

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

Case Studies

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

Volume IX

Friday, February 11, 1938

Number 16

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

Financed by the Citizens Aid Society

William A. O'Brien

I. LAST WEEK

Date: February 3, 1938
Place: Recreation Room
 Nurses' Hall
Time: 12:15 - 1:15
Program: Movie: "Laughing at Fate"

Sympathectomy

W. T. Peyton
 Leonard Titrud

Note: Through an error
 Dr. Titrud's name
 was omitted from
 co-authorship in
 last week's bulletin.

Discussion: Wilder Penfield
 A. T. Rasmussen
 J. C. McKinley
 W. T. Peyton

Present: 116

Gertrude Gunn
 Record Librarian

II. MOVIE

Title: "What Do You Think"

By Carey Wilson

Released by: M-G-M

III. GOSSIP

When the Veterinarians had their convention in Minneapolis in January, a reporter from one of the papers interviewed several of the members as to their ideas on animal experimentation. The "Public Pulse" of the Minneapolis Tribune as well as letters columns of the other papers have been filled with the pros and cons of the situation, mainly cons. The other morning "Calvin Rutstrum" wrote a letter to the editor

of the Tribune which seems worth calling to your attention. The judicial manner in which this person handles the question is a model of its kind. "Impressions of vivisection appearing in the Public Pulse, give an interesting cross section of human emotions; perhaps more realistically than we at first observe. Though a few of these contributors get a little overheated in the discussion, there is nevertheless a remaining substance of sound feeling which is significant in their viewpoint. This holds good for either side of the controversy. Those who oppose vivisection in its entirety, should try to realize that life is not a frolic and a place for impractical idealism; and that a helpless human being screaming in agony on a hospital bed from some infection is just as heartrending to all of us. We should like to be idealistic at such moments, but emergency calls for the more practical viewpoint. We may often dignify our position on earth, but at moments of intense grief we come to humble terms with life; and let me tell you how humbly and yet how courageously man comes to these terms. If you passed a law tomorrow prohibiting vivisection as now practiced, there are men - many of them - who would come to the altar with their own bodies to be experimented upon for the sake of man's suffering. It is not a part of research to quit, though every man in the field of such endeavor become guinea pigs. Man is at bottom a noble creature. And those people who rush to the defense of vivisection should try to regard the fine feelings of those who hate it to the point of wanting to abolish it. There is something of kindness underlying many of these protests, which, if it at times seems a bit irrational, is nevertheless a virtue in human conduct. I should like to abolish vivisection without losing its fruits of research, so that I could go to these people and relieve them of their grief, no less commend them for their fine feeling. But the course is not open for such action to any of us. The pitiful and dire need of vivisection is still with us, and will likely remain until science finds the panacea which makes it no

(Cont. on Page 203)

IV. CASE REPORTS1. CONGENITAL ATRESIA
OF BILE DUCTS

Robert Hebbel

Case is that of white male, 5 months of age, admitted to University of Minnesota Hospitals 11-30-37, and expired on 1-12-38 (43 days).

Jaundice since Birth

At 3 days of age, clay colored stools were noticed. Jaundice became marked at about 9 days of age and has persisted since. The stools were frequently streaked with a dark colored, nearly black substance. The jaundice has remained stationary and at times seemed to be a little less intense in the face, hands and feet. Feedings had always been taken well, and there was no vomiting except when at about 2 months of age, bile salts were given. The vomiting ceased with the discontinuance of the bile salts by mouth. Birth was normal. There was no family history of jaundice.

Jaundice; Enlarged Liver and Spleen

Examination showed a well developed, well nourished white male child. There was good turgor, no dehydration. There was generalized icterus, skin having a rather brownish color. No generalized adenopathy. Examination of the head, neck and chest negative. Liver was 3 fingers below the right costal margin, and the spleen 2 fingers below the left costal margin. No fluid could be demonstrated in abdomen.

