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A REVIEW OF SIX INTERESTING PATHOLOGIC
CASES.

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HOE COUNTY AND ST. LUKE'S HOSPITALS.



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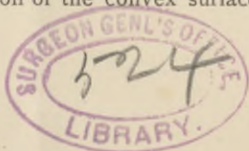
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CASE I. *Miliary tuberculosis; hemorrhage in the brain.*—Jesus V., forty-eight years of age, a Mexican, was admitted to the Arapahoe County Hospital, February 7, 1894, with a history of chronic illness and cough, with recent retraction of the head and delirium. He came under the care of Drs. McLauthlin and Eskridge, who after an extended examination diagnosed meningeal tuberculosis. Deep coma came on, and on the 10th of February the patient died.

The post-mortem examination revealed the following condition: The patient's body was greatly emaciated. The membranes of the brain were exceedingly anemic. There was a milky-white exudate under the arachnoid, over both cerebral convexities, over the cerebellum on both upper and lower surfaces, along the anterior and middle cerebral arteries, in the anterior perforated space, and in the inter-peduncular space. Over the anterior surface of the pons, near the basilar artery and around the medulla, there were numerous tubercles imbedded in the inflammatory lymph and in the pia covering these structures.

In the left cerebral hemisphere, involving the medial surface and the upper portion of the convex surface of



the hemisphere, there was a dark tumor-like mass lying in the quadrate lobe. Its anterior border was just in front of the upper portion of the fissure of Rolando, and the posterior border was at the parieto-occipital fissure. Laterally it extended from the median line outward one inch. Below it did not extend to the lateral ventricle. For a distance of from one-eighth to one-fourth of an inch surrounding the mass on its outer side was a layer of yellow softening. The tumor-mass resembled extravasated blood, with some appearances of a vascular infiltrating glioma. The remainder of the brain-substance was apparently normal. Sections of the hardened tumor-like mass were made, and it proved to be a simple extravasation of blood, due to a cerebral apoplexy.

The left pleura was free, except for some strong adhesions at the apex. The left lung presented a great many disseminated areas of tuberculous consolidation. These were of all sizes and of all shapes. The apex was solid for two inches down. The right pleura presented strong and old adhesions throughout. The upper half of the right upper lobe was completely solidified, and two small cavities were present at the extreme tip, each about three-quarters of an inch in diameter. Many small areas of consolidation existed in the middle and lower lobes of this lung. All presented tubercles. The heart was small, but its muscular tissue was normal in consistency, and the valves were normal. On the inner surface of the aorta there were a number of small calcareous plaques.

The abdominal cavity presented the point of greatest interest. Over the intestines and stomach, over the liver, over the diaphragm, over the spleen, pancreas, and bladder, indeed, following accurately every curve of the peritoneum, there was a grayish-white exudate from one-twentieth to one-sixteenth of an inch in thickness, and which could be peeled off without much difficulty, and in which were imbedded "millions" of miliary

tubercles. The appearance as presented to the naked eye was as though a thin pliable layer of rough undressed kid or molded paper-pulp covered the peritoneum. Here and there the intestines were matted together by friable, easily broken down, fibrinous bands. In one square inch of the exudate I counted on its surface a hundred and eight tubercles. If we estimate the surface-area of the peritoneum at ten square feet the number of tubercles in this man's abdomen was 155,520.

In the dependent parts of the abdominal cavity there were three or four ounces of clear serous fluid. Section of the liver, spleen, and pancreas showed these glands to be normal, and no tubercles were found within. The left kidney was normal. The right kidney was likewise normal, except a few small cheesy areas in the cortex, none larger than a grain of wheat. The supra-renals were normal. The spinal cord was not removed.

From the wide distribution of the tubercles in this case it certainly falls under the head of miliary tuberculosis.

