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GENERAL STAFF MEETING
UNIVERSITY HOSPITALS
UNIVERSITY OF MINNESOTA

CONTENTS

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AVERAGE LENGTH OF STAY PER SERVICE

Jan. 1931 - - Dec. 1931

	Jan.		Feb.		Mar.		Apr.		May		June		July		Aug.		Sep.		Oct.		Nov.		Dec.	
	'30	'31	'30	'31	'30	'31	'30	'31	'30	'31	'30	'31	'30	'31	'30	'31	'30	'31	'30	'31	'30	'31	'30	'31
Surgery	22	21	26	17	21	14	20	18	19	18	18	18	16	17	17	19	20	19	18	19	15	19	18	19
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Tumor Gyn.	19	30	66	51	19	34	15	34	16	23	25	26	23	36	13	23	47	19	39	21	37	17	57	23

Note: Blanks represent no discharges or creation of new divisions.
First honors for increased turn over go to Tumor Surgery.
Neurology and urology probably do not show real state of affairs because of short stay spinal punctures and cystoscopies.

AVERAGE LENGTH OF STAY BY SERVICE

Fiscal Year - July 1930-July 1931

Ortho-Peds.	45	Orthopedics	30	Surgery	18	Newborn	13
Recon.Surg.Ped.	40	Ophthal.	30	Surg. Peds.	18	Obstetrics	13
Tumor Gyn.	35	Neurology	23	Gynecology	17	Recon. Surg.	12
Pediatrics	32	Medicine	22	Tumor Surg.	15	T.A. & Sub.	2
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I. CASE REPORT:

CIRRHOSIS OF THE LIVER, JAUNDICE.

The case is that of a white male, 27 years of age, admitted to the University Hospitals 11-30-31 and died 12-16-31 (16 days).

Cirrhosis (7 years)?

1924 - (Summer) - Patient noted swelling of the abdomen and vomited some blood at one time. He stayed in bed for two or three days, took a vacation for two or three weeks, and then enlisted in the army. He passed the physical examination but superficial veins were noted on the anterior abdominal wall which were enlarged.

1925 - Patient worked for the Washer Machine Company in Milwaukee where he lacquered tubes. He had no symptoms.

Large vessels.

1926 - Re-enlisted in the army. He passed the examination but the large abdominal vessels were noted again. He was stationed for two and one-half years in the Hawaiian Islands.

1927 - Developed yellow jaundice and was in a hospital for ten days. Ever since this time patient has been jaundiced.

Edema.

9-30-31 - Patient had chills lasting for about ten or fifteen minutes. Two or three days later, he noticed his abdomen increase two or three times its size with swelling of legs, feet, and penis. He had a sharp pain at the right costal margin which shifted from side to side. He also had some dyspnea at this time.

10- -31 - Patient consulted a physician who sent him to a hospital where he remained for one month. He rested in bed and the swelling disappeared. Past history: Patient raised about one-half cupful of sputum one or two times per day. Appetite is good. No food distress.

Hospital.

11-30-31 - Admitted to University Hospitals. Physical examination reveals an Italian male, 27 years of age, who is well-developed and well-nourished, and lying in bed without any particular pain. There is a yellow tinge to the sclera and skin. Heart - systolic murmur over precordium, heard best at apex. Blood pressure 146/72. Abdomen - slightly distended; enlarged veins above umbilicus (caput medusae); fluid wave is present. Genitals - penis and scrotum are edematous. Rectal - no tenderness nor induration.

Laboratory.

Blood - Hb. 95%, wbc's 5,950, Pmn's 71%, L 20%, M 2%, E 7%. Urine - specific gravity 1.030, possible bile pigment and urobilinogen, and negative urobilin. Progress: Pulse 94. Temperature 99.

12-2-31 - Patient given 2.8 c.c. of bromosuphalein intravenously. Urine - specific gravity 1.018, no bilirubin, urobilin positive.

X-ray

of chest and abdomen - There is some increase in the bronchovascular markings throughout, suggestive of a pulmonary congestion. This is particularly marked in the left lower lobe. There is some elevation of both diaphragms. Plates of the abdomen were not entirely satisfactory. They show a large shadow in the left upper quadrant which may represent an enlarged spleen. Suggest filling the stomach with (and colon) to outline this more definitely. Van den Bergh's 22.2 mgs. Biphasic reaction. N.P.N. - 22.5 mgs. Icteric index - 40 units. Stool - no gross nor mucus, no microscopic pus, blood nor parasites, benzidene - faint trace. Blood - Hb. 85%, rbc's 2,560,000, wbc's 5,200, Pmn's 69%, L 24%, E 4%, M 3%. Temperature 98.8. Pulse 68.