Laboratory

Urine, no albumin, no sugar, negative sediment. Blood - hemoglobin 52%, white blood cells 13,900 with 29% neutrophils and 71% lymphocytes; blood sugar 75; icteric index 56; van den Bergh, prompt direct; blood calcium 9.5; phosphorous 3; cholesterol 240; coagulation time 2 minutes, bleeding time 5½ minutes; fragility test, hemolysis began .40, complete .28. Blood Wassermann negative. Stool examination, soft, clay colored, no mucus;

positive benzidine, no pus, negative for bilirubin and urobilin. The urine gave a positive test for bilirubin; positive Ehrlich and Schlesinger for urobilin.

X-ray

X-ray examination of long bones and skull negative. Films of the chest showed negative lungs and a possible prominence in the region of the left ventricle of the heart.

Course

Given bile per nasal tube daily in divided doses. There was slight daily elevation of temperature up to 100°, but no evidence of any infection. Surgery was planned, but operative procedure was postponed because of persistence elevation of temperature. On 12-8-37, 135 cc. of whole filtered blood was given by vein, and subsequent hemoglobin on 12-16-37 was 84. On 1-3-38 after having low grade intermittent fever, there was a sudden temperature elevation to 104.8°. There was no evident reason for elevation of temperature. Films of chest on 1-5-38 showed mottled density extending out from the hilus into both upper lobes, more marked on right. From this time until exitus, there was septic type of temperature, the daily peaks being 105° to 106°. The abdomen became markedly distended early in morning of 1-12-38. Patient became markedly weaker, had gasping respirations and expired at 4:50 A.M., 1-12-38.

AutopsyJaundice; Edema

The body is that of well developed, fairly well nourished white male child, 70 cm. in length, weighing about 15 lbs. No rigor; hypostasis of dependent parts; edema of both lower extremities below the knees to slight degree. No cyanosis. Generalized jaundice. Venipuncture marks in each antecubital space. Prominent distention of abdomen.

Ascites

The Peritoneal Cavity contains about 700 cc. of a cloudy yellow fluid containing abundant soft masses that are apparently fibrin. The liver edge is

above the costal margin. The diaphragm reaches to the 5th rib on each side. The appendix is free and appears normal. All the peritoneal surfaces are smooth and glistening.

Each Pleural Cavity is free and dry. The Pericardial Sac contains about 25 cc. of a clear straw colored fluid. The pericardial and epicardial surfaces appear normal.

The Heart weighs 50 grams. The epicardium, myocardium, endocardium and valves appear normal. The vessels appear normal. The root of the aorta is normal.

Pneumonia

The Right Lung weighs 95 grams, the Left 80 grams. The right lung presents a consolidated area at the apex and through the upper portion of the lower lobe most marked near the hilus. From the cut surface of these portions of the lung, small amounts of pus may be expressed on pressure. The left lung: there is area of consolidation in the upper portion of the lower lobe. Elsewhere there is but slight congestion, no edema. The bronchi contain a mucoid material. The vessels appear normal.

Spleen Enlarged

The Spleen weighs 130 grams. There are likewise 4 accessory spleens measuring from 5 mm. to 1 cm. in diameter. The spleen is relatively soft. Its capsule is smooth. On cut section it is found to be of rather light red in color. While follicles are not prominent, the periphery presents a more marked darker color.

Cirrhosis

The Liver weighs 450 grams. Its surface is rough, granular and somewhat hobnailed. Cut section shows a rather fibrous structure. It is very firm, and the parenchyma is throughout a deep greenish brown color. The intrahepatic bile ducts are distended. At the porta hepatis may be seen markedly distended bile ducts from which there is no communication to the duodenum.

Biliary Anomaly

The Gallbladder is very rudimentary; lies in a fossa in the liver but is about

$1\frac{1}{2}$ cm. in length and 1 cm. in its cross diameter. There is no cystic duct, but the structure representing the gallbladder communicates directly with the above mentioned distended biliary duct. There is a prominent mass of lymphoid tissue in this region and through part of this, a very small cord-like structure extends from the duodenum to the dependent portion of the distended bile ducts. This may represent the maldeveloped common duct, although there is no communication from this structure to the papilla of Vater in the duodenum. The pancreatic duct, however, may be traced from the papilla of Vater into the pancreatic substance and appears essentially normal. On opening the distended bile ducts at the porta hepatis, a watery green bile wells out. There are other points of atresia within the biliary system, for all the passages do not collapse from the primary opening.

The gastrointestinal tract appears normal throughout.

