Staff Meeting Bulletin
Hospitals of the » » »
University of Minnesota

Clinical Pathological Conference

Volume X | Friday, October 7, 1938 | Number 2

STAFF MEETING BULLETIN
HOSPITALS OF THE . . .
UNIVERSITY OF MINNESOTA

Volume X | Friday, October 7, 1938 | Number 2

INDEX

Published for the General Staff Meeting each week during the school year, October to May, inclusive.

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William A. O'Brien, M.D.

I. LAST WEEK

Date: September 30, 1938

Place: Recreation Room
Powell Hall

Time: 12:20 to 1:20

Program: Announcements

Remarks:
H. S. Diehl
John L. McKelvey
Eric Kent Clarke

Movies:
Men of Medicine
Human Heart
Seconds Count

Present: 115

Gertrude Gunn,
Record Librarian

II. MOVIE

Title: "Leader News"

A Chevrolet Film

III. ANNOUNCEMENTS

1. POSTGRADUATE MEDICAL EDUCATION

General Medicine - October 10 to 15, 1938,
Center for Continuation Study.

Guest:
Hobart Ansteth Reimann,
Magee Professor of the Practice of
Medicine and Clinical Medicine,
Jefferson Medical College,
Philadelphia, October 12, 1938.

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2. UNIVERSITY OF MINNESOTA MEDICAL ALUMNI ASSOCIATION

Annual Meeting, October 14, 1938
Clinics in morning at Hospital
Luncheon with staff
Business meeting to follow.

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3. ANESTHESIA TRAVEL CLUB

Will meet with staff next Friday, October 14, 1938, at lunch. They will participate in a special program.

Representatives from various sections of the United States and Canada will be present.

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4. GENERAL MEDICAL FACULTY DINNER MEETING

October 17, 1938, 6:30 P.M.
Minnesota Union.

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5. HELP

We are now correcting the staff list. Additions and corrections will be made next week. If your name was omitted, or information was incorrect, please communicate with Room West 432, Hospital at once.

IV. CASE REPORTS

Dr. Lawrence Berman

1. PULMONARY HYPERTENSION

The case is that of a white male, 69 years of age, who was admitted to University of Minnesota Hospitals 7-6-38 and discharged 8-5-38; readmitted 9-8-38 and expired 9-19-38. Total stay - 41 days.

History

Presenting complaint at first admission was dyspnea, arthopnea, and edema, the latter having been present for 4 days. In January, 1937 experienced a severe attack of precordial pain of several hours' duration. Since that time had frequent attacks less severe in nature and associated with dyspnea on exertion. This had become progressively worse and within recent months orthopnea has developed. Was unable to work since onset of illness in January 1937. Past health up to time of onset of illness had been good.

Examination

Revealed markedly dyspneic male. Temperature normal, pulse 126 per minute, respirations 32 per minute, blood pressure 95/60. Examination of eyegrounds revealed no evidence of hypertensive changes. Moderate distention of neck veins. Examination of chest revealed dulness to percussion over both bases and in addition superimposed rales were heard upon auscultation. Heart appeared slightly enlarged to left. Heart tones forceful and a systolic murmur was heard over entire precordium. Total irregularity of heart rate and definite pulse deficit was noted. Liver edge felt about 4 cm. below the costal margin, and it was definitely tender. Moderate degree of pitting edema over the lower extremities.

Laboratory

Studies revealed a normal urine; hemoglobin 88% and white blood cell count 12,000 with normal differential. Blood urea nitrogen on the day of admission was normal. Serology normal. Venous pressure was 13 cm. Clinical impression was congestive heart failure on basis of coronary arteriosclerosis, bilateral hydrothorax, and auricular fibrillation.

Electrocardiographic record revealed evidences of severe myocardial damage due to coronary disease.

Therapy

Placed on regime consisting of bed rest in orthopneic position, limited fluid intake, salt free diet, and full digitalization. Response was slow but satisfactory. The vital capacity which had previously been but 1200 cc. rose to 2200 cc. Venous pressure returned to normal, edema disappeared, and grade of dyspnea became much less. Gradual decrease in tachycardial though the coarse auricular fibrillations persisted. Was able to be out of bed for brief periods for last 3 days of hospitalization. Discharged 8-5-38 with prescription for digitalis which he was instructed to take to the amount of 1½ gr. per day.

After return home, was getting along quite well until about 4 days before admission at which time stated he caught a slight cold and noticed gradual onset of dyspnea. Two days before admission dyspnea became marked. Was orthopneic, and edema of ankles appeared. At hospital, was orthopneic. Marked venous engorgement and moderate pitting edema to level of the knees. Temperature was 100.4°, pulse 110, respirations 36, blood pressure 105/70.

Physical examination

Revealed emaciated white male in great respiratory distress. Dusky cyanosis and marked venous engorgement of vessels of neck. Few moist rales at both bases. Heart rate rapid and completely irregular with pulse deficit. Systolic murmur was heard at apex. Liver edge was 2 fingers below costal margin in right midclavicular line, with moderate tenderness. No ascites. Edema of feet and ankles.