Gastro-Intestinal study.

12-4-31 - The stomach shows no evidence of intrinsic pathology. There is some increase in the duodenal loop, but is questionable as to its significance, and definite diagnosis as to carcinoma of the pancreas cannot be made. The hepatic flexure of the colon extends up very high indicating a rather small liver. There is some suggestion of an enlarged spleen, the combination would be characteristic of cirrhosis of the liver with atrophy. Conclusions: Negative stomach and duodenum. Small liver, probably cirrhosis. Possible enlarged spleen.

Liver function test - 1st. specimen 20%, grade I; second specimen 4%, grade 0. Blood - Hb. 78%. Fragility test - hemolysis begins .46, complete .34. Urine - specific gravity 1.022, urobilin positive.

Surgical consultation:

12-5-31 - Jaundice for over three years. Onset while in Hawaii, 1929. Noted swelling of abdomen before this. No pain, chills, fever, nor vomiting. Examination - ascites, edema of lower extremities and genitalia; dilated abdominal veins. Impression - probable cirrhosis of liver (liver not palpable). Portal vain obstruction.

12-10-31 - P.S.P. - 1st hour 50%, 2nd hour 20%, total 70%. Pulse and temperature normal.

12-11-31 - Given 5 c.c. calcium chloride intravenously. Sent to operating room.

Operation.

Preoperative diagnosis: Cirrhosis of liver with liver cut already on part of nature to establish collateral anastomosis as suggested in the dilatation of t the veins above the umbilicus.

Anaesthesia: Spinal, very satisfactory.

Preparation: Iodin and alcohol.

Incision: Right rectus.

Operative findings: There was enormous distension and dilation of the veins in the ligaments of liver going to umbilicus. These veins were fully as large as little finger of an adult's hand. Vessels in the subcutaneous fat were also large, but not nearly as large as the vessels in the ligament of the liver. Liver was small and shrunken. It lay 4 or 5 inches above the costal margin in the midclavicular line on the right. Spleen was enlarged. Was palpable just opposite the costal margin on the left. The liver was nodular throughout. Tiny elevations and depression with umbilication were present over the entire liver surface. Liver was small. I thought of doing biopsy of liver because of difficulty of getting at it, retracted upward as it was it was felt best not to do it. Typical Talm-Morison's omentopexy was therefore done. The parietal peritoneum was scratched with a curet beneath the operative incision over a dinner plate sized area, and the omentum was sutured to it over this area over a distance of 6 or 7 inches or more in diameter, about 10 inches in diameter. The peritoneum was curetted until it bled rather freely. The omentum was brought up to the peritoneum by interrupted sutures of chromic catgut. Peritoneum was then closed in the usual fashion. Several interrupted sutures were placed in the fascia, and interrupted linen sutures in the skin. Liver function test before operation said grade I liver injury. Patient died in coma suggestive of liver failure. O.H.W. Returned from operating room. Pulse 60. Respirations 26. Color is good. Hyperventilated 5 minutes.

Post-operative.

12-14-31 - Hyperventilated 5 minutes, 3 times daily. Morphine Sulphate gr. 1/4 (H). Patient sits on edge of bed and is somewhat irrational. Morphine Sulphage gr. 1/4 times two given. Is very restless. Does not respond. Is very uncooperative. Skin itches. Chloral hydrate gr. xxv (R). Blood - Hb. 77%. Icterus index - 60 units. Carbon dioxide combining power 61. N.P.N. - 32.5. Pulse to 130. Temperature 100.2.

Coma.

12-15-31 - Hyperventilated 5 minutes, 3 times daily. Does not respond. Bleeds some from mouth. Respirations are irregular. 1000 c.c. hypodermoclysis 5% glucose started. Respirations very labored. Medical note: Blood pressure 182/70. Pupils are dilated. Pulse is rapid. Patient is comatose. There are coarse rales over the right, especially over the apex. The left side demonstrates a few rales. On expiration heard over the left apex, there are some bubbling rales over the bronchiole area. Patient experiences great air hunger.

Exitus.

