

intervals of two or three days, the remedy being used either undiluted or mixed with glycerine, olive oil, or tincture of iodine. The hypodermic method of administration is painful. From 1 to 7 minims are injected deeply into the subcutaneous tissue. Neither of these methods appears to have any special advantages, but they may be useful in exceptional cases when the ordinary mode of administration upsets the stomach.

Creosotal or creosote carbonate and guaiacol carbonate have also been introduced as substitutes for creosote and guaiacol respectively.

Creosotal slowly breaks up in the intestine into creosote, of which it contains 92 per cent., and carbonic acid. It is like creosote, liquid, but has little taste, and, as a rule, causes little or no gastric disturbance. Five-minim doses may be given to begin with, but the dose has sometimes been increased to 30 or 100 minims three times a day. A palatable mode of administration is to drop it into the well-beaten yolk of an egg this being taken after meals. Its therapeutic effects are the same as those of creosote itself.

Guaiacol carbonate is a tasteless powder, and would probably have met with much more favor than it has done were it less expensive. It may be given in doses of 5 to 15 grains three times a day.

Various other preparations of creosote and guaiacol have from time to time been introduced. One of the latest of these is a combination of iodine and guaiacol introduced by Coronedi (*Atti d. Accad. Med. Fis. Fiorent.*, July, 1897), under the name of iodo-guaiacol camphorate. P. Bacialli (*Boll. d. Sci. Ned. d. Bologna*, s. vii., vol. ix., March, 1898), has reported favorable on the effects of this remedy administered hypodermically.

Benzosol, a finely granular, insoluble, tasteless powder, containing 54 per cent. of guaiacol, may be given, in doses varying from 4 to 60 grains, in all conditions where guaiacol is indicated.

Guriacolate of piperidine, which resolves itself into guaiacol and piperidine in the duodenum, has been tried and recommended as safe, well borne by the stomach, and free from unpleasant effects. As is the case with guaiacol itself, the patients, while under its influence, improve in appetite and general

strength. The dose may be gradually increased from 5 grains to start with, three times a day, up to 25 grains. The principal objection to it is its expense.

Intratracheal injections of guaiacol and menthol (1 drachm of a solution consisting of guaiacol 2, menthol 10, olive oil 88), although beneficial in bronchiectasis and fetid bronchitis, have not proved specially useful in phthisis.

Among constitutional remedies, those known as alteratives hold a high position. Arsenic has been employed in the treatment of tuberculosis from very early times, and few drugs are believed to be more useful at the present day. Given in small doses, 2 to 3 minims of Fowler's solution, after meals, it acts as a tonic, enhances the beneficial action of cod-liver oil, and improves the condition of the blood and general nutrition. In this connection it may be mentioned that the arsenical mineral waters of Mont Dore have long been held in high repute in the treatment of phthisis.

Iron, although largely used, especially when anemia is a marked symptom, is in our experience not so valuable as arsenic. If there is a tendency to hæmoptysis it appears to increase it, and when there is anemia depending on tuberculosis, iron does not seem to improve matters. In any case the neutral preparations are better borne than the astringent. Pyrexia is regarded as a contraindication to the use of iron.

Sulphur and its compounds, sulphurous acid and sulphuretted hydrogen, are remedies which have at one time or other been in vogue, and, although little used at the present time, may again enjoy a measure of popularity. Inhalations of sulphurous acid were advocated as recently as 1887 by Dr. Auric, who published an account of seventy cases so treated by him, and concluded that great benefit had resulted. Similarly, inhalations of sulphuretted hydrogen gas have been employed with some show of benefit. One of the most curious methods of treatment which has ever been devised was that of Dr. Bergeon (1886), of injecting into the rectum a mixture of carbonic acid gas and sulphuretted hydrogen. It had been shown by Claude Bernard that sulphuretted hydrogen introduced into the rectum is rapidly eliminated by the lungs, and Dr. Bergeon