9-9-38 - Staff concurred in findings of venous congestion, cyanosis, large liver and peripheral edema. P_2 was accentuated in 3rd interspace in which area there was a thrill and a forcible impulse. Systolic murmur at apex. Electrocardiograms revealed right

axis deviation. At this time a history of rheumatic pains in early life was obtained, but there was no story of outspoken inflammatory rheumatism. Contour of heart on percussion was compatible with emphysematous heart or mitral disease.

Laboratory

On 2nd admission hemoglobin was 80%, leukocytes 7,600, neutrophils 70%, lymphocytes 27%, monocytes 3%, urea nitrogen 15.9 mg.%. On 9-15-38 venous pressure was 5 cm. of blood.

Course

Temperature continued to vary between normal and 100°, rising to 100.8° on one day, 9-11-38. Further course was characterized by anorexia, drowsiness, and dyspnea with cyanosis. 9-19-38, respirations became more labored. Began to gasp for air and became very cyanotic and expired at 6:00 A.M.

Autopsy

Body is that of a markedly emaciated white male, 169 cm. in length and weighing about 105 lbs. Rigor, edema, and jaundice are absent. Subconjunctival hemorrhage in left sclera. Abdomen is markedly scaphoid.

There is no excess of fluid in Peritoneal Cavity. The peritoneal surfaces are everywhere glistening. The appendix is free. Liver edge is 2 cm. above right costal margin in midclavicular line. Diaphragm arches to 5th rib on each side.

In each Pleural Cavity there are about 400 cc. of clear amber fluid. There is no excess of fluid in Pericardial Sac. The epicardial surface is smooth, transparent and glistening.

The Heart weighs 430 grams. There is dilation of both the right and left ventricles, the right ventricle being directed anteriorly. The right atrium is distended with blood. The left atrium is dilated. There is hypertrophy of both the right and left ventricles. The thickness of the right ventricle varies from 4 mm. to 9 mm; that of the left ventricle from 1 to 2 cm. The chorda tendineae attached to the mitral valve leaflets are thickened and fused; those attached to the anterior mitral valve leaflet are shortened, causing curling and retraction of the leaflet. The leaflets themselves are thickened by nodular fibrous change. On the auricular endocardium about 1 cm. superior to the attached edge of the posterior mitral leaflet there is a rough scar 1 cm. in diameter and a small amount of calcification at the attached margin of the anterior mitral leaflet on its ventricular side. The root of the aorta is smooth. There is an accessory right coronary orifice. There is slight calcification in the proximal 1 cm. of the left anterior descending branch of the coronary artery, but there is very little narrowing. There is practically no change in the circumflex branch of the left coronary artery. The right coronary artery contains a few atheromatous plaques in its proximal portion; otherwise, it is flexible and patent throughout.

Right Lung weighs 410 grams, Left 310 grams. Both lungs are partially collapsed. There is an emphysematous bleb on the anterior surface of the left lower lung at the diaphragmatic border. The trachea and the large bronchi of both lungs contain a large amount of green purulent material. There is calcification of the visceral pleurae in both apices. There are numerous areas of red consolidation in the right lower lobe, and these contain pus. There are a few areas of red consolidation in the marginal portion of the left lower lobe, and these contain pus. There are no lesions in the lung substance of the apices. There is slight posterior hypostasis and slight congestion throughout both lungs. The intima of the large branches of the pulmonary artery are perfectly smooth and yellow. The smaller branches of the pulmonary artery down to those having a diameter of 2 mm. appear to be free of change except that they stand up prominently on the cut surface of the lung.

Spleen weighs 90 grams. Capsule is thickened. Trabeculations are prominent. Follicles are not visible, and the pulp is firm.

Liver weighs 1,000 grams. On the dia-

phragmatic surface of the left lobe there is a cavernous hemangioma 1x1 cm. The surface of the liver has a slightly nodular appearance although there are no definite fibrous bands on the surface on cut section. Liver cuts with increased resistence, but the cut surface has a uniform brown color. There are no particular markings to be seen. The wall of the Gallbladder is thin, flexible, and translucent. A small amount of dark green bile is present. No concretions. No obstructions in any of the ducts. Bile passes freely into the duodenum.

No lesions of esophagus, stomach, small bowel, or large bowel.

Pancreas has a uniform grayish pink color. It is free of hemorrhage, necrosis, or tumor.

Adrenals are free of hemorrhage or tumor.

Each Kidney weighs 110 grams. Both have a dark purple color. Surfaces are smooth, and the markings are distinct. A few subcapsular cysts 1 to 2 mm. in diameter are seen on both kidneys. No lesions of the pelves or ureters. Mucosa of the bladder is hemorrhagic and granular, especially in the region of the trigone.

No changes in the seminal vesicles or testes. Prostate is small. No areas suggesting tumor.

Aorta is practically smooth throughout.