CASE II. *Acute croupous pneumonia; empyema; universal pericarditis; myocarditis and aortic aneurysm.*—J. J. G., an American, forty-seven years of age, was at the time of his death under the care of Dr. S. A. Fisk, who, six months before, had diagnosed an effusion in the left pleura, with probably some tuberculosis of the left lung, and who had had a large amount of serous fluid aspirated at that time. The trouble continuing, empyema was suspected. A sudden onset of inflammatory symptoms occurred just before death, and an acute inflammation of the left lung was diagnosed. A few days before his death the man spat up some blood, and an hour before he died he remarked that he felt inside his chest as if his blood was pouring out. In the left pleura was found a quart of sero-purulent fluid. Between the upper and lower lobes of the left lung much fresh inflammatory lymph was found. The entire left lung, from apex to base, was found in a state of red

hepatization of acute croupous pneumonia. In the lung there were no tubercles and no cavity. The right lung was large, distended, emphysematous, and full of blood. Otherwise it was normal. The pleura was free. The pericardium presented universal adhesions. The cavity was completely obliterated. The adhesions were old, but they gave way to force. The heart-wall was friable and presented a deep reddish-purple color, with some mottling here and there by yellow patches. The endocardium presented large areas of racemose reddening. All of the heart-valves were normal.

From the aorta, just as it was given off from the left ventricle, there arose an aneurysm the size of a big fist, which projected to the left and anteriorly. This was filled with a mass of dark, grumous blood and partly and completely organized clots. The aneurysm had no opening into adjacent structures. The blood which had been spit up came no doubt from the distended vessels of the right lung.

The spleen and pancreas were normal. Both kidneys were large and congested. The liver was deeply congested. The intestines and stomach were normal. The brain and spinal cord were not examined.

The case from a pathologic point of view was certainly a very interesting one. I felt sure that if we had been allowed to examine the brain we would have found a thrombosis. The sudden and rather unexpected death might have been due to true heart-failure, but from the condition of the clot in the aneurysm it is very probable that an embolus was the factor which immediately caused death. What occurred when the man felt his blood pouring out in his chest can only be surmised. As the clot in the aneurysm was very loose when it was examined, it is possible that its separation was occurring when he uttered his cry.

CASE III. *Subacute interstitial nephritis plus an acute parenchymatous and interstitial inflammation, probably*

"*ether-nephritis.*"—Charlotte C., thirty-five years of age, unmarried, was admitted to the Arapahoe County Hospital, March 27, 1894, under the care of Drs. McLauthlin and Collins. The history obtained was as follows: Five years ago she began running down, having malaise, frontal headache, leukorrhœa, and many uterine reflexes. This condition continued up to her admission into the hospital. Up to six months ago menstruation was regular, but since that time she has menstruated much oftener than she should. On admission, her temperature under the tongue was 96° F., but on the following day it was normal, and it continued so for five days. The urine was carefully examined. Its specific gravity was low, and the amount passed was large, but it contained no albumin. A microscopic examination was not made.

On the sixth day after admission the woman had a temperature of 100°. After consultation and repeated examinations the trouble was diagnosticated as a pus-tube, and celiotomy was advised. The patient had been under Dr. Collins' care before for a partly adherent retroverted uterus.

On April 5th Dr. Collins performed celiotomy, and removed both tubes and ovaries. The left tube contained pus, and the right ovary was badly cystic. After the operation the temperature rose to 102°, then to 104°, and on the day of death to 106.8°. No symptoms of peritonitis were present at any time. The woman went into a state of coma, and died while in that state six days after the operation.

What had caused the patient's death was the question given me to solve. The post-mortem examination showed the following conditions: The abdomen was distended; there was an incision in the median line, below the umbilicus, for a distance of five inches. This cut showed nothing purulent. It had begun to heal throughout. The peritoneum below the cut was a little dark in color, but there was nowhere any evidence of peritonitis. The

intestines were distended and projected from the abdominal cavity for about six inches. In the dependent portions of the abdominal cavity there were a few ounces of blood-stained serum. The peritoneum over the uterus, and all through the pelvic basin, was very dark in appearance, a grayish-black, and it was apparently disintegrating. It brushed off readily under the finger. There was an area the size of a watch on the ileum at the ileo-cecal valve, which was very dark and apparently necrotic, but this was all in the peritoneum, for section showed nothing else to be involved. The uterus was normal and movable. The stumps of the tubes were in good condition. Not a drop of pus, not a thread of fibrin, not an adhesion was found anywhere. The intestines were normal, although distended, and nowhere showed any peritonitis. The stomach was normal except in one or two places where the superficial epithelium was cast off, and where it looked as though there might have been ulcers at one time. The spleen was only one-fourth the normal size. The liver, pancreas, and suprarenals were normal. The left lung and pleura were normal. The right lung showed some catarrhal pneumonia, and much hypostatic congestion in the lower lobe. The pneumonia was principally located at the edges at the base and posteriorly. The pleura of this lung was normal. The pericardium was normal. The heart was small, and showed some fatty deposit over its anterior surface. The endocardium was normal except for slight evidence of inflammation of the mitral valves.