12-16-31 - Patient has Cheyne-Stokes respirations at times. 8:45 A.M. respirations are very weak and labored. 9 A.M. - patient expired.

Autopsy.

The body is that of a well-developed and well-nourished, Italian male measuring 170 cm. in length and weighing approximately 160 lbs. Rigor is present. Hypostasis is purplish and posterior. There is no edema or cyanosis. There is 4+ generalized jaundice. Each pupil

measures 4 mm. and is regular. There is a recent operative incision, 16.0 cm. in length, in the right upper quadrant.

Upon reopening the incision, it is found that there are several large veins coursing through the rectus sheath. Upon inspecting from the PERITONEAL surface, varicosities are found in the round ligament of the liver.

The PERITONEAL CAVITY seems normal, free from any infection, and shows no evidence of fluid or blood.

ONLY A PARTIAL POST IS OBTAINED. The viscera are examined through the operative incision.

The PLEURAL CAVITIES, PERICARDIAL SAC, HEART and LUNGS are not examined.

The SPLEEN is removed after tying the pedicle and weighs 510 grams. The capsule is grayish. The spleen is quite soft. On cut section a moderate amount of fibrosis is shown.

The LIVER is also removed after ligating the pedicle and weighs 1400 grams. There is a very marked 'hob-nail' type of liver which is firm and in addition shows some evidence of chronic passive congestion.

The GALL-BLADDER and ducts are normal.

On inspection, the GASTRO-INTESTINAL TRACT seems normal. The esophagus adjoining the stomach is palpated for any varicosities but none can be determined. The lower end of the gastro-intestinal tract shows no evidence of varicosities on palpation.

The pedicle of the RIGHT KIDNEY is ligated and removed. It weighs about 225 grams. On section, it seems normal.

The rest of the organs are not examined.

A Talma-Morison operation had been done.

DIAGNOSES:

1. Cirrhosis of liver, "hob-nail type".
2. Splenomegaly (cirrhotic).
3. Varicosities of round ligament.
4. Omentopexy (Talma-Morison).
5. 4+ Jaundice.
6. Recent abdominal incision.

II. ABSTRACT:

DECOMPENSATED PORTAL CIRRHOSIS
Report of One Hundred and Twelve Cases,
Chapman, C. B., Snell, A. M., and
Rowntree, L. G. J.A.M.A. 97:237-244,
(July 25) 1931.

This paper previously reviewed by us has certain features which deserve repetition. All of their cases had ascites and were due to various causes. Ascites is a critical manifestation in portal cirrhosis and may be accepted as definite decompensation of the portal circulation. The general circulation is also disturbed by its presence as more than three-fourths of their cases showed edema of the lower extremities. More than half the patients gave histories of more or less prolonged gastro-intestinal disturbances before any of the more critical signs of hepatic injury appeared. In one case, cirrhosis was undoubtedly present 7 years (see our case). In others, histories of gastro-intestinal hemorrhave followed by marked ascites was also present years before. In many periods of complete relief were also present. Transient or intermittent jaundice was also a feature of some in their earlier manifestations.

Collateral circulation is always present in cases of long standing. The caput medusa was not observed. (Note its presence in our case.) Jaundice may occur at the time of development of ascites, a chronic low-grade form may be observed, and a number of additional cases was seen a terminal feature. Results of hepatic functional studies is remarkably constant in any given case, provided jaundice is not present. Portal cirrhosis with ascites almost invariably gives retention of bromsulphalein. The presence of jaundice also seems to render diuretics, ineffective and may also make the patient worse.

84 of 112 patients died. The usual cause of death was hemorrhage, infection, or coma. These were sometimes present in combinations.

Some features of the terminal picture in portal cirrhosis merit especial consideration. The peculiar nervous symptoms of the end stage of hepatic disease have been described frequently. The peculiar delirium and such occasional neurologic features as paralysis of the sixth cranial nerve, palsy of the palate, and a positive Babinski sign have been reviewed by Spence and Ogilvie, who wrote that Bright was one of the first to notice a peculiar type of delirium. Before him, Morgagni quoted previous authors and gave cases illustrating delirium in degenerative diseases of the

liver. Rowntree, however, has recently emphasized the peculiar type of coma seen in these cases with decompensated cirrhosis:

At its onset the patient appears to sleep naturally, although continuously. In this early stage he may be awakened, although he still appears sleepy and stuporous. Later the sleep becomes progressively deeper, so that the patient can no longer be aroused by ordinary methods. The breathing may be normal in rate and rhythm. The patient is relaxed, is flaccid and may be placed in any position. He is neither dyspneic or cyanotic, he looks comfortable, and for a time his appearance is that of a narcotized person or one who is in a normal sleep. Nausea, retching, vomiting, stertorous breathing. Cheyne-Stokes respiration and other symptoms so frequently encountered in uremia may all be lacking. Day after day the patient may continue to sleep until death supervenes. It is the appearance of normal sleep that is so impressive.