The Pancreas and Adrenals are normal.

The Right Kidney weighs 70 grams, the Left 60 grams. They show normal fetal lobulation. The surfaces are smooth. Cut sections present essentially normal markings. The pelves and ureters are normal. The urinary bladder is normal.

The genitalia appear normal.

The Aorta is normal.

The organs of the neck appear normal.

The lymph nodes show the usual infantile prominence in the mesentery, mediastinum, but those around the porta of the liver are rather definitely hyperplastic as are the hilar nodes of the lungs.

The head is not examined.

Conclusion

1. Malformation of biliary duct.
2. Cirrhosis
3. Splenomegaly
4. Ascites
5. Pneumonia (microscopic diagnosis:

lipoid pneumonia,
purulent bronchitis and
atelectasis).

12-26-31 - Returned to hospital because eyes became rapidly worse. Was again put on copper sulphate applications to eyes together with atropine. There was again considerable improvement, and he was discharged on 1-11-32.

2. AMYLOID DISEASE

Robert Hebbel

Case is that of white male, 36 years of age, admitted to University of Minnesota Hospitals on 11-25-31 and discharged 12-14-31 (19 days); readmitted 12-26-31 and discharged 1-11-32 (16 days); readmitted 11-18-37 and discharged 11-26-37 (8 days); readmitted 12-16-37 and expired 1-26-38 (41 days). Total stay - 84 days.

1931 - Trachoma

History: 11-25-31, Admitted to the hospital with soreness of eyes with discharge, photophobia and burning for period of 6 or 7 years. There had been failing vision. He had not been able to read since July, 1931.

Physical Examination

Revealed follicles on lids of both eyes with granulation. The eyelids seemed thickened. There was whitish mucopurulent discharge from the eyes. Bilateral pannus was present. Vision was markedly decreased. Light perception was present.

Laboratory

Urine, specific gravity 1.005, alkaline reaction, no sugar, cloud of albumin, moderate number of white blood cells and a few red blood cells. Blood - hemoglobin 71%, red blood cells 3,890,000, white blood cells 8750.

Course

Treatment of eye condition consisted of 5% copper sulphate and glycerin. There was considerable improvement. Patient was discharged 12-14-31. Diagnosis: Trachoma.

Subsequent to this discharge, patient was followed relative to eye condition in the Out-Patient Department at relatively frequent intervals during which time intensive treatment for trachoma was continued, and there was considerable improvement.

1937 - Shortness of Breath

11-18-37, Admitted to hospital, complaining particularly of shortness of breath on exertion of several months' duration. History revealed that there had been an amputation of the right femur 26 years ago for osteomyelitis. In 1921 there was history of generalized edema of one week's duration following upper respiratory infection. Had scarlet fever without sequela as a child. Health had been good until 4 years ago when he developed trachoma for which he had been seen in the hospital previously. 3 weeks prior to admission, an external otitis was noted on left side.

Hypertension

Physical examination on admission revealed a temperature of 98.6°, pulse 90, respirations 16, blood pressure 204/110. No dyspnea and no cyanosis. Both eyelids were greatly thickened and edematous. Both cornea were markedly scarred. The fundi could not be visualized because of corneal opacity. There was no evidence of active trachoma at this time. Thyroid not enlarged. The lungs were clear. The heart was not enlarged to percussion. The sounds were of good quality. The second aortic sound was accentuated. There was a faint systolic murmur at the apex. The liver was not enlarged. The spleen was questionably palpable. There were no other masses nor tenderness in the abdomen. The right leg had been disarticulated at the hip joint. There was no edema. The mucous membranes were pale. The left ear was full

of old debris and pus.

Nitrogen Retention; Anemia

Laboratory: Urine, specific gravity 1.006, 3+ albumin, otherwise negative. Blood - hemoglobin 39%, erythrocytes 2,100,000, leukocytes 13,000 with a differential of 84% neutrophils, 40% lymphocytes and 1% monocytes. Examination of blood smear showed some poikilocytosis and anisocytosis. Reticulocytes were 1%. Blood platelets 282,000; non-protein nitrogen 153; creatinine 9.4; carbon dioxide combining power 51%; chloride 648; icteric index 9; cholesterol 250. Gastric expression revealed the presence of free hydrochloric acid. Blood Wassermann negative. Phenolsulphonphthalein excretion was 0% at the end of 2 hours. Urea clearance was 7% of normal. Congo red test revealed 87% retention in blood after 1 hour.

