



Case Analysis

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I. CASE ANALYSIS

Not all the available information is given -- enough is presented to establish or suggest the diagnosis! Write down your own diagnosis in the space after each case.

CASE I

Case is 16 year old, white girl admitted to University of Minnesota Hospitals August 30, ---- and expired September 5, ----.

Headache

Family History

October (year prior to patient's admission), aunt became ill. Had very marked "anemia" and convulsions. Died in approximately one month.

November, sisten (age 5) also became anemic, weak, developed convulsions and died within short time. Diagnosis of Bright's disease made.

June, mother became ill with anemia and convulsions and died within a short time.

Headache, sore throat

7-12- - Severe headache and sore throat which lasted about one day. Following this, patient was weak.

Gastro-intestinal Symptoms

8-1- - Suddenly seized with acute cramps in lower abdomen which persisted for several minutes, causing patient to double up and cry out with pain. Vomited during attack. In following week, had five similar attacks.

Pain in Extremities

In subsequent week, was able to be up and about. (Complained of pain in feet and legs and extreme nervousness).

Stupor

Taken to a hospital but did not improve. Became irrational, incontinent and gradually sank into semiconsciousness. Could, however, be aroused at times.

Admitted, meningeal signs

8-30- - Admitted to University of Minnesota Hospitals. General physical examination - abdomen tender and rigid, palpation difficult. Neurological - lying on back with elbows abducted, forearms flexed and pronated, wrists flexed away from body at times. At times, moves arms slightly, also right leg. Tremor of upper extremity on active movement. Semi-stuporous, understands some things when spoken to. There appears to be double ptosis although she can open eyes. Difficult to test movements of eyes because of lack of cooperation but there is no marked paralysis.

Has mask-like expression. No apparent paralysis of VII nerve. Tongue not projected on command. Considerable spasticity of upper extremities. Some resistance on attempt to move lower extremities and this apparently causes some discomfort. No special tenderness of calf muscles. Can move toes and feet to some extent. Deep reflexes of upper and lower extremities exaggerated. Bilateral short patellar clonus. No Kernig. Considerable stiffness of neck. Abdominal reflexes present but owing to tenseness of muscles are difficult to interpret.

Laboratory

Catheterized urine specimen - slight trace of albumin, occasional granular casts, few leucocytes. Blood - hemoglobin 45%, erythrocytes 2,420,000, leucocytes 18,600, neutrophils 88%, lymphocytes 7.5, eosinophiles 5%, basophiles 4%. Blood sugar - .114%, creatinine - 2.35 mgs., blood urea nitrogen 39.18 mgs. Blood - Wassermann - negative. Spinal fluid - pressure not increased, clear, cell count 10, Nonne slightly positive, colloidal gold negative, Wassermann positive.

X-Ray

Skull - single plate shows no evidence of pathology.

Diagnosis?

Correct diagnosis was suggested at this point. The course and postmortem

examination proved this diagnosis.
Expired on the 6th day in the hospital.

Your diagnosis

Our diagnosis

CASE II

Case is 40 year old, white woman admitted to University of Minnesota Hospitals May 2, ----, expired May 22, ---- (20 days).

Past history

Well except for bleeding hemorrhoids for about 3 years prior to onset of final illness.

Family and marital history

Not significant.

Pain in lower abdomen, temperature 106°

March (one year prior to admission), began having pain in lower abdomen which persisted for about 8 days, accompanied by temperature which ranged up to 106°. On one occasion during this 8 day period, pain was extremely severe, limited to lower abdomen, and accompanied by nausea and vomiting. Kept in bed, heat applied to lower abdomen, and gradually improved.

Metrorrhagia

June - Following overwork due to illness of daughter, patient became very nervous, had profuse menstrual flow lasting about 3 weeks. Examined by a physician who told her she had "inflammation of uterus." Hot applications applied. Recovered in about 2 weeks and was well except for weakness.

Lower abdominal pain

February (year of admission) - Again having pain in lower part of abdomen, particularly on left side; pain persisted for 4 days.

Chills and fever

At end of first week of this attack, developed chills, fever, hot flashes and weakness. Urinary frequency and burning for a short time. From this time on, there was persistent pain in lower abdomen, fever and chills.