It is known that omentopexy aims to sidetrack the blood from the portal vein. This is often effective but the authors believe that it should be done early in the course of the disease rather than after decompensation and ascites have developed.

Comment:

Our case is unusual in several respects (long duration, free intervals, transient ascites, caput medusa, jaundice and well-developed collateral circulation). Little emphasis should be placed on the liver functional studies because of the presence of jaundice. Rowntree has repeatedly states that jaundice is evidence enough of liver injury without resorting to other functional tests. The cause of death was undoubtedly due to acute hepatic insufficiency. The same type of peculiar unexplainable death may be observed after gall-bladder operations. Heyd, C.G., J.A.M.A., 97: 1837-1850 (Dec. 19) 1931 reports such cases. It is true that the groups are small but they do not fall into the usual causes of death. Three types are described:

1. Immediate or delayed coma with rapid rise of temperature to very high level, with retention of urea nitrogen and no other demonstrable cause of death.

2. Following sudden relief, decompression of distended biliary tract, similar to same process in the urinary system, cerebral spinal irritation and coma developed. The drainage practically ceased and changed in character while the jaundice was improved, the patient got worse.

3. Slightly delayed signs of shock coming from twenty-four to thirty-six hours after operation.

In type 1, alkalosis (up to 80 volumes per cent) with the picture of coma, hyperpyrexia and rapid death was observed. This occurred in fourteen cases with six deaths.

III. CASE REPORT

BILATERAL OVARIAN CARCINOMA WITH GENERALIZED ABDOMINAL METASTASIS AND ASCITES.

The case is that of a white female, 61 years of age, admitted to the University Hospitals 12-8-31 and died 12-22-31 (14 days).

Pain

1928 - Patient began to have intermittent dull pain in right lower quadrant which has persisted until the present time.

Distension

9- -31 - The pain became more constant and patient developed abdominal distension which has persisted and increased. She has had numerous x-ray studies but no diagnosis has been made. However, neoplasm of the ovary with extension was the impression of the examining physician.

Hospital

12-8-31 - Admitted to University Hospitals. Laboratory - Blood - Hb. 63%, Rbc's 3,140,000, wbc's 8,300, Pmn's 76%, L 24%. Grouping - group IV. Urine - specific gravity 1.015, many wbc's and few rbc's. Progress: Pulse and temperature are normal.

Operation

12-9-31 - Began at 9:42 A.M. and ended 10:40 A.M. Preoperative diagnosis: Intra-abdominal malignancy with ascites. A small mass was felt by rectum. The absence of general symptoms and the presence of the small mass felt by rectum in culdesac suggested an ovarian carcinoma. Small operative incision to verify this diagnosis and to excise an ovarian carcinoma present was thought advisable. Referring physician, however, pointed out that the patient also had as one of the earlier symptoms considerable back pain. Anesthesia: Novocain crystals; spinal, very satisfactory. Incision: Short, subumbilical. Operative procedure: Through this incision, the abdomen was explored. There was considerable ascites. Many liters of fluid apparently came away as the abdomen was incised. Some of it was aspirated. Some of it was removed by putting in dry packs and ringing them out. Ovaries were both normal. In the culdesac, however, along the adnexae of the uterus and behind it there were small palpable masses. Small carcinomatous implants over the greater portion of the small bowel as well as over the parietal peritoneum. In the pyloric end of the stomach, there was a small mass. The gall-bladder was negative. Behind the stomach in the region of the pancreas was a fairly definite large mass. A small piece of the parietal peritoneum was excised for biopsy, and the abdomen was closed with continuous catgut. Laparotomy culture was negative. Microscopic diagnosis of the biopsy: Small nodules from mesentery shows atypical proliferation and poorly differentiated glandular (?) epithelium which seems to be growing quite extensively. It is made up of cells which vary in size, shape and staining. Mitoses are numerous. There are somewhat similar proliferating nests of cells on the section made from the peritoneum. Cell nests are not definitely outlined. Diagnosis: Metastatic carcinoma, grade IV.

