

although sometimes given instead of oil, forms a poor substitute for it. It may, however, be given occasionally during hot weather, when oil is apt to disagree. One to four drachms may be taken three times a day.

Among other substitutes for cod-liver oil, pancreatic emulsion and petroleum emulsion may be mentioned. The former is fairly palatable, and the latter is tasteless: and both appear to exert a favorable influence over nutrition. The petroleum emulsion seems to have a soothing action on the irritable pharyngeal condition, and, in this way, helps to relieve cough, and in some cases, it certainly appears to assist digestion.

Creosote, although discovered in 1830, did not attract much attention as a remedy for tuberculosis until 1877, when Bouchard and Gimbert published their paper on the use of creosote in the treatment of pulmonary phthisis. They insisted that only beechwood creosote should be used, and attributed the indifference with which the drug had previously been regarded to the impure form in which it had been employed, and to the attempts to use a very feebly volatile body by inhalation.

When creosote was administered internally, Bouchard and Gimbert observed first a diminution of the expectoration and cough, and later a return or improvement in the appetite, a diminution or cessation of the fever, and a return of strength. Night sweats also gradually disappear after some weeks of treatment. Their observations have been amply confirmed by later experience.

Professor Sommerbrodt in 1877 published the results of the treatment of some 5,000 patients with creosote, and concluded that the drug was possessed of a specific action in tuberculosis. He obtained the best results in young subjects and in early cases, and he advocated the employment of gradually increasing doses.

While few probably are prepared to admit that creosote has a specific action, most of those who have had a large experience of the drug will admit that it has very valuable properties in the treatment of tuberculosis. The purest beech creosote should be employed. It should at first be given, prefer-

ably in the form of capsules, in doses of 1 to 5 minims; three times a day. The dose may be increased to 10 or 15 minims. If under its administration the appetite comes back, the cough and expectoration diminish, the fever abates, the night sweats cease, strength returns, and nutrition improves, the object with which the drug has been given will be attained, and happily these are the effects which are often observed.

The remedy should be taken after food. It has a disagreeable taste, and, if it is not administered in the form of capsules, it may be given in milk, which is perhaps one of the best vehicles. Dr. Clifford Beale has lately been giving creosote dissolved in cod-liver oil, in which form he has found it to be well tolerated. Beginning with doses of 3 to 5 minims, he has gone up to doses of 50 or 60 minims three times a day, and speaks favorably of the effect of such large doses on the condition of the patient.

Guaiacol has of late years come into favor as a substitute for creosote, of which, indeed it is the principal constituent.

Guaiacol is a methyl ether of pyrocatechin and, as ordinarily met with, is a colorless highly refractory liquid, freely soluble in oils and ethers, but sparingly so in water. Its taste and odor are less disagreeable than those of creosote. It is given in the same doses and mode as creosote. Apart from the fact that it is more readily borne by the stomach—certainly a very important matter—it does not appear to have any very special advantages over creosote, while it is much more expensive.

Guaiacol has recently been given in very large doses—60 minims three times a day—by Dr. Edwards Squire, in the form of capsules, or as an emulsion with glycerine and tincture of orange, not only without tonic effects, but with apparent benefit, although the patients complained of the emulsion burning their throats, and sometimes objected to swallowing so many capsules.

Two additional modes of administering guaiacol may be mentioned. First, it may be used as a local application to the skin; or, secondly, it may be administered hypodermically. Guaiacol when painted on the skin appears to be freely absorbed. Applications of 10 to 60 minims may be made at