April - Awakened in night with severe pain in abdomen just to right of umbilicus, radiated somewhat to right shoulder and back. No nausea or vomiting but marked anorexia. Diagnosis of gall-bladder disease made.

Continued fever and chills

May 2 - - Admitted to University of Minnesota Hospitals. Has continued to have fever, chills, marked weakness and loss of weight. Pain still present, limited chiefly to lower abdomen. Physical Examination: Temperature 103°, pulse 120, respirations 28. Appears very anemic, dehydrated and emaciated. Blood pressure 116/68. Head, neck and thorax - negative. Abdomen - slight pain on deep pressure in right upper quadrant, no rigidity or palpable masses, liver and spleen not palpable, very slight tenderness on pressure over lower abdomen. Pelvic - cervix hard and fixed, practically immovable; corpus in anterior position, displaced to right; mass in left adnexal region and smaller one on right side, both masses being fixed to the lateral pelvic wall and vagina.

Laboratory

Urine - (catheterized) trace of albumen, clumps of pus, occasional erythrocytes, no casts. Blood - hemoglobin 33%, erythrocytes 2,000,000, leucocytes 16,900, neutrophils 79%, lymphocytes 21%.

Temperature

5-4- - Temperature has shown daily rises up to 104 with evening drop to 98. Pulse ranged between 75 and 110.

Respirations 20 - 26.

Your diagnosis

X-Ray

Urinary tract: conclusion - negative.

5- 8- - Gall-bladder - negative.
Good filling and emptying after fatty meal.

Consultation

5- 9- - Medical - some impurities in heart tones, no good evidence of endocarditis. Skin and mucous membrane free from petechiae. Chest negative. Spleen not palpable. No abdominal masses although there is increased resistance in right upper quadrant. Blood culture - negative. X-ray - Chest- shows right diaphragm held somewhat higher than normal. Diffuse increase in bronchovascular markings throughout both lungs, suggesting an upper respiratory infection. No definite evidence of pneumonia.

Fever continues, fluctuating between 96.4 and 104.

5-10- - Blood culture -negative. Blood - wbc's 22,000. Urine - continues to show pus.

5-16- - Fluoroscopic examination - right diaphragm still markedly high and above it a definite haziness and some obliteration of the costophrenic sinus. Liver is low and diaphragm immobilized. Temperature shows fluctuation as high as 105.6, pulse ranges up to 140, respirations to 44.

Operation

9-16- - "Operated upon trans-pleurally on right side with resection of 9th rib and quantity of thick pus was drained from liver." Cultures of pus - show staphylococci.

5-22- - Septic condition continues unchanged. Expired.

Summary

1. 3 months, chills and fever.
2. Pelvic inflammation - probable.
3. Subphrenic (?), Liver (?) abscess.

Our diagnosis

CASE III

Case is white male, 37 years of age, admitted to University of Minnesota Hospitals February 19, ----, expired April 14, ----.

Past history

Whooping cough, chickenpox and mumps.

Asthma - 7 years

Seven years prior to admission, developed influenza. Following this, had asthmatic attacks which consisted of cough and inspiratory difficulty. Wheezing in chest from time to time with some expectoration. No increase in severity of symptoms as time progressed. Attacks usually brought on by exertion. No seasonal variation.

Headache and epilepsy - 2 years

Two years prior to admission, developed headaches which were very severe and persisted for a few weeks. From this time on, had recurring attacks of severe headaches which were generalized except for increased severity over left frontal region. About two months after onset of headaches, developed first epileptiform seizure. These spells came on with sparks in front of left eye. Became unconscious, had tonic and clonic contractions, frothed at mouth, and was incontinent. Following seizure, which lasted but a few minutes, slept soundly for 2 to 3 hours.

Edema - 1 Month

One month prior to admission, developed edema of feet. Throughout this period of time, lost weight and strength.

2-9- - Admitted to University of Minnesota Hospitals.

