

tor, and certainly did not permit sufficiently free access of the medicated air to the lungs, a large amount of the antiseptic material being lost by absorption on the convoluted walls of the tortuous nasal channels.

After many trials of the now formidable list of antiseptics, I find that carbolic acid, creasote, and iodine, in combination with sulphuric ether and rectified spirits of wine, are the most efficacious and satisfactory. The want of volatility in boracic, salicylic, and benzoic acids, and their salts, proves a bar to their employment by this method. Dr. Horace Dobell, who has had a very favourable experience of this treatment, writes to me that he has found thymol, in the form of Shirley's thymoline, very grateful and efficient, in many cases, where the smell of carbolic acid and creasote was intolerable either to patients or to their friends. Of the three antiseptic agents I chiefly use, I find iodine most useful in the second stage of phthisis, when the expectoration is passing from the glairy into the purulent character. I use a tincture, for inhaling purposes, made with sulphuric ether instead of spirits of wine; and this ethereal solution has a singularly soothing effect on the cough and pulmonary irritation. In combination also with carbolic acid as carbolised iodine, or iodized phenol, it is extremely useful in the purulent expectoration accompanying the resolution of pneumonia, both catarrhal and croupous. In the stage of excavation, whether tubercular or pneumonic, the combination of iodine with carbolic acid and creasote is most potent. The acid seems to have the greater influence in checking the amount and purulent nature of the sputa; while creasote acts more as a sedative to the cough, apparently by reducing the irritability of the pulmonary tissues. The addition, also, of varying proportions of sulphuric ether and chloroform greatly assists in soothing and allaying irritation. These combinations also act frequently like a charm in the profuse expectoration of purulent bronchitis, as also in bronchial asthma. Dr. Thorowgood, in the Lettsomian Lectures for 1879, describes my antiseptic respirator, and adds his valuable testimony to its efficacy in bronchial affections. I have also noticed that patients, while using

this form of inhalation, frequently experience great relief from the aches and flying muscular pains which often occasion much distress in the advanced stages of phthisis.

In connection with these observations, the following formula may be taken as an adaptable basis for the antiseptic solution for inhaling. *R* Tincturæ iodi etherealis, acidi carbolici,  $\text{āā}$   $\text{ʒii}$ ; creasoti vel thymoli,  $\text{ʒi}$ ; spiritūs vini rect., ad  $\text{ʒi}$ . M. Where cough is urgent, or breathing embarrassed, chloroform or sulphuric ether may be added at discretion. In the formula which I published in 1877, a small quantity of glycerine was introduced, with a view to aid solution and fix the materials; but I found it unnecessary, and also that it clogged the respirator, and soiled everything with which it came in contact.

Whether these substances act by destroying the germs to which the formation of pus is attributed by the great teacher of the antiseptic method, or by their abortive effect from a physical cause, such as coagulation, on the cell-proliferation in the seat of morbid action, I do not profess to know; but the effect of this antiseptic inhalation in diminishing expectoration, and with it the cough, in the various forms of phthisis, during the resolution of pneumonia and in the purulent stage of bronchitis, acute or chronic, with dilated bronchi and fœtid expectoration, is certainly most remarkable. The following are the first four of a list of cases of phthisis, selected by my friend, Dr. Grant, resident physician at the Ventnor Hospital, in which antiseptic inhalation was employed throughout as an adjunct to general treatment.

CASE I.—M. B., aged 32, a tailor. Third stage, right side, with moist crepitations all over the back, and second to third stage at the left apex. He was admitted on January 8th. The sputa were nummular and bloody, four ounces in amount. He was discharged on March 18th; sputa, two drachms, no tinge. He was under treatment ten weeks; he gained 10 lbs.; and was discharged with crepitation much diminished in all parts of the chest, and signs of dry vomicae at both apices. The other treatment consisted of hypophosphites and cod-liver oil, with iodine paint over the chest.

CASE II.—E. M., aged 20, a shopwoman, of