

curate diagnostic agent—the hollow needle and its limitations, let us consider if there be any possible explanation of the presence of streptococcal and staphylococcal pus in a thorax unmolested by trauma, ruptured bronchus or diaphragm. Holt asserts that fully nine-tenths of empyema of childhood follows upon pneumonia, and, in adults, 75 per cent. He gives the following bacterial findings in 19 cases of pyothorax:—

Pneumococci	14 times in pure culture	
Streptococci	3 times	"
Pneumo and Streptococci	once	"
Staphylococci	once	"

The question arises, can streptococci set up pneumonia, and may they be responsible for a concurrent or later invasion of the pleura? In reported cases of pyothorax authors do not appear to have taken this possibility into consideration. At the end of a case in which the personal history contained a note of antecedent pneumonia, one may be fairly sure to see as a bacteriological finding a pure culture of pneumococci or mixture of pneumococci and streptococci. It is more rare to see more than an expression "some lung trouble" in the personal history where streptococci appear in pure culture as a bacteriological finding. The inference of an antecedent streptococcal pneumonia is, at least, tempting in these obscure cases where the patient is doubtful as to the exact nature of an antecedent thoracic lesion. That streptococcal pneumonias do occur has been pointed out by Weichselbaum though he found mixtures of streptococci and staphylococci more constantly than he did either alone. As, then, a pneumococcal pneumonia is at times followed by a pneumococcal empyema, so also, though not clearly pointed out in the texts a streptococcal pneumonia is not uncommonly followed by a streptococcal empyema. But, as outside the body pneumococci flourish for a shorter time than do the streptococci, so also in cases of empyema the treatment of a streptococcal variety is attended by greater difficulty owing to the higher resisting power of streptococcus. Even giving speculation some lee-way in this matter of the streptococcal empyemas the most typical variety in adult life remains as somewhat of a stumbling block in the matter of precise etiological significance.

In the matter of staphylococcal empyema we may remember that associated with its ally the streptococcus, the staphylococcus inhabits the normal skin, mouth and pharynx. We may regard it as but natural that from its presence in air and in passages towards the