Physical Examination

Poorly nourished, in bed in half reclining position, with difficulty in breathing. Mouth - slight redness of pharynx. Enlarged submaxillary lymph nodes. Chest - marked Harrison's groove, equal expansion, hyperresonance on percussion; inspiration prolonged; wheezy at base; rought and rumbling elsewhere; whispered voice not increased; no fine rales or friction rubs. Apex beat inside mid-clavicular line. Heart borders normal, no murmurs, regular. Blood pressure 154/124. Slight rigidity over epigastrium, liver edge below costal margin, firm and smooth. Spleen not palpable. Tenderness in epigastrium. Marked edema of feet. Slight edema of legs below knees. Reflexes normal.

Examination by Medical Consultant

Using accessory muscles in inspiratory phase of respiration; clavicles very prominent; upper part of chest moved up while costal margins sank in, giving see-saw motion. Right chest moved slightly more than left. Lung borders at 6th rib in axillary lines; below 8th dorsal spine, percussion note dull; above and below roots of both lungs, breath sounds rather distant; while over this area, inspiration harsh and fine rales and rhonchi heard. Small umbilical hernia present. Lips, finger nails and tongue cyanotic. Fundi negative.

Laboratory

Urine - specific gravity - 1020 to 1030, sugar and albumin negative, occasional leucocytes. Blood - hemoglobin 105%, erythrocytes 5,250,000, leucocytes 11,500, neutrophils 90%, lymphocytes 10%. Spinal fluid - slight increase of pressure and cell count of 36. Stools - one positive benzidine reaction. Sputum - mucopurulent and tenacious. Blood

Wassermann - negative. Vital capacity - 2100 cc. on February 17; 1500 cc. on February 23. Pleural fluid - no tubercle bacilli, many eosinophils. Sputum at other times contained numerous eosinophils.

X-Ray

February 20 - Plates of chest - lung margins overlapped the heart; evidence of collection of fluid in both sides; extreme adhesive pleurisy with interlobar thickening and adhesions above diaphragm. Extensive mottling of parenchyma of lung with numerous areas of rarefaction, characteristic of multiple bronchiectasis, with cavitation and probable abscess formation. In region of left border of heart, there is a large area of decreased density surrounded by a capsule; this probably represented a small abscess behind the heart; it might have been a small encapsulated area of gas in the pericardium.

March 8 - Increase of fluid in right pleural cavity.

March 19 - Negative stomach and duodenum, hydropneumothorax on left side, hydrothorax on right side.

February 16 - Plates of sinuses showed complete opacity of right maxillary region, diffuse haziness over left side, slight cloudiness in frontals.

Course - Hydrothorax, Cyanosis, Dyspnea, Sudden Death

Systolic blood pressure readings during February - 140 to 130, diastolic 110 to 90.

February 21 - Aspiration of fluid. Apparently provoked epileptiform seizure which corresponded to patient's description of attacks.

February 25 - 2800 cc. fluid removed from right side.

February 27 - 350 cc. fluid removed from left side.

March 10 - 1000 cc. removed from right side.

April 3 - Bilateral taps done; 800 cc. from left, 200 cc. from right. Removal of fluid apparently did not make him very much more comfortable. Cyanotic and dyspneic.

April 8 - Uncomfortable at times. Given luminal when he felt as if he were going to have an epileptiform seizure. Sinuses washed out several times.

Was fairly comfortable and appeared to be "getting along well" up to April 14 when he felt very dizzy and had marked dyspnea. Breathing became very labored, cyanosis marked. Expired suddenly.

Pulse usually varied from 90 to 120; toward the end became more rapid; occasional elevations to 140. Temperature was normal; occasional rise to 99, once to 100. Respirations varied from 18 to 30.

Your diagnosis

Our diagnosis

II. ANNOUNCEMENTS

1. TODAY

is meeting #172 in the present series, the beginning of the sixty year of this form of Staff meeting. The plan of meeting will be similar to last year. As in the past, the Citizens Aid Society, a group of public-spirited Minneapolis citizens, will sponsor the publication of the Bulletin. The meet-

ings will be held each Thursday during the regular school year from 12:15 to 1:15, unless a more suitable hour can be found. This represents a compromise for the group, i.e., between 12 and 1, and 12:30 and 1:30. Buffet luncheon is served before each meeting. We ask you to take a seat promptly after receiving your lunch and take an active part in the program.