Old Osteomyelitis

X-ray: Film of the pelvis showed a disarticulation of the right hip joint with a few remnants of bone scattered in the soft tissues about the joint. There was some deformity of the wing of the right ilium. The left hip joint showed some pathology consisting of a marked irregularity and flattening of the head. The joint cartilage was fairly well preserved except in one area in the upper portion of the joint. No definite areas of destruction were seen. These findings were interpreted to be due possibly to an old osteomyelitis which was now inactive. Anteroposterior film of the lumbar spine showed no definite pathology. Six foot film of the chest showed the heart to be within normal limits in size but slightly rounded off in the region of the left ventricle. The aorta appeared normal. X-ray of the mastoids showed the right to be normal, the left to be slightly hazy with increased density in the cells in the region of the antrum. Electrocardiogram showed slurring of the QRS in all leads, positive T₄ and small T₁.

Course

Treatment consisted of blood transfusions which resulted in raising the

hemoglobin to 50%. Fluids were forced, and nonprotein nitrogen fell to 122. The otitis of the left ear was treated by means of dry wiping. Patient was discharged on 11-26-37 with instructions to follow a low salt diet and to rest as much as possible.

No Improvement

12-16-37 - Readmitted to the hospital. During the interval patient had felt fine for a short time, but during the few days prior to the date of this admission, there had been frequent nosebleeds, increasing malaise, headaches and repeated vomiting spells.

Impending Coma

Examination: Temperature 98.4°, pulse 100, respirations 18, blood pressure 190/116. Patient was slightly stuporous but responded to questioning. There was some dryness of the tongue and throat, debris noted in the left ear with no mastoid tenderness. Chest was clear. Examination of the heart gave essentially the findings as noted on the last previous admission. Liver and spleen were not palpable. There was no edema; no uriniferous odor to the breath was noted.

Nitrogen Retention; High Phosphorus

Laboratory: Urine, specific gravity 1.008, heavy cloud of albumin, no sugar, very many white blood cells. Blood - hemoglobin 35%, red blood cells, 1,900,000, white blood cells 7,100 with a differential of 80% neutrophils, 20% lymphocytes. Non-protein nitrogen 140; creatinine 13; uric acid 5.8; sugar 109; carbon dioxide combining power 49%; chloride 544; calcium 7.3; phosphorus 9.6.

Course

Course was continually afebrile. Fluids were forced. Patient was transfused, but the nonprotein nitrogen remained elevated and gradually continued to rise. The reading on 1-23-38 was 381. At the same time urea nitrogen was 302.4 and creatinine 22. The hemoglobin value rose somewhat subsequent to

transfusion but again rapidly fell reaching a value of 29% on 1-25-38. On 1-11-38 the pericardial friction rub was noted. Condition went steadily downhill; patient became restless and stuporous. Daily output of urine dropped steadily, and there was a complete anuria during the last 2 days of life. On 1-24-38 there was marked abdominal tenderness which was generalized with questionable rebound tenderness. A fusiform tender swelling of the upper right forearms developed with deep fluctuation. Patient expired on 1-26-38.

Autopsy

The body is that of a well developed, moderately emaciated white male, 163 cm. long and weighing about 90 lbs. Rigor is present. There is dorsal hypostasis. There is no edema, no cyanosis and no jaundice. Each pupil measures 3 mm. in diameter. There is marked scarring and thickening of the palpebral conjunctiva on both sides and marked corneal opacity bilaterally. The right lower extremity has been amputated, and in addition to the old healed scar at the amputation stump, there are several irregular scars proximal to this point over the lower lateral portion of the pelvis. There is a fusiform swelling in the proximal portion of the right forearm with its greatest diameter being about twice that of the left arm. There is some anterior bulging of the anterior chest wall to the right of the sternum from the 3rd to the 6th rib which is associated with a slight degree of funneling over the sternum.

