

symptoms, or when long persistence of a large effusion makes it likely that this may cause irremediable changes in the lung or chest wall. The assertion that phthisis may be provoked by a properly conducted tapping is not borne out by a study of a large number of cases, and the risk of converting an innocent effusion into a dangerous one, we believe to be dependent upon circumstances which can be avoided.—*Med. News.*

### ON THE VALUE OF BORIC ACID IN VARIOUS CONDITIONS OF THE MOUTH.

Boric acid is now officinal, and justly so. It has long been used in various metallurgical and ceramic operations, and more recently its preservative power has been abundantly demonstrated. It is this antiseptic power which gives it its great therapeutic value. It is a very stable compound—one of the most stable of the acids; it is not volatile, and only exerts its action when in solution; fortunately, however, it is soluble in more than one menstruum. Up till now, its chief application has been in connection with modern surgery, where the boric ointment, lint, and lotions all hold a prominent place. There are spheres of usefulness for it, too, in medicine; and one of these is in diseases of the mouth. It is the benefit of its local action we usually wish to gain, for, though sometimes given internally—as in irritable conditions of the bladder—its topical antiseptic effect is more often desired. In connection with its local application in various diseased conditions of the mouth, its solubility in water and glycerine, its unirritating character, its comparatively innocuous nature, and its almost tastelessness, are greatly in its favor. More particularly is this the case in treating such conditions in children, whose oral cavities cause them so much annoyance. Speaking generally, boric acid will be found useful in all conditions of the mouth, fauces, pharynx and nose, where there is any abrasion of the epithelium; whether it be used as a powder, gargle, mouth-wash, pigment or confection. More definitely, I may say, it is not contra-indicated in any of the forms of *stomatitis*, though scarcely severe enough for the graver varieties.

In *simple catarrhal stomatitis*, a mouth-wash, containing from 10 to 15 grains to the fluid ounce, speedily cures the condition, and exercises the same beneficial influence in the *ulcerative* form, though there, in addition to the rinsing of the mouth, a local application in the form of the powder or pigment should be made to the individual follicular ulcers. The powder simply consists of finely powdered boric acid, mixed in various proportions with starch; the pigment is a solution of boric acid in glycerine (1 in 4 or 5). In both

cases, the addition of chlorate of potassium is advantageous; indeed, I usually combine it, but it is not essential.

Nothing I know of is at once so rapid and so efficient, in the treatment of *parasitic stomatitis* or *thrush*, as this remedy. The youngest children do not object to its application, and, occasionally, you have to caution against its too frequent use. The *oidium albicans* quickly succumbs to its influence. I am well aware of the great value of nitrate of silver in many of these conditions; but, I am also alive to its extremely disagreeable and persistent taste, and the dislike which precocious children at once take to it. For thrush in children, I especially recommend boric acid, either as a mouth-pigment or as a confection. Honey and sugar have both been condemned, as being inadmissible, in combination, for the treatment of thrush; but, so far as children are concerned, I must say I consider a confection (though made with honey), which has been impregnated with boric acid, gains more by its palatableness than it loses by the tendency of the saccharine matter to further the growth of the fungus. The boric acid at once does away with this tendency. Let the pigment be frequently painted with a brush over the patches, never omitting to do it after food has been taken; or, a little of the confection simply allowed to dissolve in the mouth; and the days of the fungus will soon be ended. I have found boric acid, combined with its salt (borax), markedly beneficial. Borax alone, however, is not nearly so good.

In *pharyngitis*, and *relaxed conditions of the throat*, a gargle, containing boric acid and glycerine, with either tannic acid or alum in addition, ought not to be forgotten.

Let me allude to another condition, in which I have found combinations of this substance helpful and grateful to the patient. I refer to the condition in which we frequently find the mouth, tongue and teeth in severe cases of typhoid fever. The mouth is hot; the lips dry, cracked, and glued to the sordes-covered teeth by inspissated mucus and saliva; the tongue dry, or even glazed and hard, brown or black, crusted with a fetid fur. Under such circumstances, a pigment containing boric acid (30 grains), chlorate of potassium (20 grains), lemon juice (5 fluid drachms), and glycerine (3 fluid drachms) yields very comforting results. When the teeth are well rubbed with this, the sordes quickly and easily becomes detached; little harm will follow from the acid present. The boric acid attacks the masses of bacilli and bacteria; the chlorate of potassium cools and soothes the mucous membrane; the glycerine and lemon juice moisten the parts, and aid the salivary secretion. I consider this application well worth a trial.

So much for the soft parts; a word in conclusion regarding the teeth. Few medical men, I suppose,