

# Case Analysis

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## I. CASE ANALYSIS

### CASE 1

Case is white male, 67 years old, admitted to University of Minnesota Hospitals 6-21--- and expired 7-13---- (22 days).

#### Rheumatism

15 yrs. before admission - First attack of "inflammatory rheumatism". For next 15 years, during cold weather had pain, swelling and stiffness in all joints.

6 yrs. before admission - Symptoms have become so severe that patient had to remain in bed during acute periods. Attacks accompanied by high fever and all joints become red, swollen and hot. Teeth removed.

#### Hernia

4 yrs. before admission - Right inguinal hernia repaired. Infection developed. Orchidectomy done. Arthritis worse.

1 yr. before admission - Arthritis markedly aggravated. In bed for period of 5 weeks.

May 19-- - Another attack. All joints painful and lower extremities swollen. Feels as if he has ground glass within joints. Completely bedridden.

#### Past history

Had pleurisy, pneumonia, frequent colds and sore throat.

June 19-- - Admitted.

#### Physical examination

Temperature 99.2, pulse 84, respirations 20. Head and neck - normal. Thorax - barrel-shaped, expansion equal. No rubs. Resonance normal, auscultation without note. Heart - blood pressure 138/78, tones somewhat faint, no murmurs, normal rhythm and rate. Abdomen - obese; right inguinal scar. Joints - on inspection negative except for right knee which is slightly enlarged. There is marked limitation of motion in wrists, shoulder, ankle, knee and less so in other joints; on motion, considerable creaking and roughness of movement present.

#### Laboratory

Urine - faint trace of albumin, few leucocytes, occasional red cell; repeated twice and showed 1+ albumin once. Blood - hemoglobin 80%, leucocytes 5,850, neutrophils 62%, lymphocytes 36%, eosinophiles 2%. Wassermann - of blood, negative. X-ray - heart is somewhat displaced toward left and appears a little enlarged. Pleural effusion on left side obscures size and outlines of heart. Lung parenchyma not sufficiently well visualized to permit diagnosis. Examination of bones shows marked loss of articular cartilage characteristic of chronic atrophic arthritis. Fluoroscopic examination of diaphragm - shows shadow previously reported as fluid to be an unusually high left diaphragm. This moves slightly with respiration. Heart somewhat retracted into left chest.

#### Progress

Patient placed on tincture digitalis 2 cc. once daily. In addition, he received intravenous injections of streptococcus vaccine. During stay in hospital, he received 3 injections at intervals of one week, increasing the dosage by one million each injection.

7-8-- - Appears much more feeble. Sits up in bed only infrequently. Condition of joints appear about same.

#### Sudden Exitus

7-13-- - For the past 2 days, pulse has been very rapid. Twice it has risen to 140. No complaints other than general malaise. No flutter heard. Heart tones - faint and regular. Electrocardiogram and basal metabolic rates have been advised but because of patient's condition could not be taken. 1 P.M. - Was being examined, apparently no change observed. After completion of examination, patient suddenly gasped for breath and became extremely cyanotic. Caffeine and adrenal given without response. 1:10 P.M. - Expired.

#### Diagnosis

Yours:

Ours:

pessary #2 inserted. Discharged and advised to return in one week.

6 Months Later - Same

5-25- -- Readmitted. Complaints same as on previous admission. Physical examination - same as before. Laboratory: Urine - specific gravity 1.030. Blood - hemoglobin 93%, leucocytes 7,800, neutrophils 49%, lymphocytes 45%, M 1%, eosinophiles 5%. Advice: suspension of vagina to abdominal wall.

CASE II

Case is white female, 46 years of age, admitted to University of Minnesota Hospitals 11-17- -- and discharged 11-23- -- (6 days); readmitted 5-25- -- and expired 6-4- -- (10 days). Total stay - 16 days.

Prolapse of Uterus

10-yrs. prior to admission - Having backache which physicians thought was due to prolapse of uterus. Suspension of uterus. Practically no relief.

8-yrs. prior to admission - No improvement; uterus removed. Still continues to have pain but less severe.

7-yrs. prior to admission - Operated upon for cystocele, procedure not successful. Symptoms minimal, but has pain in back when working hard. Chief complaint is "bladder falls down" and she has to keep pushing it up.

Admitted

11-17- -- Admitted to University of Minnesota Hospitals. Physical examination: No special notes except pelvic examination - no uterus present; prolapse of anterior vaginal wall; evidence of previous repair of pelvic floor; considerable scarring of perineum. Laboratory: Urine - trace of albumin, specific gravity 1.022. Blood - hemoglobin 92%, leucocytes 12,650, neutrophils 68%, lymphocytes 25%, M 5%, eosinophiles 2%.