The peritoneal Cavity contains 500 cc. of cloudy yellow fluid in which is floating a moderate amount of coagulated fibrin. The peritoneal surfaces are smooth and appear essentially normal except for those areas on the parietal peritoneal surfaces in the region of the cecum which appear somewhat hemorrhagic. The diaphragm is at the 5th rib on the right and the 5th rib on the left. The appendix presents fibrous bandlike adhesions between it and the parietal peritoneum but appears otherwise essentially normal.

The Right Pleural Cavity contains 50 cc.

of yellowish fluid. There are multiple fibrous weblike adhesions anteriorly, laterally and posteriorly together with similar adhesions between the lower lobe and the diaphragm. The Left Pleural Cavity is dry and there are on this side adhesions similar to those on the right. The Pericardial Sac presents a moderate degree of fibrinous exudate on both the visceral and parietal epicardial surfaces. This is most marked anteriorly and least marked over the posterior surface of the heart.

Cardiac Hypertrophy

The Heart weighs 430 grams. There is a moderate degree of left ventricular hypertrophy. There are 2 small sclerotic plaques near the base of the anterior mitral leaflet. The valves otherwise appear normal. The myocardium shows no evident sclerosis. The epicardium is covered with the exception of the posterior portion with a fibrinous exudate. There is a moderate degree of coronary sclerosis, graded II, involving both the coronary vessels, but there is no closure of the lumina. There is a grade II atherosclerosis of the aortic root.

Pulmonary Edema

The Right Lung weighs 1000 grams, the Left 950 grams. There is marked edema throughout both lungs together with a moderate degree of congestion in both lower lobes. No consolidation is noted. The bronchi contain a frothy fluid. The vessels appear normal.

The Spleen weighs 200 grams. Its capsule is smooth, and cut section presents essentially normal markings.

Fatty Liver

The Liver weighs 1705 grams. Its capsule is smooth. Cut section appears to be suggestively fatty. The Gall-bladder contains 20 cc. of dark green bile and 1 calculus measuring 8 x 5 mm. in its greatest diameter. The mucosa appears essentially normal. The ducts are patent.

The stomach and small bowel contain

a small amount of watery brownish colored material. The mucosa of the entire gastrointestinal tract appears normal except for a few slightly hemorrhagic areas in the descending and sigmoid colon.

The Pancreas and Adrenals are normal.

Kidneys, 75 Grams Each

The Right Kidney weighs 75 grams, the Left 75 grams. The capsules strip with difficulty. The surfaces of the kidneys are pale, very granular. There are no large pits. There are a few scattered, very small cortical cysts, and there is on the right at the upper pole one large cyst measuring $1\frac{1}{2}$ cm. in diameter. Cut section presents a loss of normal markings. The cortex in some areas is hardly discernible. In others it reaches a diameter of about 3 mm. The color of the cut section is rather pale and yellowish. The pelvis of the right kidney appears normal, while that of the left appears to be studded with minute hemorrhagic areas of pinhead size. The ureters appear normal. The bladder contains 500 cc. of straw colored urine which is clear. The mucosa appears normal.

The prostate is normal. The scrotum and testes appear normal. There is a moderate degree of balanitis and a purulent discharge about the urethral orifice.

There is a grade II sclerosis of the abdominal Aorta.

The thyroid is normal. There is no enlargement of the parathyroids.

There is enlargement of the lymph nodes along the abdominal aorta, and there are hyperplastic nodes in the hilus of each lung.

Osteomyelitis

There is a moderate degree of swelling in the region of the right psoas muscle which on exploration yields a bloody purulent material of an estimated 400 cc. volume. The pus pocket may be traced down to the proximal posterior portion of the wing of the ilium over which the

tissue is markedly thickened and indurated and the proximal portion of the ilium itself is irregular. It may be penetrated with relative ease with a blunt instrument inferiorly. The pelvis on the right side appears essentially normal except for considerable irregularity and thickening laterally over the acetabulum. A small incision is made over the anterolateral aspect of the proximal right forearm. A pair of forceps is introduced into the area of swelling, but no pus is encountered in any place.

The scalp, calvarium and dura appear normal. The brain presents no abnormalities. The base of the skull and the hypophysis appear normal.

Microscopic study

of kidney shows marked amyloid infiltration.