Thyroid is small. Symmetrical and firm, having a uniform brownish red color. Vacini are barely visible.

No enlarged nodes.

No lesions of the scalp or calvarium or meninges. Brain is examined by Dr. Abe Baker.

Microscopic

Myocardium - nothing of note.

Kidneys - arterioles are free of change.

Spleen - nothing of note.

Liver - Atrophy of liver cords in centers of lobules resulting in a relative increase in connective tissue in these regions. In some areas the atrophy of the centers of lobules is associated with slight congestion.

Lungs - Moderate emphysema in portions of lungs taken from left lower and right lower lobes. In these parts of lungs the small arteries are very markedly narrowed by atheromata. There is marked medial fibrosis in the smaller arteries. In some places the lumen is extremely small. Portions from the upper part of each lung show similar pictures though less in severity.

Diagnosis

1. Pulmonary hypertension.
2. Severe arteriosclerosis of smaller branches of the pulmonary artery.
3. Emphysema, mild.
4. Old valve defects (mitral regurgitation and stenosis).
5. Hypertrophy of right ventricle.
6. Hypertrophy of left ventricle.
7. Bilateral hydrothorax.
8. Chronic passive congestion of liver.
9. Cavernous hemangioma of liver.

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2. ACUTE APLASTIC ANEMIA

Case is that of a white male, 5 years of age, who was admitted to University of Minnesota Hospitals 7-16-38 and expired 8-10-38 (25 days).

Patient first seen by referring physician 7-5-38. Complaints were irritability, gradual weakness, and fatigability. During the preceding few days the parents had noted that the child bruised easily, was becoming more pale, and that they had trouble stopping bleeding from minor cuts. When

first seen, the temperature was 99.4°. Skin and mucous membranes were pale. Petechiae on hard palate and hemorrhagic blisters on oral mucosa and posterior pharynx with old bleeding around several blebs. There were large ecchymoses all over body. Liver was palpable 2 cm. below right costal margin. Spleen was not palpable. Urine examination was negative; hemoglobin 60%, red blood cells 1,740,000, white blood cells 3,750, bleeding time 8 minutes, clotting time 6 minutes. Smears showed no platelets. The capillary resistance test was markedly positive. 7-8-38, hemoglobin was 60%. Was given 10 cc. of thromboplastin. In addition received Brewer's yeast, iron ammonium citrate, and cod liver oil. 7-12-38, temperature was 100.6°, pulse 120. Past history was essentially negative. Had always been a healthy child. At age of 2 received first prize at a State Fair Baby Contest.

Examination

Showed a well developed, extremely pale, well nourished white child. Many hemorrhagic spots over entire trunk, and extremities. Spots varied in size from petechial to a few cm. Bleeding from the gums. Large bleb on upper lip; few petechiae in conjunctivae. Lungs, heart, and abdomen negative. No lymphadenopathy.

Course

On admission, urine showed nothing of note. Hemoglobin was 40%, erythrocytes 1,680,000, leukocytes 2,700, neutrophils 75%, lymphocytes 25%. Platelets 31,000. During next 15 days, patient received 4 blood transfusions, but hemoglobin continued to vary between 35 and 45%. Erythrocytes varied between 1,600,000 and 2,280,000. Leukocytes varied between 800 and 3,200. 7-25-38, differential count showed 48% neutrophils, 52% lymphocytes, 38,000 platelets, and coagulation time was 12 minutes and bleeding time 8 minutes. Highest platelet count was 70,000, usual being about 33,000. Wassermann was negative.

Repeated examination of blood showed no evidence of leukemia. Polymorphonuclear leukocytes showed marked toxic changes with degenerative shift to lift. On one occasion occasional plasma cells were seen in the smear. Other than an occasional immature cell, there was no evidence of immaturity.

7-23-38 - Had several emeses of old and fresh blood. Began to have abdominal pain for first time on this date. Following first transfusion patient's color improved, and bleeding stopped temporarily. After 7-25-38, began to have severe attacks of epistaxis. Continued to have bloody emeses. During entire course temperature varied between 101 and 105° except for one occasion, on 8-2-38, when temperature was 99° for a period of about 8 hours. 8-7-38, temperature was 100° for period of about 8 hours. 8-7-38, complained of pain in abdomen. Noted that there was bloody material in right auditory canal. 7-26-38, received deep x-ray therapy to spleen, apparently without effect on clinical course. Continued to have severe epistaxis, bloody emeses, and tarry stools. Expired 8-10-38.

Autopsy

The body is that of a well developed, fairly well nourished, white male, 116 cm. in length, weighing about 50 lbs. Cyanosis and jaundice are absent. Slight posterior hypostasis and slight rigor. Marked edema of scrotum. In skin over lumbar spine there are several hemorrhagic areas, each measuring about 1x1 cm. Ulcers over right gluteal region and medial aspect of right ankle. On medial aspect of left ankle is clean incision in the skin measuring about 1 cm. in length. Numerous purpuric spots varying in diameter from 4 mm. to 2 cm. scattered over thorax, abdomen, and face. In midline on upper lip is ulcer with hemorrhagic base which measures 1.5 x 1 cm. Blood escapes from nose, mouth, and rectum. Abdominal fat is about 1 cm. in thickness and has usual pale yellow color.

