

the bacillus coli. With our present scanty knowledge on the subject it is difficult to establish satisfactorily any diagnostic points. It will be noticed, however, that in three of the four cases there was abdominal disease, and in the remaining one the origin seems to have been a wound infection. In Nichols' case the evidence of abdominal disease (appendicitis) was distinct during life. In Levy's case there was tuberculosis of the peritoneum, discovered only at the autopsy, and in my own the subdiaphragmatic abscess was doubtless infected by the bacillus coli from the intestine. The frequency with which the abdominal organs are affected by the bacillus capsulatus aërogenes, and the constant presence of the gas-producing bacillus coli in the large intestine, are in accord with the clinical features of three of the recorded cases, and where there is evidence of abdominal disease with subsequent pneumothorax, the possibility of the production of gas by bacteria is worth bearing in mind. The onset of the condition seems commonly to be gradual, and not abrupt, as is usual in pneumothorax.

May lays much stress on a chemical analysis of the gases. He points out that a cavity may become infected by air-producing bacteria, and yet the pneumothorax be due to communication with the external air. The presence of a gas in the cavity, not found in atmospheric air, may therefore be regarded as a proof of its zymotic character.

In May's case hydrogen was present in sufficient quantity to burn, and this simple test, if constantly present, may serve to replace the more elaborate method of chemical analysis. It may be remarked that the bubbles of gas produced by the bacillus capsulatus aërogenes are also inflammable.

In conclusion, it may be now accepted :—(1) That pneumothorax may in exceptional cases result from gas-producing bacteria, and that the bacillus coli or bacillus capsulatus aërogenes may be the organism concerned. (2) That the presence of hydrogen or other gases not found in the atmosphere is conclusive proof of this condition being induced by gas-producing bacteria (May).