Conclusions

1. Chronic osteomyelitis.
2. Amyloidosis
3. Uremia
4. Hypertension
5. Pulmonary edema
6. Cholithiasis

3. PULMONARY HYPERTENSION; RIGHT HEART FAILURE

Robert Hebbel

Case is that of white female, 44 years of age, admitted to University of Minnesota Hospitals on 1-14-38 and expired on 1-16-38 (2 days).

1936 - Cardiac Symptoms

History: The illness dates back to the fall of 1936 when the patient noticed that her feet and legs showed a progressive swelling from early morning to night. Shortly after the onset of the edema, she noticed dyspnea on exertion. There was a sensation of heaviness in the chest and cough with the raising of thin watery sputum. She was up and about until April, 1937, when she saw a physician who prescribed bed

rest, and she was also given digitalis in small amounts which, however, produced emesis.

1937 - Progression

There was marked improvement on bed rest and in the summer of 1937 she again began to do her housework but by September, 1937, her symptoms had again returned, and she returned to relatively strict bed rest and has been in bed most of the time since. During the 3 weeks prior to admission, she vomited almost daily, and there has been at times scanty urination. Past history was essentially negative except for frequent colds every winter.

Dyspnea; Edema

Examination revealed an obese white female of 44 lying flat in bed. There was slight dyspnea but no orthopnea and no cyanosis. There was general anasarca and edema of the face. Examination of the head and neck was negative. Ophthalmoscopic examination of the eyegrounds revealed no abnormalities. No enlargement of the heart could be made out on percussion. On auscultation the sounds were rather distant, and there were no murmurs heard. The lungs were clear except at the bases posteriorly where there was some dulness, especially on the right. The abdomen was very obese, distended, and there was shifting dulness. There was marked edema of the lower extremities. Blood pressure was 140/80.

Laboratory

Urine, specific gravity 1.027, cloud of albumin, no sugar, a few red blood cells in the sediment. Blood - hemoglobin 76%, white blood cells 6,400 with a differential of 72% neutrophils, 26% lymphocytes, 2% monocytes.

Rapid Failure

Course: Except for rather labored breathing with a respiratory rate ranging from 28 to 32, patient seemed relatively comfortable until the early morning of 1-16-38 when she became very uncomfortable with increasing dyspnea, rapid, weak pulse. Respiratory rate at this time rose to 44. Patient perspired profusely;

her lips and hands became cyanotic. Blood pressure was not obtainable. She was given morphine and placed in an oxygen tent. By 6:30 A.M., pulse was again perceptible; breathing was easier. Pulse rate at this time was 96, respirations 40. Very soon, however, the pulse became imperceptible and although the patient responded when spoken to and drank a glass of milk for breakfast, she very rapidly became weaker and expired at 8:15 A.M. 1-16-38.

Autopsy

Edema

The body is that of a well developed, well nourished white female, 162 cm. long and weighing about 170 lbs. Rigor is not present. There is beginning hypostasis over the dependent portions of the body. There is no cyanosis and no jaundice. There is a generalized edematous appearance of the body although pitting is noted only on the legs and feet. There are prominent abdominal striae. In the right anterior axillary line at the level of the 7th rib is an irregular scar 10 cm. in length. The skin in the immediate neighborhood of the scar is dry and scaly.

Ascites

The subcutaneous abdominal fat measures 3 cm. in diameter. The Peritoneal Cavity contains about 6 liters of clear straw colored fluid. The diaphragm is at the 4th rib on the right and the 4th interspace on the left. The peritoneal surfaces except for firm fibrous adhesions between the duodenum and the gallbladder appear normal. The appendix is free and appears normal.

There is 100 cc. of straw colored fluid in the Left Pleural Cavity. The Right Pleural Cavity is dry. There are no pleural adhesions. The Pericardial Sac contains 250 cc. of clear straw colored fluid, and the sac appears normal.