It seems wise to again review the purposes of Staff meetings. According to Parnell and Clough (ref: Bull. of Staff Meet., Minn. Gen. Hosp., vol. 5, No. 1 (Oct. 5), 1933): it is to "(1) stimulate the best in scientific medicine; (2) develop group consciousness; (3) promote cooperation; (4) provide post-graduate education; (5) check incompetency, ignorance and carelessness; (6) promote securing of autopsies; (7) prevent unnecessary surgery; (8) check infections, consultations and end-results of treatment; (9) periodically appraise experience and review critically work of all departments; (10) inaugurate preventive measures against infections and complications.

The program should consist of:

(1) selected cases containing object lessons in improvement of technique of diagnosis or therapy; (2) group studies of various common diseases and injuries with special reference to end-results; (3) discussion of special reports from various clinical and scientific departments; (4) discussion of ways and means of elevating scientific efficiency of hospital staff."

It was found last year that certain types of programs were more instructive than others. The best results were obtained when the departments assigned various members for the preparation of special material. Departmental reports were limited to a few who took an active part and were excellent. More studies of end-results should be included. The custom of inviting outside medical men to discuss various phases of our work meet with approval.

We are trying, today, an innovation in visual education. A large number of

suitable reels are now available. From 5 to 10 minutes at the beginning of each meeting will be devoted to this type of instruction in order to get your reaction. Short presentations of interesting cases are also solicited. Our personal column should be encouraged. If you will tell us of any invitations you have received to address meetings or the publication of your pet idea or honors which have come to you in any form or shape, we will be very glad to tell everyone about it. Do not be backward in getting this material to us. This feature, commonly known as the "Mr. and Mrs. column" is the backbone of every successful publication.

It is not the intention of those who preside at the meeting or work on these programs to monopolize your time with their own ideas. We cordially invite anyone who has something to present to bring it to us, and we will help you get it in shape. Please feel free to agree or disagree with anything which is brought up. The new type of panel discussion which is sweeping the country should be the theme of our meetings. It is not necessary in this approach to a problem to solve it. All should be heard and no one should leave the meeting feeling that he has not had the opportunity to express his own opinions. Our program will drag and be uninteresting until every member who comes to these meetings feels that he is personally responsible for the success of the program.

We thank you for your cooperation and interest in the past. We solicit it most sincerely for the future.

2. SOUND MOVIES

Title: Molecular Theory of Matter by Dr. Hermann I. Schlesinger and Dr. Harvey B. Lemon of the University of Chicago, shown through the courtesy of the Department of Visual Education, University of Minnesota. One reel.

Evidence of molecular activity in gases, liquids and solids is presented

in support of the molecular theory of matter. Animated drawings explain such phenomena as the diffusion of gases, the evaporation of liquids, and the transformation of liquids into solids, in terms of the theory. Among the features of the film are the machine gun illustration of the force exerted by molecules in motion, and the microscopic view of the Brownian movement, direct evidence of molecular motion.

Aim: to present phenomena explained the molecular theory and to illustrate the scientific method.

3. TEA

will be served this afternoon between 3 and 5 P.M. by the student nurses of the University of Minnesota in the lounge of Nurses' Hall. A special invitation is extended to every member of our staff to meet Dean Emeritus Goodrich of Yale who is Visiting Professor of Nursing at Minnesota this quarter. Those of us who have had an opportunity of a "preview" insist that you are missing a rare treat if you do not know Dean Goodrich.

The Dean of Nursing Education and Organization in America, and with it all a most charming person, is a very slight estimate of Dean Goodrich's ability and personality.

Toastmasters, presiding officers, and after dinner speakers had better look to their laurels for there is real competition in town.

We hope you will all come and meet her today.

4. INTERNS

We welcome (at this time) the new interns and those who are assuming new serviced. The backbone of every good hospital service is a good intern staff. In the past, we have had good groups with us, and we feel confident that the new crowd is going to live up to Minnesota ideals and traditions. They come from many schools and bring to us new ideas and ways of doing

things. We are asking each one to stand as we call his name and to remain standing until the list is completed. We hope you will have a successful year, and we especially invite you to come to the staff meetings and take an active part.