The right kidney showed the medullary portion quite deep in color. Its cortex measured about one-fourth of an inch, and was quite tough on section. The capsule was thickened, and on removal a portion of the cortex was torn away with it. The Malpighian bodies were not distinctly made out, and the tissue of the cortex could be seen to be more firm, dense, and translucent than normal. Section of this kidney showed that in addition to the inter-

stitial process, with some chronic changes in the tubules and tufts, there was an acute inflammation present not only in the epithelial lining of the tubules, as seen by extensive desquamation and casts, but around and about the tubules, where a large array of leukocytes was found in the thickened connective tissue. The left kidney presented but few naked-eye appearances of any trouble, and on section showed nothing marked but cloudy swelling.

The brain and cord were not examined.

Here was a patient who, with an interstitial inflammation of one kidney, was given ether to narcosis for an extensive operation. Her death follows in six days, and an acute inflammation is found in the diseased organ with no other organ showing extensive trouble.

CASE IV. *Appendicitis ; cured tuberculosis.*—John R., German, twenty-eight years of age, was treated at Davos, Switzerland, by Dr. Carl Ruedi for pulmonary tuberculosis with a great many hemorrhages. Dr. Ruedi said that the blood came from the left lung, and that at the time, five years ago, he could detect no cavity. The man came to Colorado three years ago, and resided at Salida. While under the care of Dr. Maxwell he developed appendicitis, and had had four attacks previous to this one. He refused operation. Five days before his death he developed the attack which was the cause of his death. Dr. Parkhill operated on him, June 7, 1894, and found the appendix perforated and the abdominal cavity partly filled with pus and lymph. The appendix was removed and the abdominal cavity washed out. The man developed septicemia, and died June 9, 1894.

All of the intestines were distended, and lymph and sero-pus were in all the folds of the intestines, even up to the spleen. The omentum was bound down to the pelvic brim on both sides. The stump of the appendix was low down and lay very posteriorly. It was about three-fourths of an inch in length and was in a very soft-

ened, semi-gangrenous condition. Old adhesions existed about the colon, evidences of previous inflammations. The spleen was small and cirrhotic; the other abdominal organs were normal, as were the kidneys. The heart was normal. The left lung presented old adhesions at the apex and at the tip of the lower lobe, at which point there was a well-marked, clearly-outlined tuberculous cavity an inch and a quarter in diameter, beautifully isolated and separated from the rest of the lung by a dense fibrous capsule fully a twelfth of an inch thick. It was almost empty, but contained a small amount of cheesy tuberculous material. It was traversed by two or three tiny fibrous bands, and had two or three bronchi opening into it on its inner surface. It showed a few tubercles. The rest of the lung was normal. There was not a single infiltrated area anywhere, and not a tubercle could be found. The right lung was normal throughout. The right pleura presented a few adhesions at the apex and at the base posteriorly. The brain and cord were not examined. Certainly we had here a case in which Nature, aided by our generous climate, had isolated, and had in her own way practically cured a genuine tuberculosis. The bronchi opening into the cavity were large and were so situated as to drain.

CASE V. *Chronic hemorrhagic nephritis; nephrophthisis.*—Robert C., a laborer, forty years of age, born in Denmark, was admitted to the County Hospital, June 13, 1894, in a delirious condition. No history was obtainable, but Dr. Henry Sewall found many bubbling râles in the chest, indicative of pulmonary edema. The pulse ranged from 120 to 128, the temperature from 99.5° to 102°, and the respirations from 36 to 64. A careful examination of the urine showed a small per cent. of albumin. The patient continued delirious and had to be tied down in bed. Treatment directed toward the kidneys failed to produce any results; the patient became comatose, and died June 15th.

Dr. Mack, the hospital resident, stated that the patient had been in the hospital a year before for a supposed tuberculous testicle, which was removed.