Right Cardiac Hypertrophy

The Heart weighs 355 grams. There

are multiple petechiae over the right auricle and a few over the anterior surface of the right ventricle. The conus does not appear to be prominent. The right auricle is distended and filled with blood. The epicardium, other than the above mentioned petechiae, appears normal. There is hypertrophy and dilation of the right ventricle. The left ventricle appears normal as to size. The right auricle is dilated. Except for a few minute areas suggesting fibrosis at the extreme ventricular apex on the left, the myocardium appears normal. The endocardium appears normal. The tricuspid, pulmonary and aortic valves are normal. There is a sclerotic plaque near the base of the anterior mitral leaflet. The coronary orifices are normal. The coronary vessels show a very slight sclerosis in the proximal portions of the main trunk. There is a grade 1 sclerosis of the aortic root and a rather marked sclerosis of the pulmonary root.

Pulmonary Artery Sclerosis

The Right Lung weighs 350 grams, the Left 280 grams. Both lower lobes show a slight degree of congestion but no edema and no consolidation. There are scattered ecchymotic areas along the interlobar fissure on the right. Both pulmonary arteries show a diffuse generalized patchy sclerosis. The bronchi appear normal.

Splenic Congestion

The Spleen weighs 380 grams. There is a patchy hyaline perisplenitis. On cut section the organ is deep red, moderately firm, and there are scattered through it some firm, white nodules measuring up to 2 mm. in diameter, the larger of which on cut section contains a caseous material.

Hepatic Congestion

The Liver weighs 1970 grams. The capsule is smooth and rather mottled in appearance. A few whitish nodules situated under the capsule similar to those seen in the spleen are present. On cut section the liver presents a firm consistency. There is a marked degree of chronic passive congestion. The sur-

face is mottled with large irregular whitish areas interspersed with darker rather hemorrhagic appearing areas. The Gallbladder contains about 20 cc. of brown bile. There are no stones. The ducts are patent. The mucosa appears normal.

The gastrointestinal tract except for an edematous mucosa appears normal.

The Pancreas and Adrenals are normal.

The Right Kidney weighs 160 grams, the Left 175 grams. The capsules strip with difficulty. The surfaces are rather finely granular. Cut section presents a slightly congested parenchyma but essentially normal markings. The pelvis and ureters are normal. The bladder presents a slightly hemorrhagic mucosa in the region of the trigone.

The uterus is somewhat larger than normal; though uniform in consistency it presents a hemorrhagic material. The broad ligaments and tubes appear normal. In the left ovary, there is a simple cyst containing clear fluid and measuring about 2 cm. in diameter. The right ovary appears normal. Near it from the posterior surface of the broad ligament are suspended 2 pedunculated cysts, each measuring about 1 x $\frac{1}{2}$ cm. in diameter, containing clear fluid.

There is a grade I sclerosis of the aorta. The organs of the neck appear normal. No abnormal lymph nodes are noted.

The scalp, calvarium and dura appear normal. The base of the skull and the hypophysis appear normal. The brain weighs 1260 grams and appears normal.

Microscopic

Study of lung vessels show sclerosis of the small pulmonary arteries,

Conclusions

1. Pulmonary hypertension
2. Right heart hypertrophy
3. Right heart failure
4. Chronic passive congestion of spleen, liver and portal system.

GOSSIP (Cont.)

longer necessary to exact animal sacrifices, or substitute human sacrifices to relieve the agony of mankind." - There are 29 physicians attending the institute on Medical Diagnosis and Treatment at the Center for Continuation Study this week. Many of them have taken other courses during the past year. This is course number 10 and the registration to date is 255. The Cereal Chemists follow on Monday with their sessions - An interesting visitor at the Center this week was Frank Tweddell of the cast "You Can't Take It With You" which is showing at the Lyceum. He is the assistant in the fireworks experiment and the startled model of the Roman Gladiator. An old school chum of Director J. N. Nolte, they had a good time reliving their undergraduate days at Yale - Miss Ione Corliss, Supervisor of Out-Patient Nurses, never heard Dr. O'Brien talk! - A very newsy letter was received this week from Head Radiologist L. G. Rigler on leave in California. The most encouraging item was that he still likes Minnesota best. He reports his family enjoying good health, and considerable progress on the new opus on Diagnostic Radiology - Medical Sciences Dean H. S. Diehl and Hospital Superintendent R. M. Amberg leave this weekend to attend the midwinter session of the Council on Medical Education and Hospitals of the American Medical Association in Chicago - When Neurosurgeon Wilder Penfield was here last week, he told the story behind the headlines in the gift of \$15,000,000 to Oxford for a medical center. The donor started in England as an obscure automobile mechanic. One of his early customers was Sir William Osler who made such an impression on him by his kindly way that he decided that when he became wealthy he would do something for the medical profession. He became wealthy and he made good on his pledge - Be sure to read the new regulations on electrocardiography elsewhere in this issue - For several years we have had demonstrations on how to properly use the ediphone. The story is always the same. The best results are obtained by waiting for the machine to start transcribing before speaking. The mouth-

