tion of the effusion, and a partial reëxpansion of the lung.

CASE IV. Male, forty-four years old, baker; mother, three brothers, and three sisters died of consumption. Entered the Dispensary on November 15, 1881, with following complaints: Had coughed for two or three weeks, when he felt a stitch under the left nipple, two days before entrance; this stitch interfered with his breathing, and obliged him to give up work; appetite was good; tongue thinly coated; he favored the left side on removing his clothes.

On examination an area of dullness was found extending from the fourth rib in the left mammillary line downward to the bottom of the lung, and outward to the left anterior axillary line; over this area fine mucous râles were audible; temperature 100.4° F.; pulse 112; respiration 24.

Treatment as in other cases.

November 17th. Patient returned without improvement. The left side was then less mobile than the right one; it was tender to the touch in the subscapular region, and on examination we found evidence of a beginning pleuritic effusion; temperature 100.2° F.; pulse 105; respiration 23.

November 23d. Reports himself as feeling better, but fast walking takes away his breath; has very little pain except a slight amount in his left groin; the physical signs showed the usual evidence of a pleuritic effusion, which reached as high as the fourth rib in front and the angle of the scapula behind; the heart was carried to the right; temperature 99.6° F.; pulse 95; respiration 28.

December 5th. Patient again returned to report progress. He then complained of tightness across his back, and inability to hold his water; said that he had resumed his work, and although the effusion was undiminished in size he was unwilling to submit to any operation for its removal, because he did not wish to give up work.

These cases are identical in the manner of their development. Beginning with a somewhat violent cold, each patient, after a few weeks of coughing, was suddenly seized with a severe pain below the left nipple, which was continuous in character, interfered with breathing and sleeping, and produced a strikingly anxious expression in the face. Combined with the pain were loss of appetite, physical prostration, acceleration of the pulse, and an elevation of the bodily temperature, 99.6° F. to 101° F. There was no initial chill in any case. The cough was dry and hard, and caused much suffering.

On physical examination we discovered another striking point of resemblance, namely, an area of dullness similar in position and extent in each patient. From the lower edge of the fourth rib in the left mammillary line the pulmonary resonance was diminished downward to the bottom of the lung, and outward as far as the left anterior axillary. The axillary regions and all other parts of the lung in each case were normal. Over the dull area we heard fine and medium mucous râles with both phases of respiration.

The diagnosis lay between localized capillary bronchitis, atelectasis of the lung, acute lobular pneumonia, and pleurisy. While capillary bronchitis was seemingly present, as shown by the subcrepitant râles, yet the dullness would indicate some trouble still deeper than the bronchial tubes. We are not prepared to deny the possible collapse of the lung, yet the acute-

ness of the inflammatory process as shown by the elevated temperature, the stitch in the side, and the tenderness on pressure, leads us to believe that we had acute lobular pleuro-pneumonia. In Cases I., II., and III. the pain, and probably the pulmonary complication, had existed about a week prior to the first visit. In each of these cases the symptoms began to subside in the next twenty-four hours, and at the end of three days the patients were well so far as their subjective feelings and the infra-mammillary physical signs were concerned. In the fourth case the pain had existed only two days when the patient was first seen, and the symptoms did not improve as in the previous cases. The pleuritic complication rapidly became more prominent until we soon had a copious pleuritic effusion to deal with.

In regard to the sequelæ of these cases, we found Case II. still suffering from severe cough several weeks after the first attack. Patient III. improved slowly for five or six weeks, when he was again seized with pain, and has since apparently passed through an ordinary attack of pleurisy with effusion.

UNINTENTIONAL ASPIRATION OF THE LIVER.¹

BY FREDERICK C. SHATTUCK, M. D.

E. H. G., a vigorous young man of twenty, and of good family history, was admitted to the Massachusetts General Hospital November 15, 1881. For the last three months his work had involved standing in the doorway of the ice chamber of a large slaughter house, and he reported that for four weeks previous to entrance to hospital he had suffered from gradually increasing cough, with considerable expectoration, at times green and thick, at times white and frothy.

November 16th. Physical examination of the chest gave nearly negative results, the respiration at both bases being rather feeble, with a few râles. Severe pain in the right side soon came on however, and three days later, November 19th, there were well-marked signs of effusions in the right pleural sac and probable signs of pneumonia of the right lower lobe or lobes. The effusion increased gradually, the apex of the heart moved somewhat outside of the left nipple, but there was nothing in the patient's condition which caused anxiety.

December 1st. Fetor of the breath and expectoration were first noted.

December 2d. About twelve ounces of thin, semi-opaque sputa were raised.

December 3d. The dyspnoea was so severe that I decided to tap him, being in charge of the service during the temporary absence of the visiting physician, Dr. Shattuck. In order to save the patient the fatigue of sitting up I chose the anterior axillary line for puncture, but from not counting the ribs carefully inserted the needle lower than I should have done, in the seventh intercostal space. About two ounces of apparently clear blood were withdrawn, and the needle was removed soon after, no more fluid being obtained and the patient complaining of pain. The next morning I punctured again, but below the angle of the scapula, and this time obtained about twenty ounces of very fetid pus.

¹ Read before the Section for Clinical Medicine and Pathology of the Suffolk District Medical Society, March 9, 1882.

