of treatment of cholera, and various medicaments, to which I have not referred, but this paper has already

¹ Ibid.. November, 1892; from the St. Petersburger Wochenschr., 1892, No. 36.