No excess of fluid in Peritoneal Cavity. Peritoneal surface is shining and translucent throughout. Few adhesions between omentum and anterior wall of stomach in region of fundus. Appendix is retrocecal and adherent to posterior wall of cecum, but it is not injected and not fibrous. Liver edge is flush with costal margin on

right. Diaphragm arches to 3d rib on right and 5th rib on left.

Each Pleural Cavity contains about 30 c.c. of blood. No adhesions. Lungs are not collapsed when thorax is opened. Hemorrhagic area in muscle of 2nd right interspace at sternal margin. Pericardial Sac contains about 30 c.c. of blood. On external surface of pericardium are numerous hemorrhagic blebs, each about 1 cm. in diameter. Inner surface of pericardium is granular and bright red in color.

Heart weighs 130 grams. Over anterior and lateral surface of right ventricle and over anterior surface of comus pulmonalis are numerous hemorrhagic areas varying in diameter from 2 mm. to 1 cm. These practically completely cover entire anterior and lateral surfaces of right auricle. Myocardium is soft and cloudy. Has a pale brownish red color. Over entire inner surface of left auricle there are confluent subendocardial hemorrhages. Several hemorrhagic areas under endocardium of septum between auricles on right side. No thrombi, no lesions or deformities of any of valves, and coronary arteries are free of change. Root of the aorta is smooth.

Right Lung weighs 200 grams, Left 160 grams. Over anterior surface of left upper lobe there are 4 hemorrhagic areas, smallest measuring .5x1 cm. and largest being 2.5x2.5 cm. Several smaller similar areas on anterior and lateral surfaces of right upper lobe. Apical parts of each lung are firm and fleshy and do not contain air. There are numerous small hemorrhagic spots scattered throughout both lungs. In left lower lobe near base is an area of consolidation measuring 1 cm. x 1 cm. Large bronchi of both lungs have red granular mucous membrane and contain frothy mucus. No pits or scars on surfaces of lungs. Mediastinal and tracheobronchial nodes are slightly prominent. Have a pale purple color, and there is no evidence of tumor or tuberculosis on section.

Spleen weighs 100 grams. Capsule is slightly wrinkled. Parenchyma is firm, dark red in color, but corpuscles are indistinct.

Liver weighs 840 grams. Capsule is tense. Cut surface everts and has a pale cloudy brown color with very indistinct markings. Gallbladder shows no change. There is no dilation of any of ducts. Bile passes freely into duodenum.

In lower one-third of esophagus there are several submucosal hemorrhages on posterior wall. Stomach is moderately distended with gas and bloody mucoid material. On posterior wall of stomach there is a large ulcer measuring about 1 x 3½ cm. and having undermined edges. Several similar smaller ulcers on anterior surface in region of fundus. The duodenum and most of remainder of small bowel contain large amounts of bloody fecal material. Tarry stool is present in rectum. No lesions in small bowel or large bowel. Mesenteric nodes are prominent throughout, largest measuring about 1.5 x 1 cm. Lymph nodes have a pale purple color but show no evidence of tumor grossly.

The Pancreas is firm and fleshy and has pale brownish pink color. No evidence of hemorrhage or necrosis.

Adrenals show no evidence of tumor.

Right Kidney weighs 80 grams, Left 90 grams. Capsules are tense, but they strip easily leaving smooth surfaces. Cut surfaces of each kidney are pale, yellowish pink, and cloudy, with very indistinct markings. Several of the pyramids of left kidney hemorrhage. Pelves of kidneys, ureters, and bladder show no change.

Prostate and testes show no change.
Inguinal, axillary, and cervical nodes are barely palpable.

Thyroid is firm and symmetrical. Has uniform brownish red color. Acini are barely visible, and there are no nodules.

No lesions of scalp or calvarium. No thickening or opacity of meninges. Numerous small hemorrhagic spots in dura at base of brain in anterior and middle cranial fossae. About a dozen petechial hemorrhages scattered over

surfaces of brain. In left middle ear is an accumulation of pus and blood. The brain is examined by Dr. Baker.

The marrow of ribs and sternum has a bright red color.

Microscopic

Ulcers of stomach - complete destruction of the mucosa and submucosa and a large portion of the muscularis with marked edema and a cellular exudate of large mononuclear macrophages, occasional plasma cells, and polymorphonuclears. No fibrosis.

Dura - diffuse intradural hemorrhage.

Liver - accumulations of lymphocytes in portal spaces.

Spleen - follicles are small; the pulp is congested; there are large accumulations of hyaline material in the follicles.

Lymph nodes - mediastinal lumbar and mesenteric nodes are similar in appearance; hyperplasia of reticulum.

Kidneys - nothing of note.

Lungs - numerous scattered small areas in which the alveoli are filled with red blood cells.