The post-mortem was made seven hours after death. The left pleura had a few slender, old adhesions at the apex of the lung. The right pleura was adherent everywhere, but the bands could be broken down with the hands, except at the apex, where they had to be cut. The left lung was greatly edematous, and on section a part in the lower lobe looked as though it was in a state of catarrhal pneumonia, but the part floated on water and presented no elevated and depressed patches, and was, no doubt, simply edematous. The right lung was in the same state as the left, except that at the apex the pleura was thickened for a quarter of an inch. The bronchi in both lungs were filled with edematous fluid, which was blood-stained and frothy. The pericardium was normal. The heart was more than one-half again the usual size. The wall of the left ventricle was greatly hypertrophied, being fully five-sixths of an inch thick. The aortic valves and the aorta were normal. A large white clot was present in the left ventricle and in the aorta. The left heart was found strongly contracted. The mitral and pulmonary valves were normal. The right ventricle was dilated and its walls were thinned for such a large heart. A large, firm, white clot was present in this ventricle. The spleen was normal.

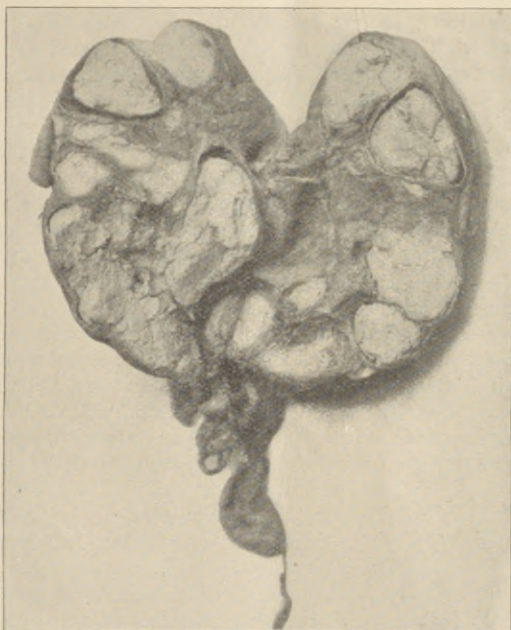
The left kidney was "a revelation." The organ was four inches long, two inches wide, and was buried in a mass of fat. The surface was found raised in rounded elevations the size of a large marble. The color externally was dark and bluish. On section the knife was covered with a white grumous paste, and the same material bulged from the kidney. The capsule of this organ was thickened to one-twelfth of an inch, and could not be removed. Running from the capsule into the kidney were a few thick fibrous bands like the cap-

sule. Every vestige of a renal cortex and medulla had disappeared, being broken down into the whitish-gray, grumous material mentioned. This material was soft, like soft cheese. It could be spread, and would not dissolve in potash or chloroform. It lay in well-formed, fibrous capsules from which it could be easily removed, leaving cosy nests. The fibrous walls about were rather smooth, and, unlike what I expected to find, were not markedly ulcerated. A large mass of the cheesy material occupied the pelvis of the kidney and the beginning of the ureter. The mucous membrane of the pelvis seemed to be normal, though anemic. About the pelvis was a large quantity of fat. In the fibrous capsules, about the grumous material, I detected a few tubercles, but none was present in the capsule of the kidney or in the pelvis. There was no suppuration. Dr. Le Garde examined the cheesy matter for the bacillus of tubercle, but found none. He pronounced the material to be granular débris and fat. He also examined the septa for the bacillus of tubercle, but he found none. From the distinctive naked-eye appearances of the kidney, however, I pronounced it tuberculous. The cheesy mass found was no doubt due to a tuberculous process, probably secondary to the tuberculous testicle, or possibly had been itself primary. The ureter and bladder were normal, although this examination, I regret to say, was hastily and carelessly made.

The accompanying illustration shows the destruction of the kidney-tissue.

The right kidney was four and a half inches long by two and a half inches wide. The cortex and medulla were separate and fairly distinct. Both the cortex under the capsule and the cortex on section, as well as the medulla, were mottled with white. The section presented light red areas alternating with lighter gray or yellowish-gray areas. The cortex was a little thickened, and a few small hemorrhages were present. The cap-

sule stripped nicely. The pelvis was normal. To the naked eye this kidney presented all of the appearances of chronic hemorrhagic nephritis. The gray or yellow parts corresponded to the anemic or fatty-degenerated portions. Dr. Le Garde reported that the sections re-



vealed parenchymatous and fatty degeneration of the epithelium lining the tubules, with granular infiltration of the interstitial tissue; thickening of the capsule of some of the glomeruli, and complete destruction in places of the uriniferous tubules.

