but under the eleven main subdivisions there is always something to be said.

After the paper is finished review it, and not the book, for your next recitation. You will find that the writing of the text alone has given you a clear knowledge of the disease, and that but little study is needed for you to recall, not only the essential, but the minor points of morbid anatomy, etiology, symptomatology, diagnosis, prognosis and treatment.

One can readily understand the value of the system, for the knowledge is impressed in so many different ways: by study, by writing, by recitation.

Then, when the weekly examination is given, you find yourself provided with a system which brings the work all back to you. You have simply to take your knowledge from each of the pegs with which the system provides you. Certainly it aids materially.

As I know from personal experience, the entire subject of medicine can be exhaustively taken up and completed from the 1st of June to the 10th of September.

The schedule is not only of use to you as a student, but in actual practice it can be used every day. What better system is needed for reviewing the symptoms of a patient than the one given under symptomatology? How can you omit any important investigation if you follow the system through a physical examination?

When medical students realize the benefit to be derived from system, they will quickly accept it. It is an idea of mine that the schedule which I have given you ought to be the subject of the first lectures of those who teach medicine in our medical colleges.

Clinical Department.

A CASE OF ACUTE YELLOW ATROPHY OF THE LIVER: A CASE OF RAPID SARCOMATOSIS.¹

BY F. C. SHATTUCK, M.D.

I. ACUTE YELLOW ATROPHY OF THE LIVER.

A WELL-DEVELOPED and nourished woman, apparently between twenty and thirty years of age, was admitted to the Massachusetts General Hospital, April 5, 1894. No history was obtained until after her death, as no friends accompanied her, and she was unconscious on admission, remaining so to the end.

She was deeply jaundiced; pulse 70; respiration 20, stertorous; temperature 97°; pupils equal, contracting or dilating on exposure to light. There was some rigidity of the arms, but no paralysis could be detected. Physical examination was otherwise negative, except that the liver dulness was very small and that the lower abdomen was occupied by a tumor corresponding to an impregnated uterus at the fifth or sixth month. No fetal heart or placental souffle could be heard, and there was no bluish discoloration at the introitus vaginae. A probable diagnosis of acute yellow atrophy of the liver was made, and the catheter was used to get a specimen of urine which was submitted to Prof. E. S. Wood. This secretion showed only seventy-five per cent. of urea, a slight trace of albumin, with pigment; a little blood and renal epithelium free and on casts, a few hyaline and brown granular casts, an occasional epithelial cast. The

cells were stained with bile and with bilirobin crystals. Leucin and tyrosin absent. The blood examination was negative. In one of four cultures made from the blood in glycerine agar before death a small growth of staphylococcus aureus occurred. In view of the negative results of the autopsy cultures this was doubtless due to contamination.

The coma became rather less deep for a time and the patient became very restless. But no marked change in the symptoms occurred until 9 P. M., April 6th, when tonic spasm began in the left leg, soon involving the whole body, and passing off with some clonic spasm of the left arm. Death at 10.40 P. M.

It was then learned that she had been married three and one-half years, had a child two years old, considered herself now six months pregnant, and was perfectly well until three weeks ago, when she noticed red spots on various parts of her body, disappearing in a few days. A week ago jaundice first appeared and rapidly deepened. She kept at work and was only "a little sick," until two days before entrance, when she became worse. April 4th she could "hardly speak from weakness," vomited several times, once a little blood, and gradually became unconscious, fully so at 11 P. M.

The great viscera were extracted through the rectum and submitted to Dr. Whitney, whose report is summarized as follows:

Lungs.—Negative.

Heart.—Extreme and universal fatty degeneration shown by the microscope.

Liver.—Reduced at least one-half in volume, capsule not wrinkled, organ fairly firm, form symmetrical. The microscope showed that the liver cells in the centre of the lobules were entirely destroyed and those at the periphery filled with fat drops of varying size. Many of the cells were filled with minute fatty molecules. The region of the portal vessels was infiltrated with round cells, invading more or less extensively the lobules.

Spleen, large, firm, dark-red in color; the follicles not distinct.

Kidneys.—The microscope showed extensive fatty degeneration of the renal tubules.

Pathological Diagnosis.—Acute yellow atrophy of the liver with jaundice. Acute fatty degeneration of the heart and kidneys. Hyperplasia of the spleen. Glycerine agar cultures of the liver, spleen and kidneys were negative.

This is the first case of this rare affection which has come under my observation both clinically and pathologically. The course was rapid. The case was in most respects typical, and the only important diagnostic feature which was absent during life was the leucin and tyrosin in the urine. Out of fourteen cases Riess says they were absent only once. Their absence in the liver post mortem is also noteworthy. The necessity for a purely objective diagnosis added to the interest of the case. Advanced pregnancy in a young woman the condition of whose general nutrition showed that the process must have been of short duration, deep coma, intense icterus, the absence of fever, and negative results from physical examination, except for a marked diminution in the liver dulness—these points were sufficient to establish the diagnosis beyond reasonable doubt.

Tenderness in the hepatic region, even during coma, is spoken of as a common symptom. It was ab-

¹ Read before the Boston Society for Medical Improvement April 9, 1894.

sent in this case and there was not even muscular rigidity on palpation.