Marrow from ribs and sternum - there are occasional granulocytes and a few small nests of myelocytes with few degenerating mature granulocytes; occasional normoblasts are seen, but there is no evidence of very active regeneration; the reticulum is prominent; there is a definite increase in plasma cells rising from reticulum.

Report of Dr. A. B. Baker:

Externally the brain revealed many tiny hard hemorrhagic spots that were scattered over the surface of the brain. These were most numerous in the right temporal lobe of the brain. In the left parieto-occipital region there was a large ecchymotic area measuring 2 x 1 cm. which seemed to be more superficially located in the meninges. Cut section through the brain showed the numerous tiny hemorrhages limited almost exclusively to the cortex of the brain. None were found in the white substance. A few were seen in the left basal nuclei and internal capsule. Situated deep in the right parietal region, there was found a tiny hemorrhagic tissue measuring lxl cm. and situated entirely in the white matter. It was well circumscribed and had the gross appearance of a small angioma. No other changes were observed on gross examination of the nervous system.

Histologically one could find the typical well circumscribed ball type of petechiae scattered through the cortex. These hemorrhages were fairly fresh and showed no signs of hemolysis. They were very well demarcated from the surrounding brain tissue and some of the adjacent nerve cells were filled with iron pigment.

The larger lesion in the right parietal region on microscopic study reveals a large fairly well organized hemorrhage. Many of the erythrocytes have already been destroyed. The entire hemorrhage is fairly well organized, being filled with young fibroblasts and capillaries. This is a peculiar reaction to a hemorrhage, which, usually in the brain, is repaired by means of glial proliferation. Surrounding this old hemorrhage is an area of softened brain tissue filled with fat granule cells in all stages of its transformation from microglia. The source of the hemorrhages was not detected.

Diagnosis

1. Acute aplastic anemia (Pan-myelophthisis)
2. Generalized purpura.
3. Intradural hemorrhages.
4. Cerebral hemorrhages.
5. Bilateral hemothorax.
6. Hemopericardium.
7. Acute pericarditis.

8. Subepicardial and subendocardial hemorrhages.
9. Hemorrhages in the lungs.
10. Acute bronchitis.
11. Atelectasis of both lung apices.
12. Acute splenitis.
13. Cloudy swelling of the liver, kidneys, and myocardium.
14. Submucous hemorrhages in the esophagus.
15. Acute ulcers of the stomach.

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3. ADENOCARCINOMA OF RECTUM

The case is that of a white male, age 60, who was admitted to the University of Minnesota Hospitals on 8-8-38 and expired on 9-5-38 (29 days).

History

In 1907, patient had an attack of jaundice, which lasted about 4 weeks. The patient believed that the stools were light colored during the attack, which was associated with epigastric distress. Since that time, has had epigastric distress, especially following fatty foods. Occasionally, he noted an icteric tinge of the eyes. Epigastric distress became much more severe in December, 1937, when he began to complain of a dull, gnawing fullness, associated with belching, especially after meals. There has been progressive anorexia and loss of weight over the last year. Three weeks before admission, he developed severe jaundice, during which time the urine was very dark, and the stools were clay colored. About this time itching of the skin started.

On 8-8-38, the day of admission, the patient had pain in the midabdomen which radiated laterally.

Physical Examination

Temperature was 98°, pulse 80, respirations 20. Had icterus of skin and sclera. Was markedly emaciated. There were numerous excoriations over the shoulders and upper arms. Chest and heart negative. Abdomen was slightly distended. Liver and spleen not palpable. Slight tenderness in midepigastric region. No masses felt. Extremities and reflexes normal. On rectal examination, a firm, nodular, non-tender mass was felt just proximal to the prostate.

Laboratory

On admission, the hemoglobin was 75%, leukocytes 8,800, neutrophils 74%, lymphocytes 24%, monocytes 2%. Nonprotein nitrogen was 35.4 mg.%. Icterus index was 153, the van den Bergh was prompt direct, Gastric analysis on 8-9-38 revealed no free acid. On several occasions, the guaiac and benzidine stool tests were both positive. Specific gravity of urine on 8-8-38 was 1021. There was 1+ albumin. A positive test for bilirubin was obtained.

Course

Temperature remained normal throughout hospital stay except for one occasion when it rose to 100° for a period of several hours - 8-13-38. On 8-16-38, a 4-day stool examination for urobilinogen revealed only a trace. 8-29-38, was considerably distressed by gradually increasing ascitic fluid. Paracentesis done, and 450 cc. of bile stained fluid removed, Patient had considerable relief. The fluid was examined for tumor cells, but none were found. On 9-1-38, it was noted that following paracentesis a nodular mass in the midepigastric region was palpable.

The liver also was palpated just below the costal margin and had a nodular surface. The specific gravity of the ascitic fluid was 1016, the total protein content was 5 grams per liter.

Roentgenologic Examination

8-10-38, 2 days following admission: acute duodenal ulcer with duodenitis, high grade pyloric obstruction.

