

each pill containing one grain of digitalis. Four may be swallowed daily.

8. In maniacal cerebral excitement the hot infusion, sweetened, in teaspoonful doses, twice a day or oftener, sometimes answers the purpose of quieting the patient better than the bromides.

To return to digitalis. In all cases great care must be taken to watch the effect of the medicine. It is better to begin with small doses, observing the results from day to day. When we have reason to suspect fatty degeneration of the heart, it should not be given. In ossification of the aortic valves and in croupous pneumonia, digitalis is likely to do more harm than good. As a general rule, it is not serviceable in robust patients; and it only acts as a diuretic during the presence of dropsical fluid. The dose should be diminished as soon as the amount of urine secreted becomes less. The main benefit derived from digitalis seems to be the relief of *irregular* pulsation by imparting tone to the heart and arteries. Like opium, its first effect is stimulating, its second effect is sedative.

#### NOTES ON THE TREATMENT OF DIPHTHERIA BY PROF. DA COSTA.

Diphtheria may continue in an individual for a long time, relapses occurring from self-infection. Treatment must be preventive and individual. In the first place, the strictest isolation must be enforced: remove all unnecessary furniture, clothing and the like from the room; disinfect the sputa, linen and everything from the patient, and, if possible, remove the paper from the walls and wash with some disinfectant. Do not allow members of the family to come in contact with well children, for fear the former may convey the poison to the latter.

The individual treatment is both general and local. In the former, *alimentation* and *stimulation* are of the greatest importance, given, as in typhoid, every two or three hours, day and night. Alcohol is given to the point of tolerance. Begin with  $\bar{3}$  ss to  $\bar{3}$  j of brandy every hour; increase till heart and pulse are improved. The amount a patient suffering with diphtheria can take is incredible; a child, *æt.* 2 years, has been given a tablespoonful of brandy every hour, and  $\bar{3}$  j is quite common. There is present a condition comparable to that found in snake poisoning. Begin the stimulus early.

As to *medicines*, one of the earliest and best treatments is by potassium chlorate,  $\bar{3}$  j to  $\bar{3}$  ss per diem, in divided doses, well diluted. Next to this, either alone or combined with it, is *tinctura ferri chloridi*, gtt. x every hour or two, for a child *æt.* 10 years.

The rising treatment now is with calomel. It consists in giving large doses frequently, not mind-

ing the free movements from the bowels. Give one grain every hour till twelve doses have been taken, then the same amount every second hour. This has been often tried in the *laryngeal* form, in larger doses, and is of especial utility in this variety of the disease.

Corrosive sublimate, gr.  $\frac{1}{20}$  to  $\frac{1}{12}$  every hour, is a similar but hardly as effective treatment.

Jaborandi is a very new remedy in this trouble. The idea is that when the patient sweats well the membrane will loosen. As it is very depressing, it is not safe unless the patient is quite strong.

Locally, strong caustics have been abandoned. Cleansing, disinfecting gargles are the modern treatment. Carbolic acid, with borax and soda, may be used. Thymol holds a high place, never weaker than 10 grains to the ounce.

R Thymol .....  $\bar{3}$ j.  
Glycerini .....  $\bar{f}\bar{3}$ ij.  
Aque .....  $\bar{f}\bar{3}$ iss. M.

Sig.—Gargle. Dilute if necessary.

Permanganate of potassium, a favorite with the English, equal parts of lime water and glycerine, or two parts of the former to one of the latter, are very useful and grateful. When the patient is old enough, these are best used in the form of spray. Equal parts of Monsel's solution and glycerine may be used when the redness and swelling are very great. Do not scrape the membrane.

The most prominent among the solvents for the membrane are lime, bromine and pepsine. Of lime, it is difficult to get enough. Bromine is too irritating. The remedy that has done best is a saturated solution of pepsine in the form of spray.

Lactic acid, jaborandi and numerous other agents which have been used for this purpose, have some solvent power, but not enough.

*Complications or Varieties.*—*Fornasali diphtheria*, in addition to the ordinary treatment, carried on, if anything, more actively, keep the posterior nares well washed out with—

R Sodii sulphitis .....  $\bar{3}$ ij.  
Glycerini .....  $\bar{f}\bar{3}$ ij.  
Aque .....  $\bar{f}\bar{3}$ iv. M.

Pepsine may prove yet more effective. This washes away the membrane, checks decomposition of the same and prevents blood poisoning. Use with the post-nasal syringe.

In *laryngeal diphtheria*, besides the ordinary treatment, the best results have been obtained by having the patient breathe fumes from slaking lime. Also an occasional emetic while patient has sufficient strength, does good.

*Diphtheritic paralysis*, with good management, usually recover. The blood is always deteriorated and patient is anæmic. Give iron, nourishing food, red wines, strychnine, for the paralysis, best hypodermically, if patient is old enough.—*Coll. & Clin. Rec.*