Interns:

Adams, Carolyn Gaston - Washington, D.C.
B.A. - Barnard College '30.
College of Phys. and Surg. '34.
M.D. - Columbia.
Pediatrics.

Adams, John Milton - La Moure, N. D.
B.S. - Princeton '29.
Polyclinic Hosp., night service,
8 mo. '32-'33.
M.D. - Columbia '33.
Intern on Pediatrics, New Haven,
'33-'34.
Surgery.

Ainsworth, Roy Chapman - Madison, Wis.
Research Asst. Med. Bac., Wis.,
'30-'31, '31-'32.
B.S. - Wisconsin '31.
M.S. - Wisconsin '32.
M.D. - U. of Rochester, N.Y. '34.
Surgery.

Bowman, Milton B., Jr. - -
M.D. - Tulane University.
Surgery.

Cook, Malcolm M. - Macon, Georgia.
B.S. - Emory Univ. '30.
M.D. - Emory Univ. '33.
Medicine.

Ellinger, George Frederick - Mount Vernon,
Washington.
B.A. - U. of Min. '30.
Jr. Internship N.P.B.A. '32.
Jr. Internship, Glendive, Mont.
'33.
B.M. - U. of Minn. '34.
Medicine.

Gerdes, Maude - Eureka, S. D.
B.A. - U. of Minn. '25.
B.S. - U. of Minn. '28.
B.M. - U. of Minn. '28.
M.D. - U. of Minn. '29.
Intern. Univ. of Minnesota, '30.
General practice, N.D., 3 yr.
Obstetrics and Gynecology.

Iverson, Eleanor - Moorhead, Minn.
B.A. - Concordia College '30
B.M. - Univ. of Minn. '34.
Univ. of Minn. '34.
Medicine.

Jensen, Reynold A. - Minneapolis, Minn.
B.S. - Univ. of Minn.
B.M. - Univ. of Minn. '34.
Pediatrics.

Juers, Arthur L. - Lake City, Minn.
B.S. - Louisville Univ. '28.
M.D. - Louisville Univ. '31.
General rotating internship,
Letterman Hospital, San
Francisco, Cal.
Intern, Urology, Louisville,
'30-'31.
General Practice, Kentucky, 2 yrs.
Eye, Ear, Nose and Throat.

Knights, Catheryn - Minneapolis, Minn.
B.S. - Univ. of Minn. '31.
B.M. - Univ. of Minn. '33.
Medicine.

Lohman, John George -
B.S. - Univ. of Minnesota.
B.M. - Univ. of Minnesota.

Matteson, Collis - Detroit, Mich.
D.D.S. - Univ. of Minn. '34.
Dentistry.

Myrick, John - Providence, R. I.
Ph.B. - Providence College, '27.
M.D. - Georgetown Univ., '32.
Rotating internship, St. Joseph
Hosp., Providence, R.I., 1 yr.
Surgery.

Nash, Leo A. - Chisholm, Minn.
 B.S. - Univ. of Minnesota '34.
 B.M. - Univ. of Minnesota '34.
 Pediatrics.

Nydahl, Malvin J. - Minneapolis, Minn.
 B.A. - Univ. of Minnesota '28.
 B.S. - Univ. of Minnesota '34.
 B.M. - Univ. of Minnesota '34.
 Medicine.

Nelson, James M. - Oklahoma City, Okla..
 B.S. - Univ. of Okla. '32.
 M.D. - Univ. of Okla. '34.
 Surgery.

Okelberry, Alfred M. - Salt Lake City,
 Utah.
 B.A. - Harvard '29.
 M.A. - Harvard '31.
 M.D. - Harvard '34.
 Surgery.

Olson, Stewart - Stanley, Wis.
 B.S. - Univ. of Minnesota '33.
 Sr. Intern, N.P.B.A., Glendive,
 Mont., 9 mos., Sept. '33 to
 June '34.
 B.M. - Univ. of Minnesota '34.
 Medicine.