Had steady downhill course, gradually becoming more and more cachectic. Expired on 9-5-38.

Autopsy

The body is that of a well developed poorly nourished, white male, 179 cm. in length, weighing about 135 lbs. Slight rigor, slight posterior hypostasis, edema of the ankles and hands,

slight cyanosis of the nail beds are present. There is very severe jaundice. A decubitus ulcer involving only the skin, measuring 1 cm. in diameter, over the left shoulder. Venipuncture marks in each antecubital fossa. Two trochar puncture wounds in the midline of the lower one-half of the abdomen. Small amount of hemorrhage surrounding the trochar punctures in fascial planes. Abdomen is distended.

Peritoneal Cavity contains a large amount of blood and soft clots under the pressure. Over the parietal peritoneum and in the mesentery there are multiple nodules, 2 to 6 mm. in diameter, yellowish white in color, and of firm consistence. The appendix is bound by adhesions to the cecum and the terminal portion of the ileum. It is edematous. The liver edge is 2 cm. below the right costal margin in the midclavicular line. The veins of the mesentery of the small bowel are distended with blood, and in a few areas there are hemorrhagic spots within the mesentery. In the parietal peritoneum, especially in the pelvis, there are numerous hemorrhagic spots and injected capillaries, but the source for the bleeding in the peritoneal cavity is not found. The diaphragm arches to the 4th rib on the right and to the 4th rib on the left.

In each Pleural Cavity there is about 50 cc. of slightly bloody fluid. On the pleural surfaces of each diaphragm there are multiple raised yellowish white plaques, varying in diameter from 2 to 6 mm. and very firm in consistence. There are similar multiple nodules scattered over the parietal pleura on both sides below the level of the 4th rib. There are adhesions at the apices of both lungs.

Pericardial Sac contains the usual amount of clear amber fluid.

Heart weighs 275 grams. On the anterior surface of the right ventricle is an opaque, white plaque, 2.5 cm. in diameter. There is no apparent hypertrophy or dilation of any of the chambers. There are no deformities of any of the valves. The root of the aorta contains a few slightly raised yellowish plaques, especially in the region of the coronary orifices. The coronary arteries are practically free of change. The myocardium has a pale brownish red color. There are no scars.

The Right Lung weighs 425 grams, the Left 260 grams. There are no scars on the surface of either lung. The bronchi leading into both lungs contain a small amount of frothy mucus. The tracheal and bronchial nodes are prominent, the largest being 2 cm. in diameter. Cut section of these nodes reveal no evidence of tumor. There is slight posterior hypostasis and congestion in both lungs. There are no areas of consolidation.

Spleen weighs 110 grams. The capsul is wrinkled. On the hilar aspect there are numerous nodular hyaline thickenings. The cut surface of the spleen has a dark purple color. It is firm and free of change.

Liver. On the diaphragmatic surface of the left lobe there is an opaque white area which has infiltrating edges, which measures about 6 x 9 cm. The antero-inferior edge of the liver in the region of the gallbladder fossa is adherent to the hepatic flexure of the colon, and in this region there is a very firm nodular mass which is composed of slightly enlarged, thickened gallbladder, the pylorus of the stomach, first part of the duodenum, hepatic flexure and the proximal portion of the transverse colon, and a group of confluent nodules of very firm consistence and yellowish white color, which completely encircle the hepatic artery, the common bile duct, and the portal vein. There is very definite pressure upon the portal vein and its adjacent structures. The cut surface of the liver is a dark green color in general, but the center of lobules are a distinctly darker green. There are no masses in the right lobe of the liver. The white area seen on the diaphragmatic surface of the left lobe of the liver is found to be the external portion of a mass which extends into the substance of the liver for a distance of 7 cm. This mass has a shape corresponding roughly to the structure of the biliary

tree. Elsewhere in the liver the large bile ducts are greatly dilated. Bile escapes from these ducts under pressure.

Gallbladder contains thick mucoid material. The cystic duct is dilated to about a diameter of 1 cm. In the common bile duct about 2 mm. distal to the junction of the hepatic duct, a setment of the common bile duct about 1 cm. in length is markedly narrowed by two factors, the first of which is apparently extrinsic pressure by the nodular mass surrounding the structures within the portal ligament, the second is thickening in the wall of the duct itself. The common bile duct in this region is adherent to the surrounding nodular mass. When the common bile duct is opened at this point, the bile under pressure escapes from the liver. The cystic duct is compressed by the extrinsic tumor mass in this region. There are no concretions in the biliary tree or the gallbladder. There are numerous nodules in the mesentery of the small bowel, each measuring about 1 cm. in diameter and consisting of yellowish tumor tissue and fat. These nodules are situated along the inner border of the small intestine. There is great shortening of the lesser omentum and greater omentum. The foramen of Winslow is obliterated. The greater omentum is represented by a thick nodular mass which binds the greater curvature of the stomach to the transverse colon. The nodules are composed of tissue similar to that found in the mesentery of the small bowel. In the mid-portion of the ascending colon there is a firm adhesion between the distal and proximal portions which has caused a marked kinking of this part of the colon. The adhesions are composed of yellowish white firm tissue resembling tumor. Along the entire large bowel there are numerous extrinsic nodules which involve the serosa and in some parts the muscularis of the colon without causing ulceration of the mucosa. These nodules are rather uniform in size, each about 1.5 cm. in diameter. One nodule in the rectum is similar to the masses found elsewhere in the colon, but differs in that the mucosa of the bowel in this region is ulcerated.

