

cially useful in the treatment of diphtheria. Each remedy is supposed to act upon the disease locally, some in one way, some in another; one writer, essaying to attack the disease from more than one point, recommends a combination of chloral, salicylic acid, sulphite of soda, and glycerine, and believes that in it he has found that which acts as "an energetic antiseptic, anti-fermentative, disinfectant, hæmostatic and preservative, as well as a destroyer of parasitic organisms." The efficacy of local remedies may be shown in the modification of the inflammatory conditions which co-exist with the diphtheritic deposit. In the hope of doing something in this way, I have advised inhalations of steam, frequent spraying of the throat, and the washing of the inflamed parts with warm water, and saline solutions thrown in with a syringe.

The inhalations of steam may be of value in cases where the symptoms refer to the larynx and trachea, and in one case where the dyspnœa was very great through a laryngeal complication, the use of the steam-spray atomizer was attended with good results. Some have placed value on solvents, as liq. potass. and lime water, in the belief that they will dissolve the diphtheritic membrane; my own trials with liquor calcis did not succeed in dissolving the membrane expectorated in the case treated recently; some of the mucus adhering to it was dissolved in a few minutes, but there remained portions of the membrane which resisted the action of this agent for a month. Some, regarding the disease as due to the agency of low forms of vegetable life, hope by destroying these to remove the disease. I may not be sufficiently impressed with recent theories regarding the action of these agents upon the human system. It is possible that the atmosphere may be the abode of countless germs which invade our bodies and destroy vitality, and that we are to a greater or lesser extent exposed to their influence unless we ascend, as Prof. Hueter remarks, "mountainous regions, near and above the line of perpetual snow." If this be true, it would account for the difficulty met with in the treatment of severe forms of diphtheria. With respect to the micrococci present

in suppurating wounds, Dr. Ogston says that "once they have gained access to a wound it is not easy to eradicate them. Ordinary Lister dressings will not do so. After weeks of dressing with carbolic lotion, carbolic oil, 1 to 16, and 1 to 8 in strength; after the use of dressings with boracic lint, salicylic acid, and chloralum, all carefully and thoroughly applied, they were found in the wounds and ulcers in nearly as great numbers as before, and it was clear that these applications, at least as ordinarily employed, though generally sufficient to kill bacteria and bacilli, are powerless to eradicate micrococci. The only way in which I succeeded in destroying them in wounds where they had once established themselves, was by cauterization with a strong solution of chloride of zinc, or by strong frictions with a 5 per cent. watery solution of carbolic acid." The micrococci present in diphtheria may possibly be less tenacious of life, but these low forms of vegetable life seem to have high degrees of vitality, the lower the form the higher the degree, for they seem to exist and survive where all animal life dies; and if our hopes of treating the disease with success depends upon the agency of remedies applied to the throat with a view of destroying these organisms, I think that those who have often tried the influence of agents upon the vegetable growth present in tinea tonsurans will not be sanguine of results in combatting diphtheria on this line.

• Dr. Bilkington says that 60 per cent. of all cases will recover without treatment, 5 per cent will die no matter what treatment may be employed. These figures show how wide a field there exists for forming incorrect conclusions as to the usefulness of remedies. There remains, however, a sufficiently large proportion of cases for us to enquire in what manner, and to what extent, the disease may be influenced by remedies local or general.

There seems some reason to believe that when it first appears this disease is a local one; it has been produced by localized infection, and it is probable that it begins in that part where the germs have been planted. But does it follow that by attacking it there it will be cured? A chancre is produced in the same