

chronic laryngitis and laryngeal and pulmonary tuberculosis, in a number of cases, with promising results, although it is too soon to place any proper estimate upon the value of the new method of treatment.

The early injections were chiefly aqueous solutions, with the addition of glycerine; and although good results were reported, it was not until oil was substituted for the water that the full beneficial results began to be realized—the oleaginous applications being so much less irritating. Of the various oils that have been used, none seem to suit the conditions so well as the purified hydrocarbons, extracted from crude petroleum. Besides the essential qualifications of blandness and softness, they possess the additional advantage of not being culture mediums.

The most effective medicines for use by the intratracheal method are the same that are used for stimulating sprays—stereoptines like menthol and thymol, and methyl-ethers like creosote and guaiacol, substances that are soluble in oils and that will volatilize slowly at the temperature of the body, the vapor from them reaching not only the larynx, but all parts of the lungs as well. The strength of the solutions should be from 1-2 to 2 per cent.

The writers mentioned claim that from 4 to 8 cubic centimetres of the mentho-campher solution of 1 or 2 per cent. strength can be injected into the larynx without producing irritation, the larynx being bathed with it, and the whole bronchial tree medicated at the same time. The solution is felt by the patient in the bronchial tubes, and the odor can be detected in the breath of the patient for hours afterwards. In the latter lies one of the essential benefits of the treatment, as in the act of expiration the vaporized drug is brought in direct contact with the diseased laryngeal tissues.

One of the immediate results of the treatment is a warm, pleasant glow felt throughout the lungs, and extending over the entire body, even to the hands and feet. Another is the rapid sensation of cough, the larynx feeling soothed and comfortable, the sensation lasting in some cases for hours.

Menthol may be used of the strength of 1 or 2 per cent.; thymol, 1-2 to 1 per cent.; guaiacol, 1 per cent.; creosote, 1 per cent. A stronger solution of either of the latter would produce pain. Chlorophenol may be used in small doses, say 1 c.c. of 1 per cent. Of any of the others, the dose might be from 4 to 8 c.c. repeated once a day.

Lake is the only one of the writers mentioned who has referred to the matter of temperature. I may say, however, that in every instance that I have used this method, following his suggestion, I have first heated the instrument in warm water, and then filled it with the oil at blood temperature. By the use of the laryngoscope, the tip of the instrument was then guided over the epiglottis, and the patient instructed to inhale slowly while the stream was