Acute Illness

11-18- -- - Sore throat. Temperature 104, pulse 120. Had been feeling well until late this afternoon when she developed quite severe abdominal pain and backache. Vomited brown material.

11-23- -- - Feels well. Pulse and temperature normal. Round Smith-Hodge

Operation

5-27- -- 8:55 A.M. - To operating room. Suspension of vaginal stump made to peritoneum of anterior abdominal wall. Dense adhesions of bowel, right lateral and anterior abdominal wall freed during operation. Ovary removed - pathological diagnosis - fibroma. Returned from operating room in good condition. 2000 cc. normal saline, subcutaneously, given.

Post-Operative Course

5-28- -- Routine instillation of 1 oz. silver nitrate, strength 1:3000 in bladder. Temperature 100.6. Pulse 72. Respirations 18. Morphine sulphate gr. 1/4 for pain and restlessness.

5-29- -- Somewhat nauseated. 2000 cc. normal saline given subcutaneously. Emesis of small amount of watery fluid.

5-30- -- Has hiccoughs. Several emeses of 150 cc. each. Gastric lavage, 500 cc. retention.

Intestinal Obstruction

6-1- -- Surgical note: No abdominal pain. Abdomen definitely distended but no rebound tenderness noted. No definite muscular rigidity. Auscultation shows moderate amount of peristalsis with definite metallic tinkles heard repeatedly in right upper quadrant. Lower abdomen quiet. Percussion shows marked tympany over entire abdomen. X-ray of abdomen: flat plate of abdomen not entirely satisfactory but it shows numerous dilated loops of bowel. Little or no evidence of gas in colon. Appearance fairly characteristic of intestinal obstruction. Conclusion: Intestinal obstruction.

Chest Lesion

X-ray of chest: heart slightly displaced into left chest. Appearance is exaggerated by rotation toward left. Considerable density in right upper lobe which is most suggestive of a tuberculous lesion. Conclusions: possible tuberculosis, right upper.

Treatment

Blood chlorides 530 mgm. 500 cc. 10% glucose given intravenously. Temperature 104. Patient very restless. Blood pressure 82/60. Intravenous injection of 500 cc. acacia given. Blood pressure 80/60 before intravenous, 108/80 afterward. Complains of pain in legs and dizziness. Caffeine sodium benzoate gr.  $7\frac{1}{2}$  given every half hour (five doses), 300 cc. citrated blood given intravenously. 8 A.M. - gastric lavage, warm and cold water, 100 cc. retention. 11:40 A.M. gastric lavage, warm and cold water, 150 cc. retention. 1 P.M. - 2500 cc. normal saline given subcutaneously.

Nasal suction started

6-2- -- Morphine sulphate gr.  $\frac{1}{4}$  given. Nasal suction continued. 400 cc. gas drainage, 1000 cc. of fluid drainage. 500 cc. normal saline with 10% glucose given. 350 cc. whole blood given intravenously. Morphine sulphate gr.  $\frac{1}{4}$  caffeine sodium benzoate, gr.  $7\frac{1}{2}$ . Talks irrationally.

Exitus

6-3- -- Put in restraints. Temperature 105.4. Tepid sponge given. Subcutaneous normal saline, 3000 cc. 80 cc. gas bacillus antitoxin (polyvalent). Intravenously. Breathing quite labored.

6-4- -- Still in restraints. Temperature 105.8. 4 A.M. - Temperature 106.8. 12:30 P.M. - Temperature 107.2. 2:10 P.M. - Expired.

Diagnosis

Yours:

Ours:

CASE III

Case is white male, 74 years old, admitted to University of Minnesota Hospitals 6-19- -- and expired 6-20- -- (1 day).

Stomach and Bowel Trouble, 30 Years

Stomach trouble consisted of dull pain just below umbilicus, no relation to meals. Duration from few minutes to few days and recurred at intervals of one to two or three weeks. No relief by food or soda, only by cathartics and bowel movements. During this 30 year interval, there were several very severe attacks.

January (year of admission) - Another severe attack, relieved by enema.

June 17 (year of admission) - Awakened by severe pain in abdomen. Did not eat, was nauseated and vomited several times. No bowel movement. Took cathartics without effect.

June 18 - Pain continued. Somewhat improved since yesterday. No bowel movement. This attack is said to be similar to others in that same type of pain is present and gas seemed to accumulate in bowel.

June 19 - No relief. Has taken cathartics each day, without no bowel movement. Admitted.