There are no lesions in the esophagus stomach, duodenum, or remainder of small bowel. There is very marked edema of the distal portion of stomach and pylorus. These structures are narrowed by pressure from multiple nodules described in the region of the gallbladder fossa.

Pancreas has uniform brownish red color, a uniform consistence, and is free of hemorrhage, necrosis, or tumor.

No evidence of hemorrhage or tumor in the Adrenals.

Each Kidney weighs 150 grams. Both are cloudy and bile stained. There are no lesions in the pelves, ureters, or bladder.

The prostate shows no evidence of tumor. The seminal vesicles are free of change. There are no nodules in the testes.

The Aorta is practically smooth throughout.

The thyroid is firm and symmetrical, has a uniform brownish red color. The acini are visible.

A few nodes are removed from the posterior cervical triangles on both sides, but they show no evidence of tumor. The axillary nodes are very small and free of change. The lumbar nodes are free of change. The inguinal nodes are not found.

The head is not examined.

Microscopic:

Common bile duct - marked edema. The mass which compresses the duct is composed of firm connective tissue in which are found numerous irregular gland-like structures representing metastatic adenocarcinoma.

Liver - metastatic mucin forming adenocarcinoma with marked atrophy and destruction of the liver cords in the areas invaded by the tumor.

Pleura - metastatic adenocarcinoma; irregular gland-like structures are lined by tall columnar epithelium in which goblet cells are very numerous.

Rectum - adenocarcinoma, primary.

Prostate - nothing of note.

Kidneys - numerous bile stained casts in tubules.

Spleen - nothing of note.

Diagnosis

1. Adenocarcinoma of rectum, with metastases to liver, common bile duct, colon, mesocolon, mesentery, greater and lesser omentum, pleura, parietal peritoneum with compression of portal vein by tumor mass in the lesser omentum.
2. Hemoperitoneum.
3. Hemorrhages into mesentery.
4. Bilateral hemothorax.
5. Obstructive jaundice.
6. Edema of pylorus.
7. Decubitus ulcer.
8. Hyaline nodular perisplenitis.

V. GOSSIP

We started the 1938-1939 program with the best first day in years. The new room arrangement with tables for all met with universal approval. We thank Superintendent Amberg and Steward Schenck for the innovation. At today's meeting we add a microphone and public address system. We earnestly ask all to use it so that everyone can hear. Under the new room arrangement, it may be difficult for those in the back to hear some of the speakers unless they use the amplifier.. ...Doctors McKelvey and Clarke scored with the crowd with excellent responses to their introductions. As both have now been officially inducted into the group, we can treat them like "home folks" from now on; "Every man for himself".....Altho we do not have a medical course at the Center for Continuation Study this week, there is no need for any one to feel lost for special gatherings. We have 2 with us this week: The Tenth Annual Meeting of the Central Association of Obstetricians and Gynecologists at the Radisson Hotel, October 6, 7, and 8; and the Seventeenth Annual Convention of the Central Neuropsychiatric Association, October 7 and 8, with headquarters at the Nicollet Hotel, and meetings at the Center for Continuation Study. The Central Association of Obstetricians and Gynecologists meets under the presidency of Robert D. Mussey, of the Mayo Foundation. On Thursday afternoon a special program was held in Room 15, Medical Sciences Building, on "Some aspects of the vascular changes in the obstetrical toxemias." It was conducted by J. C. Litzenberg, M. G. Visscher, E. T. Bell, and John L. McKelvey. Among the visitors on the program we note former Minnesotans Leroy A. Calkins of Kansas City, Kansas, and Fred L. Adair and John A. Haugen of Chicago. The local arrangement committee is headed by Claude J. Ehrenberg. Minnesota speakers include James R. Manley and Russell Moe of Duluth; E. C. Hartley, John L. Rothrock, J. J. Swendson, and Charles W. Froats of St. Paul; Leonard A. Lang, Owen F. Robbins, Jalmer H. Simons of Minneapolis; Virgil S. Counseller, Della Drips, L. M. Randall, Arthur B. Hunt and James C. Masson of Rochester. The banquet address is by Guy Stanton Ford on Postgraduate Medical Education. The honored speaker is Emeritus Professor of Obstetrics and Gynecology, Jennings C. Litzenberg. Non-members are invited to luncheons and regularly scheduled meetings.....The Central Neuropsychiatric Association has an all-Minnesota program, under the presidency of John Favill of Chicago. The counselor is Henry W. Woltman of Rochester. This organization, which last met in Minneapolis and St. Paul in 1927, was formed in 1922 with the idea of affording better mutual acquaintanceship among the neuropsychiatrists of the Central and Western States and Provinces. Appearing on the program are H. O. Peterson, N. J. Berkwitz, W. T. Peyton, L. Titrud, A. T. Rasmussen, Royal C. Gray, S. R. Hathaway, H. B. Hannah, J. C. Hultkrans, Bryng Bryngelson, L. R. Gowan (Duluth), E. J. Engberg (Faribault), E. M. Hammes, George N. Ruhberg, Frank Whitmore, H. S. Lippman,