Incidentally I should like to call attention to the discrepancy between the urinary examination during life and the condition of the kidneys only thirty-six hours later. Although these organs were acutely fattily degenerated, the urinary sediment suggested nothing more than decided renal irritation or hyperemia.

II. RAPID SARCOMATOSIS.

T. S., thirty-six years of age, single, of negative family and previous history, and good habits, entered the Massachusetts Hospital March 6, 1894. He was well until two and one-half weeks before entrance, when he began to have pain in the back and malaise, his work—that of an insurance agent—requiring effort. Several days later he had a sharp pain like a stitch just to the left of the small of the back which made him scream, but soon passed off. Some malaise and pain in the back continued, but he kept at work. March 1st, after a sleighride, he had a chill lasting for ten minutes, not followed by sweating. The two next days he felt miserable, suffered from severe pain in the back and legs but went to business. At night at this time he had no pain. March 4th he thrashed round on the sofa all day on account of pain and nervousness and then sent for Dr. H. P. Jaques of Milton, where he lived. Morphine was given with relative relief to the pain but impairing the appetite and binding the bowels. The pain came in entire side and even when he was lying still.

When admitted to the hospital two days later, physical examination was negative except for tenderness in the small of the back.

March 13th. Several small subcutaneous nodules were discovered over the lower sternum, movable, not tender. The next day others were found in the axillæ, back, front of chest, and over the right biceps. One of these was excised and examined by Dr. Whitney, who pronounced it sarcoma. The skin over some of the nodules was discolored by hemorrhage.

A blood count showed:

Red	2,637,000
White	24,000
Hemoglobin	50%

The differential count of the white by Dr. R. C. Cabot was as follows:

Polymorphonuclear neutrophiles	70%
Lymphocytes	19
Large mononuclear in transition	3
Eosinophiles	1
Myelocytes and small mononuclear neutrophiles	7

March 21st. Decided enlargement of the liver was made out but pain has disappeared and was absent afterwards. The breathing became labored and wheezy, with inspiratory retraction of the soft parts above and below the thorax. The spleen became palpable and April 7th he died. There was almost constant but irregular pyrexia throughout. The autopsy was by Dr. Whitney and may be abstracted as follows:

No nodules below waist line. Some in scalp, over clavicles, and scattered over chest, upper abdomen and back.

Masses, plates and nodules of new growth in mediastinum, heart, lungs, pleura, lower dorsal vertebræ extending into the spinal canal but not into the cord, omentum, mesentery and intestines, spleen, liver, kid-

neys and adrenal bodies. The marrow of the femur was normal. Glycerine-agar cultures from the various organs were negative. This case ran its course in about six weeks from the first symptom, between four and five weeks from the time when a physician was first summoned. The first subcutaneous nodule was found between three and four weeks before death.

It seems probable that the disease started in or near the dorsal vertebra, where pain was first noticed, and thence rapidly spread. The blood examination was remarkable only for the chloranemia and the increase in the percentage of the myelocytes and small mononuclear neutrophiles.

AN IMPACTED GALL-STONE REMOVED BY OPENING THE COMMON DUCT, THE WOUND IN THE DUCT BEING CLOSED BY SUTURES.¹

BY J. W. ELLIOT, M.D.

THE patient, a laundress, aged thirty-nine, had been subject to occasional bilious attacks for fifteen years. Ten years ago she had a very severe attack, and five years ago another. During the last two years they have become more frequent, so that in the last year she has had six or eight. In the last two months she has had an attack with vomiting almost every week. She has lost flesh and strength. Five days before I saw her she had an attack so severe that she left her work and went to bed. She had fever and chills and a severe pain in the right side and middle of abdomen. She thought she had not been jaundiced, and the bowels had moved.

She entered the Massachusetts General Hospital in the evening of February 1, 1893, with a temperature of about 102° and a pulse of 110. Dr. Fitz and I saw her soon after her arrival.

She had a moderate general icterus. The abdomen was full and tympanitic, except in right hyperchondrial region, where there was a pyriform tumor continuous with the liver-dulness, occupying nearly the whole of the right side of the abdomen, extending below the anterior superior spinous process. This was dull on percussion, fluctuating, with rounded borders, and moderately tender. The rest of the abdomen was not tender. The general condition of the patient was one of suffering and exhaustion and seemed to demand immediate relief.

The diagnosis was not made, as we were unable to get any of the above history owing to the patient's critical condition, and the jaundice was not noticed in the electric light.

Operation.—An incision was made above and to the right of the umbilicus over the most prominent part of the tumor. It was found to be a very much enlarged gall-bladder, which contained about three pints of bile and twenty gall-stones. Its contents being evacuated, the gall-bladder wall, which was much thickened, was stitched into the abdominal wound. No attempt was made to clear the ducts of stones, as the pulse had become rapid and weak during the operation.

The patient rallied well from the operation, and gradually improved; but a large amount of thick, tenacious bile continued to pour from the gall-bladder, and the stools remained white. The patient was still jaundiced, but less so. For the next two months the

¹ Read before the Surgical Section of the Suffolk District Medical Society, March 7, 1894.