A few days later a free incision was made by Dr. A. T. Cabot in the sixth interspace and anterior axillary line under strict antiseptic precautions, giving exit to a large amount of most offensive pus and a couple of shreds of tissue, one of which was examined microscopically but no elastic fibres were found.

The operation gave great relief to the patient, who made a gradual recovery, and was discharged from the hospital March 8th in very good condition. The right lung is still much disabled by false membranes, but there is every reason to think that, with time, the patient will be practically well.

The point to which I wish to draw especial attention is the puncture of the liver without, as far as can be seen, any evil consequences. The aspirator has now been so long in use that we have learned how safely a small needle or trocar can be plunged into almost any organ or part of the body; and the liver has been punctured many times, unintentionally as well as intentionally, before this. A peculiarity of this case is that the point of the needle must have lain free in a large hepatic vessel, inasmuch as a considerable quantity of blood flowed freely into the receiver without any unusual force being applied to the piston. Ordinarily if a healthy liver is tapped nothing at all, or, at most, a few drops of blood, will be obtained, and it was not until the second and successful attempt had been made to reach the pleural cavity that I was entirely convinced as to the precise nature of my mistake. This is the only case which I recall in which I have tapped in the axillary space, it being my rule to insert the needle in the back; and should it seem desirable to choose the axillary space again I should not puncture at a point lower than the fifth intercostal space, unless the effusion were a very large one and had caused marked displacement of the liver.

My sincere thanks are due to Drs. Shattuck, A. T. Cabot, and Abbot, who kindly placed the whole records of the case at my disposal.

A CASE OF INTUSSUSCEPTION.¹

BY T. M. ROTCH, M. D.

A MALE infant six months old, breast fed and previously perfectly healthy, after showing a loss of appetite for several days, began to have abdominal pain on the morning of August 30th, and at half past twelve had a discharge of blood from the rectum, apparently unmixed with fecal matter or mucus. The bowels had been moved regularly on the previous day, and there had been no tendency to constipation.

After taking a few drops of ginger at half past one he vomited. During the afternoon he had five or six bloody discharges and did not retain an enema of starch and laudanum which was given.

I saw the infant in the evening and found him looking well, but having from time to time slight attacks of abdominal pain and showing an indisposition to nurse. The temperature was 39.1° C. An examination of the abdomen revealed nothing abnormal.

August 31st. The infant was reported to have had a restless night, to have vomited several times after nursing and to have had six discharges of blood. Temperature 38.2° C.; pulse 135, of good character;

¹ Read before the Section for Clinical Medicine and Pathology of the Suffolk District Medical Society, March 9, 1882.

general appearance good. Abdomen soft and not tender on pressure, but between the umbilicus and the left costal cartilages a rather undefined cylindrical tumor could be detected. At four P. M., Dr. Langmaid saw the patient with me in consultation, and at that time no tumor was detected and the infant looked and nursed well. The bloody discharges, however, had not ceased, though they were less frequent and the starch and laudanum enemata were therefore continued and were retained.

September 1st. The patient was reported to have had a restless night and to have cried out a good deal with pain. Dr. Minot saw the case in consultation with me at eleven A. M. Rectal examination revealed no obstruction but brought away a large jelly-like mass supposed to be bloody mucus, and reported by Dr. Gannett, who afterwards examined it, to probably contain portions of the mucous membrane of the intestine in a condition of fatty and albuminoid degeneration, such as would be expected where the nutrition of a portion of the intestine was cut off. On examination of the abdomen, the same cylindrical tumor was felt as at my second examination, but much more defined and unmistakable.

Ether was given and hydrostatic pressure on the rectum at a height of about 180 cm. was made with the buttocks raised, and by means of a fountain syringe and the rubber bulb described by Dr. Putnam in the successful case reported by him in the BOSTON MEDICAL AND SURGICAL JOURNAL, April 21, 1881. The pressure was kept up for about ten minutes without producing the slightest effect on the tumor.

During the afternoon the infant came out of his ether well; he took a little breast milk, looked pretty well; temperature 38.2° C.; pulse of good character; no more vomiting or bloody discharges.

It was decided to wait until the following morning before resorting to abdominal section. During the night the child became restless and died suddenly at 11 P. M.

September 2d, eight A. M. Dr. Haven performed the autopsy, the result of which can be seen in this portion of the intestine, which was kept for examination.

Nothing abnormal was discovered in the thorax or abdomen, excepting an ileo-cæcal intussusception.

Hydrostatic pressure was again tried with the same apparatus used during life, but at a height of about 250 cm. No effect was produced on the invagination, and on examining the specimen you will see that even if no adhesions had taken place, the twisted position of the retained cæcum would have effectually prevented its being pushed back by water in the colon.

A certain degree of anxiety is usually felt by those who have made use of hydrostatic pressure in these cases regarding the danger of bursting the intestine, and in order to test the amount of pressure which the intestine can withstand, the abdomen of an infant's cadaver was laid open and the nozzle of a syringe firmly fastened in the rectum. A ligature was then passed around the large intestine just below the ileo-cæcal valve. With a pressure of 180 cm. in height, transudation took place; with a pressure of 268 cm. the intestine burst, the rent occurring 35 cm. from the anus. The length from the anus to the ileo-cæcal valve was 75 cm.

It was also found by another experiment that a pressure of only 12 to 30 cm. was necessary to force the water through the ileo-cæcal valve and that it then soon escaped through the stomach and throat.