Gordon R. Kamman, Professor J. M. Thomas of the Senior College of Science, Literature, and the Arts, Lillian Cottrell, J. C. Michael, Irvine McQuarrie, Mildred Ziegler, A. B. Baker, J. C. McKinley, Hugo Mells (St. Cloud), Burtrum C. Schiele, and C. D. Creevy. Non-members are cordially invited to all meetings and the annual dinner at the Nicollet Hotel at 7:00 p.m. this evening. For some strange reason, both organizations are recessing at noon on Saturday to attend the Minnesota-Purdue football game.....We are glad to report that Proctologist Harold Hullsiek of St. Paul has returned to his practice following an absence of five months because of illness.....When Head Pathologist Elexious Thomas Bell toured England with his family this summer, some of his friends were concerned about the custom which he would encounter of driving on the left side of the road. His wife assured them that this would not be very difficult for Tommy, as he almost drove there in this country.....The dinner honoring Emeritus Professor Jennings C. Crawford Litzenberg, to be held at the Minikahda Club the night before the Homecoming Game with Michigan, will be a gala affair. Advance sale of tickets indicates that most of Litz's friends who can make it will be there. Others are urged to write special messages to be assembled for the occasion.....Superintendent Raymond Michel Amberg was in Dallas, Texas last week at the annual meeting of the American Hospital Association. He saw many of our old Minnesota friends who wish to be remembered to the group. Dr. Fred Carter, formerly of Ancker Hospital, now at Christ Hospital, Cincinnati, was made president-elect, a well-deserved honor for a very capable hospital administrator.....If you have read the current issue of "Good Housekeeping" (October), you undoubtedly have seen the article by Henrietta Ripperger on "X-ray Marks the Spot." She quotes Medical Sciences' Dean Harold Shelly Diehl and cites the work of the Health Service in tuberculosis control, and also mentions the routine Mantoux testing and x-ray studies which are made of all patients admitted to this institution. ....And speaking of national recognition, you undoubtedly saw in the September 26 issue of "Time" reference to the book by Winifred Watson, public school teacher of St. Paul, and Director of Continuation Study Center, Julius M. Nolte. They drew more than a column under the Department of Education on their book called "Living Grammar." It is described as a 99-page attempt to make grammar popular. The publishers are Webb Book Punlishing Company of St. Paul. The book is liberally sprinkled with cartoons and snappy admonitions. Librarians have found it difficult to know on which shelf to place it - adults' or childrens.' After reading it, it apparently belongs on both. You will find the illustrations of pigs, boys, swinging trapeze artists, clocks, stop and go traffic signs, and even grammar games enjoyable.....Sport fans elsewhere may be surprised to note Health Service Director Ruth Boynton's bulletins on the condition of star halfback Van Every of the Fighting Gophers. In these parts we know the splendid role Dr. Boynton plays in protecting student health and find nothing unusual in the matter of a lady doctor for a gang of he-men..... ..One of our interns has a name familiar to all Minnesotans but still difficult to spell for many people. I refer to Northrop (not Northrup) Beach, grandson of Minnesota's famed president, also the son of Professor Beach of the English Department.....Word was received this week from Edgar H. Norris, Professor of Pathology at Wayne University in Detroit, that he is happily located in his new position. School has started, and he finds it a good sized job to get the work organized. He is building a new home in Detroit which will be ready before snow flies, and invites all who came that way to stop and see him....Crusading Phthisiologist J. Arthur Myers, former president of the National Tuberculosis Association and member of this staff, has traveled a total of 233,992 miles in the last ten years to give talks on tuberculosis. Of these 111,291 miles have been by air, 108,495 miles by train, and 14,206 miles by automobile. His trips have taken him to all parts of the United States and now on next Monday he leaves for Cordoba, Argentine, South America to address the Sixth Annual National Medical Conference. He is flying

and will reach his destination on Saturday. Believe it or not the ticket is $1,495.26. We hope that he returns in time for the Postgraduate Medical Course in Tuberculosis at the Center for Continuation Study, November 14-19, 1938... ...A tea was given last Monday in farewell to Mrs. Lillian Dahl, head radiologic technologist for 21 years. As Mrs. Theodore Sonsteng, she will now devote her time to domestic duties. In her place we are fortunate to have Mr. A. J. Carter of the University of Iowa, who will have charge of technic... ...Watch next week for extra special gossip.