piece should be held near the upper lip with the lower portion held at an angle. Speak directly ahead. Speak plainly and not too rapidly. Before shutting off the machine, be sure that you are through speaking - Dr. Klaveness who is a regular attendant at staff meeting when in town writes that he is enjoying an oriental cruise on a freighter out of the port of San Pedro. He is now 8,000 miles out and reports a very enjoyable time as they near the Orient -

V. ELECTROCARDIOGRAMS

1. A standard fourth lead. To conform with the Standards recommended by the American Heart Association¹, the fourth lead of those electrocardiograms which are interpreted by the Medical Service, will henceforth be taken in the following manner, and be known as Lead IVL: The right arm electrode is placed on the left leg; the left leg electrode is changed to become the precordial electrode, and is placed upon the extreme outer border of the apex beat, as determined by palpation. If the apex beat cannot be satisfactorily located by palpation, the electrode is placed in the fifth intercostal space, just outside the left border of cardiac dullness; or just outside the mid-clavicular line in the fifth interspace if percussion of the heart is unsatisfactory. The marking of this area is to be entrusted to a physician, and not the technologist. In order to obtain standard electrocardiograms, the cooperation of the staff is solicited in marking carefully the apex beat. A skin pencil may be used to mark this area, and this must be done before the patient is sent to the electrocardiographic laboratory.

2. The new request blanks. These have been placed on the wards and will be the standard request form for all electrocardiograms interpreted by the Medical Service. The clinical

information which is requested in this form will aid greatly in the interpretation of the electrocardiographic tracing. Attention is called particularly to the information concerning "Present Cardiac Diagnosis" printed on the reverse side of the request form. The cooperation of

the staff in the use and proper completion of this request form will be appreciated.

¹The American Heart Journal. Special Article. Standardization of Precordial Leads. 15: 107-108. January, 1938.

UNIVERSITY OF MINNESOTA HOSPITALS

Request for Electrocardiogram

Date _____ Portable? _____
 Hospital No. _____ Hospital Service _____ Station _____
 Name _____ Age _____ Blood Pressure _____

The following clinical information will aid in the interpretation of the electrocardiogram. When frequent records are being taken, all of the data need not be recorded after the first request. Any changes, however, should be noted.

PRESENT CARDIAC DIAGNOSIS (consult reverse side for information)

ETIOLOGIC _____

ANATOMIC _____

PHYSIOLOGIC _____

FUNCTIONAL _____

Is Uremia present? _____ N.P.N. _____ or B.U.N. _____ B.M.R. _____

Has patient had any of these drugs within the past three weeks? Specify dates and amounts.

Digitalis _____

Quinidine _____

Morphine _____

Date of last electrocardiogram _____ Reason for this electrocardiogram _____

(Be certain position of apex impulse is marked on chest of patient.)

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 Form 271 - 2-38 - 1000

Signature: Dr. _____

(Reverse side of "Request for Electrocardiogram")

The items listed on the reverse side under "Present Cardiac Diagnosis" are those recommended by the American Heart Association as the essentials of a proper cardiac diagnosis.

	Example I	Example II
Etiologic:	Rheumatic heart disease	Coronary Arteriosclerosis
Anatomic:	Cardiac hypertrophy and dilatation Mitral stenosis and insufficiency	None
Physiologic:	Auricular fibrillation	Bundle branch block Adams-Stokes syndrome
Functional:	Class III	Class IIa

The functional diagnosis is an estimation of cardiac reserve.

Class I indicates the absence of cardiac symptoms, even on severe exertion.

Class IIa indicates cardiac symptoms on moderate to marked exertion.

Class IIb indicates cardiac symptoms on slight exertion.

Class III indicates cardiac symptoms at rest, i.e., decompensation.