Peterson, Donald Bullen - Minneapolis,
 Minn.
 B.S. - Univ. of Minnesota '34.
 B.M. - Univ. of Minnesota '34.
 Surgery.

Ripka, Emily - Owatonna, Minnesota.
 B.A. - Univ. of Minnesota '30.
 B.S. - Univ. of Minnesota '33.
 B.M. - Univ. of Minnesota '33.
 Pediatrics.

Ritchey, Sterling - Des Moines, Iowa.
 B.S. - Iowa Univ. '30.
 M.D. - Iowa Univ. '32.
 Rotating Internship, Albany
 Hosp., '32-'33.
 Intern at Univ. of Minnesota
 Hosps. '33-'34. (Medicine)
 Intern at Mpls. Gen. Hosp.,
 July to Oct. '34 (Obstetrics)
 Obstetrics and Gynecology.

Schade, Frederick L. - Minneapolis, Minn.
 B.A. - Univ. of Minnesota '25.
 B.S. - Univ. of Minnesota '31.
 B.M. - Univ. of Minnesota '34.
 Medicine.

Tyler, Stanley - Mound, Minn.
 B.A. - Univ. of Minnesota '30.
 B.M. - Univ. of Minnesota '34.
 Jr. Internship at Univ. of
 Minnesota Hosps., 2 mos.
 (Pediatrics).
 Jr. Internship at Univ. of
 Minnesota Hosps., 9 mos.
 (Medicine).
 Medicine.

5. SHORT COURSE

Nearly 100 physi-
 cians registered at the recent short
 course offered by the Medical School,
 Minnesota State Medical Association
 and the General Extension Division of
 the University of Minnesota. This is
 the second course of the series, the
 first having been held in the spring.
 It is interesting to note that in spite
 of the very short notice many who came
 this time were here in the spring. We
 owe the Alumni Association of the Medical
 School a debt of gratitude for inaugu-
 rating this type of instruction and now
 that the school has taken it over, they
 are going to discontinue their programs.
 We appreciate this courtesy.

Look over the program and you will
 note among others an attempt to present
 a comprehensive unit picture of tuber-
 culosis, diabetes and heart disease.
 This plan deserves special study from
 the standpoint of undergraduate teach-
 ing. We have comprehensive examinations -
 why not comprehensive teaching. The
 committee in charge would appreciate
 any suggestions you have to make in
 regard to future programs. The list
 follows:

Heart DiseaseChairman: F. J. Hirschboeck

Modern Classification	F. J. Hirschboeck
Infections Types	R. A. Johnson
Congenital Forms	M. J. Shapiro
Hypertensive Disease	H. L. Ulrich
Coronary Disease	F. A. Willius
Functional	
Heart Problems	F. J. Hirschboeck

FracturesChairman: A. A. Zierold

Forearm and Hand	W. D. White
Lower Extremity	O. J. Campbell
Hip and Pelvis	E. A. Regnier
Skull	A. A. Zierold
Humerus	R. R. Cranmer
Complications of Fractures	Edw. Moren

TuberculosisChairman: J. A. Myers

Methods of Diagnosis	W. G. Paradis
Nature of Adult Form	E. K. Geer
Nature of	
Childhood Infection	C. A. Stewart
X-ray Demonstration	L. G. Rigler
Ambulatory Treatment	J. A. Myers
Bed Treatment	E. P. K. Fenger
Surgical Treatment	O. H. Wangensteen

CancerChairman: W. A. O'Brien

Radiation Therapy	W. K. Stenstrom
Skin Tumors	H. E. Michelson
General Cases	W. T. Peyton
Genito-urinary Tumors	C. D. Creevy

DiabetesChairman: R. M. Wilder

Significance of	
Glycosuria	B. A. Watson
Nature of Diabetes	R. M. Wilder
Treatment of	
Childhood Form	I. McQuarrie
Exhibit -	
Mayo Clinic	
Treatment in the	
Adult	A. H. Beard
Medical Complica-	
tions	R. M. Wilder
Surgical Complica-	
tions	M. H. Manson.
Clinico-pathologi-	
cal conference	E. T. Bell, etal