Distension

12-13-31 - Gas 850. Fluid drainage 450 c.c. Patient seems quite comfortable. Morphine Sulphage gr. 1/6 given. The abdomen is distended. Suction seems to be draining. Gas 1400. Fluid drainage 1500 c.c. Sugar and soda enema given. Physostigmine sulphate gr. 1/100 given. Expelled a great amount of flatus. Patient is very much relieved. Abdomen is softer. X-ray of abdomen - There is distinct distension of the colon with gas. Some distension of small bowel is also present. The appearance suggests somewhat an ileus, but there is a very distinct localization of the distension to the right side and upper abdomen. The possibility of some fluid in the remainder of abdomen displacing small bowel upward or a mechanical obstruction in this region cannot be excluded. Suggest further examination. Pulse and temperature are normal.

Suction

12-14-31 - Nasal suction is discontinued. Pituitrin 1 c.c. given. S.S. enema given. Expelled a great deal of flatus. 12:30 P.M. - patient complains of abdominal pain. Morphine Sulphate gr. 1/6 given. Patient is up on a back rest. Complains of gas pains. Rectal tube is inserted with some relief. Patient complains of being very tired.

Radiotherapy

12-15-31 - Request for deep x-ray therapy. Diagnosis - carcinomatosis of the abdomen. Chief symptoms and course - patient's symptoms began with dull aching pain in lower abdomen, first being present. Following this there was a gradual enlargement of abdomen. Diagnosis: Probable carcinoma of ovary with metastasis. Patient was given two deep x-ray treatments, one on 16th and one on 18th.

Up

12-19-31 - Patient is up in a chair. Has been resting fairly well. Physostigmine salicylate gr. 1/30. Noble's enema given - expelled with formed stool and much flatus. Patient up and about in corridor-- became very tired and weak. Complains of abdominal pain. Codeine sulphate gr. 1-1/2 given. Temperature normal.

Sleeps

12-20-31 - Slept for long periods. Very good night. Appetite is improved. Codeine sulphate gr. 1-1/2 for pain. Small amount of drainage from would. Noble's enema - much flatus and soft

stool expelled.

Comfortable

12-21-31 - 8 A.M. - dressings changed. Alcohol 70% to wound. Dry dressing applied. Patient is fairly comfortable this morning. 10 A.M. - codeine sulphate gr. 1-1/2 for pain. Appetite poor. 1:30 P.M. - Noble's enema - returned with very good results. 5:30 P.M. - complaining of abdominal pain. 5:45 P.M. - Morphine Sulphate gr. 1/6 for pain.

Paracentesis

12-22-31 - Codeine sulphate gr. 1-1/2 given. 10:40 A.M. - catheterized, 300 c.c. urine obtained. 11:00 P.M. - 1600 c.c. yellowish fluid removed by paracentesis. Patient is very weak after paracentesis. Patient became very dyspneic. 12:00 noon - pulse is weak and irregular. Complained of pain in chest. 12:20 P.M. - Pituitrin 1 c.c. (H) and ephedrine 1 c.c. (H). Color not so good. Expelled a large amount of gas. Morphine sulphate gr. 1/6 (H). 12:40 P.M. Adrenalin 1 c.c. (H). Foot of bed is elevated. Hot water bottles are applied to the body. Respirations are shallow and labored. Color poor. 12:45 P.M. - Adrenalin 2 c.c. (H) given. 12:58 P.M.- patient ceased breathing.

Autopsy:

The body is that of a fairly well-developed and well-nourished, white male, measuring about 167 cm. in length and weighing approximately 150 lbs. Rigor is slight. Hypostasis is purplish and posterior. There is no edema, cyanosis nor jaundice. Each of pupils measure 4 mm. in diameter and are regular. There is a recent abdominal scar present. The abdomen seems to be distended.

The Peritoneal Cavity is found to contain about 3000 c.c. of clear, straw-colored fluid. Upon inspection, the peritoneal cavity is found to be massively studded with numerous, white, small, round plaques from the size of a pinpoint to about a half a centimeter in diameter. These are quite numerous, especially over the lower abdominal peritoneum but are also present in upper portion. The mesentery and bowel also show numerous implants, as previously described, although these are smaller.

