

spoonful every second hour, and one of eighteen months or two years one teaspoonful every second or third hour. I have prescribed this syrup during the last two years, and mothers who have observed its effects have commended it. As is seen from its composition, it promotes expectoration without any of the ill effects which sometimes result from the use of those mixtures which contain opiates. If it were introduced into our pharmacopœia it would probably be largely used in this country.

If the temperature rise to 102° or above with the respiration in a corresponding degree accelerated, the cough painful, and the pulse frequent and strong, indicating extension downward of the inflammation, the following prescription I have found useful:

R.—Spts. ætheris nitrosi,
Syrupi ipecacuanhæ aa ʒij
Ol. ricini ʒii
Syr. bal. tolut ʒj.—M.

Sig. Shake bottle, and give half a teaspoonful to an infant of one year; one teaspoonful to an infant of two years.

Mild bronchitis, with the use of such remedies as have been mentioned and with the external treatment of the chest which will be described hereafter, gradually abates in most instances. But the physician should be prepared for the other alternative, namely, an increase in the severity of the symptoms by extension of the inflammation to the smaller tubes, and the change of a mild into a severe bronchitis.

Severe or grave Bronchitis. The inflammation has extended to the minute bronchial tubes: the mucous membrane of these tubes is hyperæmic and swollen, and actively secreting. On account of the small size of the tubes, many of them become occluded by muco-pus, which acts as a ball-valve, allowing the escape of air upward from the alveoli, but preventing its entrance into them. Hence the alveoli connecting with these closed bronchioles become less and less distended with air, undergoing partial collapse, and some of them pass into a state of complete atelectasis. This occurs most frequently in the posterior and depending portions of the lungs.

Another equally serious pulmonary complication often occurs. I refer to catarrhal pneumonia. The inflammation in its progress downward in the most severe forms of the disease passes from the bronchioles to the adjacent alveoli, usually in more places than one. With the occurrence of this complication, the symptoms are aggravated, the suffering increased, and the prognosis is obviously the more unfavorable the greater the extent of this complication. Broncho-pneumonia thus occurring is indeed one of the most dangerous diseases of infancy, and one that requires the utmost vigilance on the part of the physician, and the most skillful use of remedies, to save the life of the patient. The respiration in severe bronchitis is greatly

accelerated, numbering 60, 80, or even 100 or more per minute, and each inspiration is usually accompanied by a moan. The pulse is in a corresponding degree accelerated, and is often feeble; the countenance is anxious and indicative of suffering, and the patient restless.

In this form of bronchitis the indications for treatment are: 2. To promote expectoration, and prevent clogging of the tubes; 1. To diminish the inflammation, and prevent its extension; 3. To strengthen the action of the heart and prevent exhaustion.

In employing measures to fulfil the first indication it should be borne in mind that the cough is useful as the only means of expelling the mucus, and that patients never do well with severe bronchitis that do not cough often. When asked by parents to prescribe something to diminish the cough, I inform them that the safety of patient depends on the strength and frequency of this symptom, and that it would be dangerous to put a stop to it by the use of opiate or other medicines, and I now very seldom combine an opiate with the cough mixture for severe infantile bronchitis. If the infant be allowed to cough every five or ten minutes, and the cough be rendered as loose as possible by appropriate remedies, it will do better, according to my observations, than when the cough occurs at longer intervals. If it requires sleep, I give medicine separately once or twice daily, as in the following formula for a child of one year:

R.—Liq. opii compositi (Squibb's) . gr. xij.
Potassii bromidi ʒj.
Syr. rubi idæi (raspberry) . . . ʒss.
Aque ʒiss.—M.

Sig. Dose, one teaspoonful.

I have seen much harm done by employing stupefying agents which, while they produce sleep, also cause suspension of the cough, upon the strength and frequency of which the safety of the infant depends. The very prevalent opinion among the laity that the cough does no good to the infant unless mucus is ejected from the mouth, needs to be corrected. In order to obtain their full co-operation, I often find it beneficial to explain to the mother or nurse the process of expectoration in the infant, so that they understand that the tubes are freed from mucus as effectually when it is swallowed, after the cough, as when it is received upon the handkerchief.

Among the agents to fulfil the first indication mentioned above—that of promoting expectoration with the least possible loss of strength—the first place must be given to the ammonium salts; of which the two in common use are the carbonate and muriate. The carbonate is both a stimulant and expectorant, but its irritating property is such that it should not be prescribed in a larger dose than one grain to the drachm; a larger dose frequently repeated may produce gastritis, especially if there be little food in the stomach. It has been known to produce gastritis in animals when administered in considerable quantity, and its