Past History

Stroke in January of year of admission. Legs paralyzed and numbness in right arm which persisted for about 6 weeks and from which he has apparently recovered. Trouble in starting urination which has been present for some time. Accompanying this there is nocturia.

Physical Examination

Apparently in great distress, complaining of abdominal pain and distention. Respirations shallow and rapid; face flushed. Head - essentially negative. Slight exaggeration of breath sounds, normal resonance, no rales. Heart - total irregularity, no murmurs, blood pressure 145/78. Peripheral vessels markedly sclerotic. Abdomen - distended and tender in lower quadrants, slight generalized rigidity, marked rebound tenderness, reducible bilateral inguinal hernia. Rectal - prostate slightly enlarged. Following catheterization, 400 cc. clear urine obtained. Feet and ankles cyanotic and cold. Multiple scars over lower extremities, no edema. Reflexes - normal. Skin clammy.

Laboratory

Urine - cloud of albumin, many hyaline and granular casts, occasional erythrocytes and leucocytes. Blood - hemoglobin 115%, erythrocytes 5,200,000, leucocytes 17,850, normal differential. X-ray - normal urinary tract; chronic hypertrophic arthritis of lumbar spine; marked gaseous distention of bowel; diffuse dilatation of aorta; old tuberculous lesion of right apex; pulmonary congestion; normal colon after barium enema.

Progress

Temperature varies from normal to 99.2, pulse 75 to 110, respirations 22 to 16. Patient expired on day after admission.

Diagnosis

Yours:

Ours:

II. ANNOUNCEMENTS1. INTERNS SCORE AGAIN!!

"13 - 0" Touch-Ball score against the Eagles. Our team was augmented by none other than Ray Jensen, the "Sleepy Eye Flash".

2. HOMECOMING TEA

Nurses' Hall, Sunday, November 4th, 3 to 5 P.M. Everyone welcome. This marks the 25th anniversary of the School of Nursing.

3. TRANSFER OF PATIENTS

When a patient is transferred to the Ambulatory Ward but stays on the same service, be sure the transfers read correctly, e.g.: Transfer of Mary Jones to Ambulatory Ward, Dermatology Service. It is confusing to know whether both floor and service are changed or just floor. Thank you!

4. CENTRAL SOCIETY FOR CLINICAL RESEARCH

Seventh Annual Meeting, will be held November 2d and 3d, 1954 at the Medinah Club, 505 North Michigan Ave., Chicago. This group of seriously minded young clinicians will present their research problems in a two-day session. Minnesota is well represented. The eye-opener for the first day is "An Introduction to the Subject of Bone Marrow (Sternal) Biopsies" by E. L. Tuohy of Duluth. Richard Johnson will present "The Absorption and Excretion of Calcium and Phosphorus in a Patient with a Colostomy and Ileostomy." Harry Gerting and John F. Briggs will tell about "The Influence of Gastric Lavage upon Familial and Non-familial Erythremia." C. J. Watson, if time permits, will read his paper on "A Study of the Formation and Fate of the Derivatives of Bilirubin in Man." To Be Read by the Title Only are the following: "Leucocyte Counts in Pregnancy," J. B. Carey and J. C. Litzenberg; "Dinitrophenol - a Statistical Survey Based on One Thousand Inquiries Concerning its Biological Side Effects," Edgar T. Herrmann; "Calcium and Phosphorus Balance Studies in Two Cases of

Myeloma," Richard M. Johnson; "The Influence of Variations of Food and Water Intake upon Feces Collected from an Iliostomy," Richard M. Johnson; "The Treatment of Minimal Progressive Pulmonary Tuberculosis by Collapse Therapy," J. Arthur Myers; "The Pathogenesis and the Expectancy of Recurrences in Juvenile Rheumatism Treated Non-specifically," M. J. Shapiro; "A Study of Jaundice of Various Etiology with the Aid of a Simplified Method for the Quantitative Estimation of Urobilinogen in Urine and Feces," C. J. Watson; "Changes in the S-T Level of the Electrocardiogram after the Use of Vasodilators as a Test for Impairment of the Coronary Circulation," Thomas Ziskin.

The Mayo Clinic is represented by 16 clinicians. The most unusual title is "Facts on the Heart in Texas." We are proud of our representation on the program; the organization is to be congratulated for its wise selection of speakers.

#### 5. WAIL

The following letter from the mail bag may be of interest: "My problem may seem trivial to you as I am not in the danger of dying or even sick. I am a girl of 19 and wouldn't be bad looking if it were not for my face for I have acne. It is the worst case I have ever seen and I have seen plenty. My complexion has all the charm of freshly ground hamburger. I dread to meet people as I do not want to make any more hypocrites in the world. Some might even say "I am glad to meet you." I need help badly. If possible, send me something which will cure me before Thanksgiving. The hours I have spent crying over this situation far outweigh the time I have spent in laughter."