The Pleural Cavities contain no fluid. The lungs are free. There are no adhesions. There is a moderate amount of anthracosis present. The Pericardial Sac contains a minimal amount of fluid.

The Heart weighs 325 grams. The valve edges are free and normal. The chambers are normal. The coronary arteries show a moderate amount of sclerosis but no interference with their lumina. The muscle is quite firm and on cut section shows no evidence of fibrosis. The Root of the Aorta shows a moderated amoun of sclerosis.

The Right Lung weighs 300 grams, Left 250 grams. There seems to be no intrinsic pathology in the lungs. Anthracosis is present, as described above. The lungs are sectioned but show nothing of note.

The Spleen weighs 100 grams. The capsule is grayish and wrinkled. The pulp is red and fairly firm.

The Liver weighs 1625 grams. On cut section, it shows a moderate amount of cloudy swelling.

The Gall-Bladder and ducts seem quite normal. There are some nodes around the region of the gall-bladder, as well as around the pyloric end of the stomach. Upon first examination, this was thought they may have risen from the pancreas.

The Pancreas is palpated and a mass is thought to be present but on further examination the pancreas is found to be quite normal throughout its normal entirety.

The Gastro-Intestinal Tract is normal in its entirety except for the implants as previously noted.

The Adrenals are normal.

The Right Kidney weighs 150 grams, Left 160 grams. The capsules strip easily revealing smooth surfaces. No evidence of any infection can be seen. The ureters are normal.

The Bladder is normal.

There are irregular masses in the culdesac which are interpreted as carcinomatous deposits. The uterus, tubes and ovaries are removed. The ovaries are found to be of normal size but slightly larger than normal, but both are somewhat nodular, and cut section show intrinsic carcinomatous involvement. There are several enlarged nodes around the region of the head of th Pancreas and also some along the course

of the Aorta. No metastasis can be found in the Thoracic Cavity.

Diagnoses:

1. Bilateral ovarian carcinoma.
2. Peritoneal carcinomatosis (generalized).
3. Carcinomatous deposits in culdesac.
4. Lymphatic metastasis (aortic).
5. Ascites.
6. Abdominal paracentesis followed by shock (clinical).
7. Cloudy swelling of liver and kidneys.
8. Moderate anthracosis.
9. Slight coronary sclerosis.
10. Recent abdominal incision.

IV. ABSTRACT:

COLLAPSE FOLLOWING PARACENTESIS

Abstr. Koucky.

Current Textbooks of medicine and surgery make little mention of complications following paracentesis of the abdomen.

The statement that fluid must be withdrawn slowly is usually made and pressure on the abdomen by means of a bandage is frequently recommended.

H.D.Rolleston: (Osler's Modern Med. Vol. V.)

states that rapid removal of fluid is dangerous in that it may lead to faintness. In rare instances fatal hemorrhage has followed an injury to the deep epigastric artery and in extremely rare instances acute pulmonary edema has followed paracentesis of the abdomen.

F. Lehmann (Deut. Med. Wchusche, 54:33-28 (Nov.)

reports a case of fatal hemorrhage following injury to one of the intercostal arteries.

Debove and Castaigne (La Cirrhose de Laennec, Consult mid Franc 1910 #6 quoted by Forcheimer "Therapenics of Int. Disease, Vol. III)

Discuss the Dangers connected with tapping. They classify them into two groups called the immediate and the remote complications. The immediate include hemorrhages from the abdominal wall, hemorrhages from the gastro-intestinal canal and cardio-pulmonary disturbances.

Hemorrhage from the abdominal wall may lead to rapid collapse.

Hemorrhage from the gastro-intestinal tract are due to a rapid decompression which usually ceases spontaneously but may prove fatal.

The cardiovascular disturbances may occur during the paracentesis or shortly thereafter. Intense dyspnea and rapid dilation of the heart may occur leading to fatal collapse. Cardiac stimulants (digitalis) are recommended in weak patients before operation.

The remote complications are two in number and gradually follow upon the removal of the fluid. One is called by the French writers exhaustion of the blood serum, and the other is a deep jaundice. The nature of these is not explained. The precautions recommended by the writers are (1) slow withdrawal of the fluid, (2) compression of the abdomen, (3) removal of all the fluid in one sitting only in patients in fair condition, (4) preoperative administration of cardiac stimulants.