Both supra-renals were cystic. The glands were ap-

parently normal in size, but the parenchyma was lacking, and only a small bit of a semi-fluid brownish material occupied its center. A long observation of the suprarenal glands convinces me that they are often cystic, and that they break down quickly after death, if indeed not before.

The liver, pancreas, stomach, and intestines were normal. The brain and cord were not removed.

The specially interesting pathologic feature in this case was in the left kidney. It was the form of kidney called by the old authorities "scrofulous disease of the kidney," "strumous pyelitis," "scrofulous pyelo-nephritis," and the "inflammatory form of tuberculous disease of the kidney." In reference to the formation of the cheesy material found in it, Morris (in the *International Encyclopaedia of Surgery*, vol. v, page 676) says: "Whether these cheesy masses are due to retrograde changes in confluent groups of miliary tubercles, or are the results of degeneration of the products of ordinary inflammation, pathologists are not agreed; some, indeed think that both conditions may exist at once, but that under such circumstances the tubercular process takes precedence of and excites the inflammatory changes." Such being the truth the absence of the tubercle-bacillus need not invalidate our diagnosis.

CASE VI. *Chronic parenchymatous nephritis, the inflammatory fatty kidney.*—Thomas W., a laborer, sixty years of age, born in Ireland, was admitted to the County Hospital, June 9, 1894, under the care of Dr. W. J. Rothwell. He had had malaria and dysentery. He was in perfect health in June, 1893, when, while walking on an elevated railroad track in New Mexico, he fell and injured his left leg. He was severely tumbled, and suffered from profound shock. He was taken to a Union Pacific Railroad Hospital, and was there for three months, being delirious much of the time. After he left the hospital he did a little work, but

was not strong or well. He progressively ran down in health and became anemic and felt poorly. He came to Denver, and was sent out to the Arapahoe County Poor Farm. Here he began to have occipital headaches and diarrhea.

When the patient was admitted to the hospital he was intensely anemic, and his blood showed a deficiency of hemoglobin. The examination of the urine by the house-interne revealed nothing abnormal. This examination I believe to have been carelessly made.

The diagnosis was thought to lie between carcinoma and pernicious anemia.

On June 18th the patient vomited something that might be called "coffee-ground vomit." Mental apathy then came on, and he died in stupor June 20th. The night before he died the temperature in the axilla was 95°.

The post-mortem examination was made forty hours after death. The right pleura was free of adhesions. The lung floated in a pint and a half of blood-stained serum. The pericardium was normal and contained an ounce of clear serum. The heart was enlarged a third. It was very flabby and had much subserous fat on its anterior surface. All of the heart-valves were normal. Both of the heart-ventricles were dilated. The walls of the heart were friable and thin. The lungs were normal, but exceedingly edematous. Many old adhesions were found over the spleen. This organ was enlarged a half. It was very soft and friable. The left kidney was movable, forward, up to the median line. It lay imbedded in a mass of fat, and was enlarged about a third. It was pale and light in color and the capsule stripped, leaving the outer surface smooth and of a gray-yellowish red color, the yellow being pronounced here and there. The cortex was half an inch thick and showed a yellow faint mottled appearance. The pyramids were more prominent than usual, the red vessels and the yellow tubes being strongly contra-distinguished. No hemorrhage of

any size could be detected. The pelvis was normal. The yellow of the cortex was very prominent in places. It was arranged in wedge-shaped masses, with the base at the cortex and the apex at the pelvis. It was a beautiful specimen of the inflammatory fatty kidney. I follow Strümpell's classification of chronic nephritis:

1. Chronic hemorrhagic nephritis, the large variegated or mottled kidney.
2. Inflammatory fatty kidney, the large white kidney.
3. The secondarily contracted kidney.

The right kidney was not movable. It was much more nearly normal than the left one, but its upper half was in the same condition as the left. The liver was large and apparently in a condition of cloudy swelling. All of the other abdominal organs were normal. The suprarenals were cystic. The brain and cord were not removed.

This case showed the value of a post-mortem examination. It had been registered "pernicious anemia" at one time.

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