This illustrates one of the things which come up in practice. One of our regular followers said that he thought our bulletin was probably worth the postage but he was not sure. He said that we were just as impractical in the selection of our subjects as any Medical Journal. None thought it worthwhile to discuss the problems of daily practice.

#### 6. COMMUNITY FUND

The solicitors will be around the week of November 11th for the Minneapolis Fund Drive. A definite quota has been set for the Hospital. Each year we fail by a greater margin to meet our quota. The number who give grows less, the amount gets smaller. The number who give at home is amazing. If possible, make up your mind to give us something if you have never given before. If you have given before, please give more this time. If you give at home and the solicitor for your district is not well-known to you, help us by giving here. It is to be remembered that there is no intention to support through federal funds the agencies financed by private donations.

#### 7. FACTS ABOUT THE GREAT AND NEAR-GREAT

At a recent meeting of the Redwood Falls P.T.A., excited bystanders were heard to point out Alex Blumstein as Minnesota's Nobel Prize Winner. They probably confused him with Murphy of Harvard....Frederick L. Schade, intern on Admissions, is a former calf buyer in South St. Paul. He graduated from the School of Business '25 with a B.A. degree....Robert Tenner, Minnesota's star end on the Football Team, is the only medic on the regular squad. He is said to seldom go to regular practice but gets his assignments and works them out after hours....George Hauser, line coach extraordinary, a former graduate in Forestry, interned at our Hospital last year and is now on the Student Health Service staff...William T. Peyton is the author of the sound effects for the radio program sponsored by the Minnesota Daily over Station WLB this week. His particular part is concerned with the removal of the 185 lb. tumor from the 65 lb. woman in Texas. (The weights may not be exactly right.)....Wallace Ritchie is busy these days preparing for his marriage to Alice Ransom Otis of St. Paul, Saturday evening, the tenth of November, at half after eight o'clock, at the House of Hope Presbyterian Church. He had a haircut yesterday. They will spend their honeymoon in Florida. Wally is the third

male representative of the Ritchie family to be represented on our staff as his grandfather was our second Dean. His sister Priscilla is a senior in Medical Technology....The stenographers are now required to make a monthly report of everything they do each day.

### 8. SPINAL FLUID PROTEIN

The laboratory is now ready to do quantitative spinal fluid protein tests. The method which has been adopted is the one used at the St. Peter Asylum and is also identical with that developed by Dr. Cavette. Essentially, the method consists of balancing the protein in the spinal fluid by the colorimeter with a known amount of thyrosin. The normal quantity is 35 mg. or less. Two cc. of spinal fluid is necessary except when the fluid contains an abnormally large amount of protein. The average spinal fluid which comes to the laboratory is not sufficient to carry out all the routine procedures and also the quantitative estimation; therefore, it will be necessary to send more spinal fluid than is being done at present. The laboratory wishes to know whether the staff prefers a quantitative protein estimation or the colloidal gold curve when both tests cannot be done because of insufficient fluid. The test is new in our hands and we ask the cooperation of the staff in keeping a check on the results.

### 9. CORRECTION

Add O. H. Wangensteen's name to list of those who discussed "Lipomas" (Vol. VI, No. 4).

### 10. SOUND MOVIES

Title: The Earth's Rocky Crust, - by University Film Foundation, Harvard University.

One reel.

### III. STAFF MEETING

Date: October 25, 1934

Place: Recreation Room,  
Nurses' Hall

Time: 12:15 to 1:15

Attendance: 109

Discussion: J. C. McKinley  
C. J. Watson  
J. C. Litzenberg  
I. McQuarrie  
A. Baker  
H. A. Reimann  
F. W. Lynch

Theme: J.C.McK.: I was rather interested in the note that the neurological examination in the first case was essentially negative. (Dr. Blumstein: "That was the first neurological examination). As I see it this is a bilateral subdural hemorrhage covering both temporal lobes. I suppose that involvement in motor areas on both sides, is more or less present too. One would expect Babinski signs to be positive in cases of this sort, although that depends upon amount of encroachment and where encroachment is on the motor area. If this is a pure motor lesion ankle clonus fits in with site of lesion. Absence of cremasteric reflexes is alright. Pupils -- one really can't correlate with anatomical findings.

C.J.W.: I believe you can say that signs of blood regeneration are absent in the second case.