O. H. Wangensteen and H. G. Scott (Arch. Surg. Jan. '28).

reviewed the studies on intraperitoneal pressures and presented a study in experimental ascites. According to the literature the normal intraperitoneal pressure is slightly positive. In patients with ascites the pressure varies from 15 to 60 cm. of water. This varies not only with the amount of fluid but also the rapidity of accumulation.

The writers cited two clinical cases of distension of the abdomen with serious collapse following rapid decompression at operation. One was a case of hemoperitoneum and the other a case of tumor of the ovary in a child.

These cases were reproduced experimentally by the injection of saline solution into the peritoneal cavity of dogs followed by rapid decompression by incision of the abdominal wall. In all cases an immediate marked fall in blood pressure occurred. No fatality however was brought about by this sudden decompression in the normal dog. In three dogs with a previously produced intestinal obstruction death followed the decompression in two in-

stances. Gradual decompression, replacement of the fluid, hypodermic injection of pituitrin, and intravenous fluids reduced the fall in pressure.

The etiological factors of "Primary Shock" as outlined in standard textbooks do not mention paracentesis of the abdomen. Injuries seemingly not sufficient in themselves to cause systemic symptoms are reported to have produced immediate collapse or even death (Dean Lewis Surgery). Keen's Surgery cites cases of operative procedures about the larynx causing reflex inhibition of the heart and the respiration with collapse and death. The reflex theory of "pleural shock" is frequently advanced in current writings. Possibly collapse during paracentesis of the abdomen before much fluid is withdrawn belongs to this type of reflex reaction.

V. ATTENDANCE REPORT

Fall Quarter
Oct. 1 - Dec. 17, 1931

Anderson, Arnold	7
Beard, Archie	1
Berkivitz, N. J.	3
Blumstein, Alex	10
Boyden, Edward	7
Boynton, Ruth	5
Carlson, Herbert	6
Chunn, Stanley	11
Cranston, Robert	8
Creevy, Donald	1
Cole, Wallace	1
Cottam,	8
Diehl, Harold	8
Dvorak, Harold	11
deBerry, Ellet M.	2
Erickson, Lester	11
Engle, Rudolph	6
Exner, Frederick	11
Ellis, Ralph	6
Fallon, Madge	9
Fisher, L. C.	11
Fjelstad, C. Alvord	1
Gray, Royal	4
Hansen, Arild	11
Hanson, Cyrus	9
Hesdorffer, Meredith	9
Hilleboe, Herman	10
Hudson, George	8
Hutchinson, C. J.	3
Jacobi,	4
Johnson, Richard	10
Kertesz, George	5
Kvitrud, G.	10
Lane, Laura	7
Lang, Leonard	6
Litzenberg, J. C.	2
Lynch, Francis	7
McKinlay, C. A.	4
McQuarrie, Irvine	8
Madden, John	8
Manson, Melville	7
Mead, Charles	9
Mickelson, Henry	3
Moen, Joseph	11
O'Brien, Wm.	11
Pearson, Bjarne	11
Peyton, Wm.	8
Phelps, Kenneth	1
Raal, Robert	11
Randall, Osmer	11
Reimann, Hobart	4
Rigler, Leo	8
Sagel, Jack	10
Scammon, R. E.	1
Scott, Horace	6
Schwegler, Raymond	6
Shimonek, Stewart	9
Stenstrom, K. W.	9
Stewart, C. A.	5
Stoesser, A. V.	11
Thompson, Willis	9
Ulrich, Henry	9
Vogel, Howard	11
Waldron, Carl	6
Wangensteen, O. H.	10
Watson, Bernard	10
Weisiger, Ross	10
Wetherby, Macnider	9
Wethald, Anton	1
Youngs, Nelson	7

Summary of Number od Deaths, Autopsies, Percentage.
July 1, 1930 - Dec. 31, 1930 -- July 1, 1931 - Dec. 31, 1931

	Deaths		Autopsies		%	
	1930	1931	1930	1931	1930	1931
July	30	36	27	30	90	33
August	33	28	24	22	73	79
September	31	28	21	22	68	79
October	32	35	27	29	84	83
November	21	25	20	20	95	80
December	39	18	27	15	70	83
	186	170	146	138	79	81

Autopsy Average

July, Aug. Sept. 1931 82- %
Oct., Nov., Dec. 1931 82+ %

Thank you, until three months from now, thank you.