

drug was stopped, the sputum became less abundant and more tenacious with a sensation of dryness or tightness in the chest. These symptoms were relieved when the drug was again administered. If the dose is large enough, it will act as a nauseant and increase the secretion of water in the bronchi.

The use of alkalies in the treatment of bronchitis is recommended especially by the older writers. Lauder Brunton (9) observed the presence of moist rales after the administration of alkalies, especially around the margins of a tuberculous cavity. "When these (alkalies) are continued until the expectoration has been free for a day or two and the rales diminish, acids may be given with advantage, so as to dry up the expectoration still more." It is questionable, according to Cushny (10), whether alkalies are excreted by the bronchi.

Coughs are divided into two classes, useful and useless. The larger percentage of coughs is useless or ineffectual, and so, harmful, hence the universal use of opium in bronchitis. The act of coughing, by increasing air currents carries upwards the secretions in the trachea and larger bronchial tubes, but has no effect on the bronchioles. The patient who tries to "raise the phlegm" which is in the bronchioles, by coughing, is doing himself more harm than good. The cough, not only of bronchitis, but also of pneumonia and tuberculosis, should be minimized. It is well on this account to tell your patient the less he coughs the less he has to cough. If he can control the cough without opium it is better for him to do so. The dose should be sufficient to diminish the irritation to the point that the cough will just suffice for removal of secretion.

When the sputum is abundant, as in chronic bronchitis, terpin hydrate, creasote, cubebs, copaiba are said to be indicated. Of these, terpin hydrate is probably the most popular. It is a white powder, insoluble in water and not very soluble in alcohol, hence it is advisable to give it as a tablet or powder rather than in the form of an elixir. Cadbury (11) reported a case where 7.5 cc. (less than two drachms) of Elixir Terpin Hydrate and Heroin produced symptoms of mild alcoholic intoxication. It is well not to use the drug indiscriminately in the treatment of bronchitis of the old, especially if a nephritis is present. Cubebs and copaiba have passed the zenith of their glory and are found in the scrap heap of the modern therapist.

In acute bronchitis, where the sputum is thick and tenacious, expectorants are serviceable. The nauseating expectorants, e.g., Vinum Antimoniale, will thin the mucus by causing an outpouring of water. Drugs having a "salt action," e.g. ammonium chloride and sodium iodide, will produce the same effect by their solvent action on mucus. Either type of drug, then, will increase the efficiency of the cilia in the effect to expel the secretions from the bronchial tract. Opium should be used only when the cough is uncontrollable or so troublesome as to interfere with sleep. If the drug is prescribed separately, the dose can be increased or decreased, e.g. at night; it can be stopped entirely when its further use is not indicated.