C.J.McK.: I wonder how complete a neurological examination was done in Case II. Certainly we would expect more findings than were found here. Reasonable to suppose headache began with subtemporal hemorrhage described pathologically which was not suspected clinically. Patient was in bad shape the day spinal puncture done, had Cheyne-Stokes respiration. At 3:05 respirations shallow and expired one hour later.



Typical sequence of spinal puncture influence. At autopsy conus along with clot found. Do spinal punctures in cases of increased intracranial pressure, and from time to time we will get in trouble. I have great respect for lumbar puncture in cases of increased intracranial pressure. If patient has increasingly severe headaches and signs of pressure go awfully slow before inserting needle into spine.

More has been said than I know already about hemorrhage in blood diseases. I think Dr. Blumstein should be complimented for his presentation. Of course, the common causes of cerebral hemorrhage are such things as trauma, cerebrospinal arteriosclerosis, syphilis, and infectious diseases. We often call an apoplectic individual a cerebral hemorrhage when actually incidence of hemorrhage in individuals with hypertension is low as it is usually related to thrombosis. Clinically, we have given up trying to differentiate between thrombosis and hemorrhage in the brain, usually wrong in the differential, although we follow all rules in the differential picture. I think last year we talked over in this group hemorrhages that occur in young people. Even yet we have to admit that group is largely atypical so far as putting our finger on the cause is concerned.

Syphilis certainly causes hemorrhage. I have seen a few cases of hemorrhage in brain with syphilis. In neurological literature we find statement fair percentage of paretics die of hemorrhage. Subdural hemorrhage may be notoriously slow.

C.J.W.: I was very much interested in first case. Unfortunately in this patient we could not get blood to transfuse him when we needed it. As a result he undoubtedly went longer than he should without blood. Possibly if we could have given him as much blood as we wanted to, exitus may have been avoided. Was the positive Wassermann related to thrombocytopenia? Splenectomy considered. We wanted to make certain that man had syphilis. We had no intention of undertaking splenectomy at the time because it seemed to be consensus of opinion that it was not indicated. There is good evidence that platelets are intimately

ly concerned in normal blood clotting as well as the capillaries. Spontaneous hemorrhages in systemic types are due to reduction of platelets, capillary injury and in some cases capillary overfilling. Thrombocytopenia may be primary or secondary. Severe infection and leukemia character of leukocytosis helps greatly in separating conditions from primary type. Aplastic anemia may show high grade of thrombocytopenia. Diffuse hemorrhagic disease can take place when there is toxic capillary injury, especially in rheumatic disease. Platelets normal and capillaries injured so that hemorrhages occur. Hemorrhages may at times occur from overfilling of capillaries. Impressed by extreme overfilling of vessels. Recently saw patient with this disease who came in with tremendous hematoma, which came on suddenly. Platelets elevated (580,000).

Platelets transfusion can be done by taking plasma and transfusing it. Beneficial in cases when severe anemia is not present.

J.C.L.: Intracranial hemorrhage in newborn as a rule does not fit in with picture we are trying to visualize today. However, we must remember that not all hemorrhage in the newborn is due to injury, although it usually is. Dr. O'Brien did postmortem examination of baby delivered by cesarean section (woman had toxemia; operated upon because she had had myoma in pelvis which prevented delivery). Diagnosed dead fetus before delivery. Post done and cerebral hemorrhage found. Baby delivered without any possible injury. No pressure upon head at any time. Hemorrhage in the brain (petechial), and abdominal viscera. That was not birth injury; perhaps "unknowable" something that causes hemorrhage in toxemia. Hemorrhages in newborn may be due to infection which is so rapid that baby in one case died 36 hours after delivery. Had 2 such cases, bacillus Friedlander found in culture of both cases. While intracranial hemorrhages in the newborn may be improved by good obstetrics it certainly will be most improved by better delivery of babies by breech.

I.McQ.: We still see hemorrhagic

disease of the newborn but not very often. I am interested in the fate of the blood resulting from meningeal hemorrhage. Is it absorbed or organized? If organized, could it be responsible for some epileptic seizures?

J.C.McK.: While abroad, I saw surgeons operate for adhesions in epilepsy. No personal experience?

A.B.: Blood has been injected in the subarachnoid space. No adhesions formed in animals. I studied one case of purpura with hemorrhages in brain. Hemorrhages were not from large vessels, but diffuse capillary hemorrhages.

H.A.R.: One small point: All cases of purpura hemorrhage do not die. Following splenectomy they may recover completely.

F.W.L.: We have seen a case of generalized Herpes Zoster associated with leukemia. The incidence of Herpes Zoster is small as compared to other neurological findings in leukemia. In one case of localized Herpes Zoster hemorrhage was found in the associated posterior ganglion.