

tensified, and in Empyema it is decreased—feeble.

The character of the sputum is another means of differentiating. When expectoration takes place in Pneumonia (as it usually does) it will be very characteristic—rusty—bloody or prune juice. The expectoration of Empyema has none of these features. It will be mucous or muco purulent. A bacteriological examination removes all doubt as a rule. Pneumococci being found the disease is Pneumonia. This test, however, is not always available. Even when sputum can be obtained a bacteriological examination is not always available and in some cases of Pneumonia there may be no expectoration. I have seen cases presenting all the typical evidences of Pneumonia running a regular course and terminating by crisis and no expectoration, at least none characteristic of Pneumonia, took place during the whole course of the disease. When the evidence of the sputum is available it is conclusive—when not available we must rely upon the symptoms and especially upon our physical examination.

One other test is still at our command—the hypodermic needle. When sputum is not obtainable or when a bacteriological examination is not available, the hypodermic needle ought, in all cases of doubt, to be used. If proper precautions are taken no injury can result to the patient; and if pus is obtained we have conclusive evidence that we have to deal with an Empyema. The failure to obtain pus, however, on the first attempt is not to be regarded as proof positive of the absence of this condition. The needle may have been passed in above the fluid or the fluid may be in pockets and the needle may have entered at a point between these pockets. I can recall two cases exemplifying this. In one case the first attempt produced no pus but when the needle was passed in at the intercostal space next below pus was obtained. In another case the first attempt was unsuccessful, and on the second trial pus was readily obtained. This patient died, and the post mortem revealed the fact that the fluid was contained in pockets and the needle had at first been passed in between these pockets. These cases emphasize the fact that all means of diagnosis must be tried, and even tried repeatedly before we are sure of our diagnosis.

I said at the beginning of this article that I had seen cases in consultation in which a diagnosis of Pneumonia had been made, which afterwards were demonstrated by the presence of pus to be Empyemas. I shall briefly refer to three of these. One, a child three years of age, with the following symptoms and signs: