January Autopsies

Volume VI Thursday, February 21, 1935 Number 18

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Comment:

Case is that of white male, 65 years of age, admitted to the University Hospitals 12-20-34 and expired 1-7-35 (18 days). Autopsy No. 34 - 37.

Dyspnoea

6- -34 - Patient was evidently entirely well until this time when he first noticed breathlessness on exertion. This gradually became more severe and he began to have severe pain over precordium.

Edema

12- -34 - Developed swelling of lower extremities which became progressively worse up to the time of admission to the hospital.

Admitted

12-20-34 - Physical examination: cyanosis of lips and finger nails, dyspnoea and orthopnoea. Bilateral pleural effusion, particularly on right. Heart - markedly enlarged to left; systolic murmur heard over apex; gallop rhythm. Abdomen - considerable ascitic fluid; liver palpable about 3 cm. below costal margin in right midclavicular line; spleen not felt. Extremities - both lower show marked pitting. Laboratory: Urine - cloud of albumin, occasional erythrocytes, few pus cells. Blood - hemoglobin 83%, leucocytes 8,250, neutrophiles 78%. Wassermann and Kahn tests - negative. Electrocardiogram - left axis deviation and an inverted T in the first lead.

Progress

Thoracentesis performed on right, 2000 cc. slightly turbid, bloody fluid being removed. Given digitalis, ammonium nitrate gr. 30. t.i.d. and sedatives. Given salyrgan to which he responded with an excellent diuresis. His condition gradually improved although he still had Cheyne-Stokes respirations from time to time and was often irrational.

Acute Pain

1-5-35 - 1 P.M. - Suddenly seized with a severe abdominal pain. Shortly afterward, the abdomen was tender and there was marked muscular rigidity and rebound tenderness throughout. It is felt that the patient probably had a mesenteric thrombosis, but because of his poor general condition operative interference is considered inadvisable.

1-6-35 - Stool - positive for blood.

Blood - hemoglobin 100%, leucocytes 16,450, neutrophiles 82%, lymphocytes 17%, monocytes 1%. Gradually becoming weaker and respirations more shallow and irregular.

1-7-35 - 12:27 A.M. - Expired.

Autopsy

The body is that of a well-developed, fairly well nourished, white male, 65 years of age. Pupils are equal.

The peritoneal Cavity shows generalized peritonitis with adhesions and considerable free pus. The Appendix is not inflamed.

The Pleural Cavities show a shaggy exudate on the pleural surface of the right lung. The Heart weighs 480 grams. Valves show no vegetations or thickening. There is an old fibrous infarct about 2 cm. in diameter in the lower tip of the left ventricle on the anterior surface. On opening the left ventricle, a large thrombus is found slightly adherent to the fibrous wall. The root of the aorta shows a high grade atherosclerosis with some ulceration. The right coronary shows a very mild degree of atherosclerosis. The left coronary shows a high grade atherosclerosis. The anterior descending branch of the left coronary is practically occluded.

The Right Lung weighs 550 grams, Left 390. No consolidation or nodules. The shaggy exudate in the right pleural space is probably secondary to the large accumulation of pus in the subphrenic space.

The Spleen weighs 300 grams. No infarcts.

The Liver weighs 1500 grams and has a fatty cast and slight cloudy swelling.

The Gall-Bladder contains no stones.

Gastro-Intestinal Tract: There is a large area of discolored, friable bowel, about 3 feet from the ileocecal valve. Branches of the mesenteric artery are dissected out and they do not seem to have any high grade atherosclerosis. In one of the large branches of the mesentery in the involved area, a firm plug is detached from the inner vessel wall.

The Pancreas contains no hemorrhage, necrosis or tumor.

The Adrenals show no hemorrhage, necrosis or tumor.

The Right Kidney weighs 100 grams, Left 120. The pelves are not dilated or injected. There is coarse and fine pitting of the cortex. The capsules strip easily.

The Bladder shows a diverticulum on the posterior surface (about 5 cm. in diameter).

Genital Organs: Prostate is enlarged to 2+ on the basis of 4. There does not appear to be any obstruction.

Head and Neck - not examined.

Diagnosis:

1. Coronary occlusion.
2. Coronary Sclerosis.
3. Myocardial scar.
4. Ventricular thrombus.
5. Cardiac decompensation.
6. Hypertension.
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Suppurative myocarditis.

Comment:

This is a case of a 23 year old, white female who suffered

from a migratory polyarthritis which was diagnosed as rheumatic fever. While in the hospital, her joint symptoms improved very much but she had a persistent leukocytosis. She was getting along well when her pulse suddenly became slow and she expired after a short period of coma.

Autopsy revealed a suppurative myocarditis.

Note: This case will be reported in detail at a later meeting.

12. [redacted], 34
Gynecology,
Ectopic pregnancy.
Lobar pneumonia.

Comment:

Case is that of white female, 34 years of age, admitted to the University of Minnesota Hospitals 1-6-35 and expired 1-9-35 (3 days).

Normal

10-26-34 - Had a normal menstrual period. No spotting.

Pain

11- -34 - Well up until the last part of this month when she experienced sudden severe crampy pain in the abdomen. This was confined to the lower quadrant. She also had some pain in the chest which was aggravated by taking a deep breath. Pain was very severe and lasted one day or so. Her physician was called, who gave her some medicine by mouth.

Pregnancy

1-1-35 - Felt well until about this time when she had a similar attack. The physician made a diagnosis of pregnancy. From this time until admission, she had frequent attacks of pain. They usually came on in the morning, being mild and lasting one-half hour to one hour. No pain in chest.

Pain

1-6-35 - 8:30 A.M. - Experienced very severe pain in lower abdomen. Morphine necessary for relief. Admitted. Physical examination: Blood pressure 132/86, pulse 118, temperature 101. Abdomen - marked distention with dulness in both flanks. Pelvic - uterus is anterior, about normal in size, movable, painful; crepitant mass in culdesac.

Laboratory

Urine - cloud of albumin, numerous casts and leucocytes, hemoglobin 56%, erythrocytes 2,520,000, leucocytes 18,650, neutrophiles 94%. Clinical diagnosis: ruptured ectocopic pregnancy. Operation performed immediately. Left-sided ruptured ectopic pregnancy found. Abdomen contains a large amount of blood. Tube removed in usual manner. Pulse remained very rapid.

Consolidation

1-7-35 - Examination of chest shows definite evidence of consolidation in the right middle lobe. Blood transfusion given. Fails to rally.

1-9-35 - Expired.

Autopsy

The body is that of a well-developed, well-nourished, white female, 34 years of age. There is high grade pallor of the finger nails and conjunctiva. There is a midline incision, 17 cm. long. There is slight cyanosis of the left side of the face. Pupils are equal.

The Peritoneal Cavity contains clotted and free blood in both flanks (exact amount not determined). The Appendix is free and shows no inflammatory reaction.

The Pleural Cavities contain no excess fluid or empyema. The Pericardial Sac contains no excess fluid or adhesions.

The Heart weighs 300 grams. Valves are smooth. Musculature has a normal consistency.

The root of the aorta shows no atherosclerosis. The coronaries are soft and patent.

The Right Lung weighs 900 grams, Left 600. Both lobes on the left are consolidated. All three lobes on the right show some areas of consolidation. There is gray hepatization in the right upper

lobe. There is consolidation in the right lower lobe.

The Spleen weighs 100 grams and is soft.

The Liver weighs 1600 grams. No areas of necrosis on gross examination.

The Gall-Bladder contains no stones.

Gastro-Intestinal Tract: No hemorrhage or tumors.

The Pancreas shows no hemorrhage or necrosis.

The Adrenals show no hemorrhage or necrosis.

The Right Kidney weighs 100 grams, Left 150. The capsules strip readily. The pelves are not dilated or injected.

The Bladder shows no tumors or hemorrhage.

Genital Organs: The uterus is enlarged. The cervix is soft and discolored. There is an oval mass about 4 cm. in the long axis and 3 cm. in diameter within the uterus. This is probably a decidual cast. There is a prolongation from this mass into the uterine horn on the left side. The uterus is opened and at the orifice of the left tube there is a myoma 2 cm. in diameter.

Head and Neck: not examined.

Diagnosis:

1. Ectopic pregnancy.
2. Lobar pneumonia.
3. Hemoperitoneum.
4. Intramural myoma at orifice of left Fallopian tube.
5. Decidual cast in the uterus.
6. Bluish discoloration and softening of cervix.

13. [redacted], 74
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Comment:
X-rays of the chest showed metastases which appeared to be forming bone.

15. [redacted], 48
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20. [redacted]., 10
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Pneumonia.

21. [redacted]., 70
Urology,
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22. [redacted]., 34
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Strangulation obstruction.
Gas bacillus infection.

Comment:

Case is that of a white male, 34 years of age, admitted to the University of Minnesota Hospitals 5-17-34 and discharged 6-15-34 (29 days); re-admitted 1-11-35 and expired 1-15-35 (4 days). Total stay - 33 days.

Abdominal Pain - Operation

5-13-34 - A. M. - Noted slight pain in abdomen. After lunch, the pain became sharp and crampy, being accompanied by vomiting and a feeling of distention. 2:30 P.M. - Patient consulted his physician who gave him a hypodermic which gave relief from pain for one-half hour. The physician then advised operation for bowel obstruction. Six hours after the onset of the pain, he was operated upon. At this time, an appendicostomy was apparently done. He felt better for a day or so when he began to have diffuse abdominal pain with distention. He had no bowel movement. X-ray showed a paralytic ileus.

Admitted

5-17-34 - Physical examination: marked distention, complaining of more or less generalized abdominal pain, right rectus incision with a Penrose drain at the lower end, together with a stab wound in the lower abdomen; definite tenderness throughout together with rebound tenderness. Rectal - large, soft mass which is quite fluctuant. Laboratory: Urine - negative. Blood - hemoglobin 100%, leucocytes 10,000, normal differential. Kline and Kahn tests for syphilis, negative.

Progress

Patient is considered to have a generalized peritonitis. He has been treated conservatively with nasal suction and massive hot packs. At the time of admission, his temperature was 102.6. This gradually returned to normal within the next 2 or 3 days. He continued to improve.

6-15-34 - Discharged. Temperature normal.

Another attack

1-11-35 - Patient felt quite well up until this time when he was suddenly seized with crampy pain in the abdomen. He was nauseated. Readmitted. Physical examination: scaphoid abdomen with no definite borborygmi at the height of the pain, tympany present in right upper quadrant, evidence of fluid in abdomen, no masses palpable, no spasm. Rectal - negative.

Laboratory:

X-ray of abdomen - (immediately after entrance into hospital) - shows the presence of slight distention of a few loops of small bowel in the upper portion of the abdomen and also the presence of some gas in the colon. Urine - negative. Blood - hemoglobin 80%, leucotytes 9,500, normal differential. Clinical diagnosis: partial intestinal obstruction due to adhesions.

Course:

Treated conservatively with hot packs to the abdomen and nasal suction. Pain was not relieved by this form of therapy.

Strangulation

1-13-35 - Distention increased. Rebound tenderness and slight spasm of the abdominal muscles appeared. About midnight, patient was explored at which time strangulation obstruction involving practically the entire extent of the small bowel was found. It was impossible at the time of the operation to entirely free the constricting mechanism. Several constricting adhesive bands were cut, and an enterostomy made.

Gas Infection

1-15-35 - A.M. - Crepitation felt beneath the skin over right side of chest. Within 2 or 3 hours, the amount of gas which was present in the tissue of this region increased tremendously. There is jaundice with an icterus index of 160. Noon - Taken to operating room, the entire pectoral muscle group was seen to be necrotic and filled with bubbles of foul smelling gas. As much as possible of the necrotic muscle was cut away, the incision left open and packed with Dichloramine-T dressings. Gas bacillus antitoxin injected locally. 4 P.M. - Expired (about 40 hours after exploration).

Autopsy

The body is that of a well-developed, somewhat under-nourished, white male, 34 years of age, weighing about 130 lbs. No rigor, hypostasis or edema. There is very marked jaundice. There is a wide open wound over the entire right chest, as well as the abdominal wound already mentioned. There is gas in the tissue of the chest.

The Peritoneal Cavity is filled with brown, cloudy fluid. There is a band of omentum about 11 cm. long, extending from the left lateral abdominal wall to the mesentery of the small intestine. This forms a loop through which most of the small intestine has herniated and folded back on itself, thus causing a strangulation obstruction. Eight to 10 feet of the lower ileum is markedly discolored. There is no perforation of the intestine except at the enterostomy wound in the jejunum. The enterostomy wound is well healed and has not broken down. It is in the jejunum about two feet from the pylorus. The Appendix is not found.

The Pleural Cavities contain no excess fluid. The Pericardial Sac contains no adhesions or excess fluid.

The Heart weighs 325 grams. The valves are smooth; no fibrosis. The coronaries are soft and patent.

The Lungs are not weighed. No consolidation or gas infection.

The Liver weighs 1800 grams, has a greenish discoloration. There are gross areas of necrosis.

The Spleen weighs 150 grams and is somewhat soft.

The Gall-Bladder contains no stones or tumors.

Gastro-Intestinal Tract: There are a few diverticulae in the transverse colon. No tumors or hemorrhages.

The Pancreas and Adrenals show no hemorrhages or necrosis.

The Right Kidney weighs 125 grams, Left 150. Pelves are not dilated or injected.

The Bladder shows no hemorrhage or tumors.

Genital Organs show no tumors.

Head and Neck - not examined.

Diagnosis:

1. Strangulation obstruction.
2. Gas bacillus infection.
3. Adhesive band constricting the small intestine.

23. ., 44
Medicine,
Essential hypertension.

Comment:

At autopsy, the heart weighed 600 grams. There was a thrombus in the left ventricle. There were areas of softening in the brain.

24. ., 8 mo.
Pediatrics,
Meningitis, streptococcic type.
Acute septicemia.

25. ., 1 mo.
Pediatrics, no autopsy.
Spina bifida.
Myelomeningocele with hydrocephalus.

26. , 22
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Acute peritonitis.

27. ., 7
Pediatrics,
Pulmonary stenosis.
Subacute bacterial endocarditis.

Comment:

Case is a white female, 7 years of age, admitted to the University of Minnesota Hospitals 1-7-35 and expired 1-18-35 (11 days).

Scarlet Fever

Spring 1933 - Had scarlet fever with otitis media of left ear. Ear continued to drain for a long time following the otitis media. Since the attack of scarlet fever, the patient has been weak, restless and had marked anorexia. Has had edema of the feet and ankles since the attack of scarlet fever, edema only appearing when the patient is ambulatory.

Operations - Cough - Dyspnoea

1934 - Upper and lower central incisors removed because of abscess pockets. Tonsils and adenoids removed.

7- -34 - Developed chronic cough, nonproductive in type.

Several months before admission, patient had dyspnoea.

Congenital heart defect.

Past History: At the age of one year, the patient was examined by a physician who discovered a murmur over the precordium. He made a diagnosis of congenital heart disease.

Admitted

1-7-35 - Physical examination: reveals a 7 year old, white female, who is rather pale, emaciated and apprehensive. Slight cyanosis is present. Eyes - react to light and accommodation, conjunctivae pale. Congestion of nasal passages. Teeth - upper and lower central incisors absent, other teeth are carious. Mucous membranes of the mouth are pale, throat is only slightly injected. Slight cervical adenopathy is present. Chest - normal to percussion, moist rales in both bases and in region of precordium; heart - slight enlargement to percussion, load systolic murmur best heard over pulmonary area. Abdomen - liver and spleen palpable, some tenderness in both upper quadrants, no other masses noted. Extremities - cyanosis present, marked clubbing of fingertips with crystal nails; suggestion of puffiness over ankles; numerous petechiae noted over both legs along tibial crest. Areas of petechiae scattered over rest of body.

Laboratory

Urine - cloud of albumin, 2 or 3 erythrocytes per hpf, 1 to 2 leucocytes per hpf. Blood - hemoglobin 56%, erythrocytes 3,920,000, leucocytes 22,000, neutrophiles 75%, lymphocytes 22%, monocytes 1%, eosinophiles 1%, definite shift to right. Platelet count (1-9-35) - 330,000. Coagulation time - 4 minutes, bleeding - 2 minutes. Blood Wassermann - negative. Schick - positive. Mantoux - negative. P.S.P.- 40% during 1st hour, 17% 2d hour, total 57% at end of 2 hours. X-ray - probable congenital defect of heart. Esophagogram - probable congenital defect of heart with displacement of esophagus.

Transfusion

Progress: Temperature ranged from 98.6 to 104, pulse 75 to 120, respirations 20 to 48.

1-10-35 - Transfusion given, 100 cc. citrated blood.

1-12-35 - 100 cc. citrated blood given. Diastolic and systolic murmurs best heard in 3d and 4th interspaces on the left. There is a definite arrhythmia of the heart with numerous extrasystoles. Grade II edema of lower extremities. Placed in oxygen tent because of progressive cyanosis.

1-17 (P.M.) and 1-18 (A.M.) - 35 - Very restless. 3 A.M. - Child made the following statement to the nurse, "I think I am going to die. What will I do?" 3:10 A.M. - Expired. Before death, became very dyspneic and cyanosed but complained of no pain.

Autopsy

The body is that of a well-developed, very pale and emaciated, white female, 7 years of age, measuring 43 inches in length and weighing approximately 50 lbs. Slight edema of lower extremities. No cyanosis or rigor. The pupils are round and equal, each measuring 4 mm. in diameter. There are a few scattered petechiae over the lower extremities and abdomen (slight red in color). Watch crystal

nails and clubbing of finger-tips present.

The Peritoneal Cavity contains no free fluid or adhesions. The Appendix lies free over the brim of the pelvis.

The Pleural Cavities contain no free fluid. There is an adhesion on the right side in the region of the 4th rib posteriorly and the lower lobe is adherent to the diaphragm. On the left side, there are adhesions of the lower lobe to the diaphragm. The Pericardial Sac contains about 75 cc. of straw-colored fluid. No adhesions.

The Heart weighs 200 grams. There are a few petechial hemorrhages over the surface. The musculature of the ventricles is normal. The aortic and tricuspid valves appear normal. The mitral valve shows thickened edges and a few fresh vegetations on the edge. On opening the pulmonary valve, there is marked stenosis of the leaflets. An aperture, about 3 mm. is found. There are fine vegetative growths on the wall of the right ventricle near the pulmonary valve. The pulmonary leaflets are covered with vegetations as are the pulmonary valve. The pulmonary leaflets are covered with vegetations as are the pulmonary arteries. These vegetations extend out into the right pulmonary artery and lung substance.

The Right Lung weighs 150 grams, Left 175. The right lung presents a few petechial hemorrhages underneath the pleura. There is a subdivision of the lower lobe into what is called embryologically the cardiac lobe. The left lung presents on its external surface a few petechial hemorrhages underneath the pleura and numerous areas of infarction, one in the upper lobe and two in the lower lobe. On opening the pulmonary artery, these vegetations are found to extend out into the pulmonary artery in the lung. In the lower lobe, there is a large thrombus found in the artery which is very fibrotic and attached to vessel at one point. The lung supplied by this vessel, however, is not infarcted. On cut section, the infarcted areas are dark red, firm in character. No areas of bronchopneumonia or abscesses found.

The Liver weighs 700 grams. On cut section, there are numerous hemorrhages found just beneath the cortex and extending down into the substance of the liver for about 2 cm.

The Spleen weighs 100 grams and is normal.

The Gall-Bladder contains a few cc. of dark green bile. The mucosa appears normal.

Gastro-Intestinal Tract: Negative throughout.

The Pancreas is normal.

The Adrenals show no hemorrhages.

Each of the Kidneys weigh 100 grams. Capsules strip with ease. No areas of infarctions, hemorrhages or abscesses found.

The Bladder is negative.

Genital Organs - not examined.

The Aorta is negative.

Head and Neck - not examined.

Diagnosis:

1. Congenital pulmonary stenosis.
2. Subacute bacterial endocarditis of pulmonary valve with extension to pulmonary arteries.
3. Multiple infarctions in lungs.

Bacteriology (Postmortem)

Blood culture from heart - sterile.

Culture from infarcted area in lung - negative.

Culture from vegetations of heart valves - strep. viridans.

28. , 50
Medicine, no autopsy.
Hypertension.

29. , 8 mo.
Medicine, no autopsy.
Bronchopneumonia.
Empyema.

30. , 41
Medicine,
Systematized amyloidosis.

Comment:

White female, age 41, admitted 1-7-35 and expired 1-24-35.

Pains

Well until January 1933, when she noticed aching of legs after walking and occasional aching of shoulders and arms at night after lying down. About this time, a goiter was noted by the local physician.

Fever

5- -33 - Severe sore throat, cervical adenitis, generalized aching and marked weakness. In bed at home 3 weeks, then in local hospital 2 weeks. X-ray of chest - negative. Various agglutination tests were negative. Mantoux - negative. When discharged from hospital, patient still felt very weak and had fever, ranging from 99 - 100, and tachycardia (120). Local physician saw patient off and on until 12-4-33 and during this time, fever (99-100) and tachycardia persisted.

7- -34 - Noted swellings in both submaxillary regions.

Thick Tongue

10- -34 - Blisters on left side of tongue. She looked at tongue and thought that it seemed very red and thick. About this time, weakness became so pronounced that patient was unable to do her housework. Developed dyspnoea upon slight exertion and at times had orthopnea. Had some difficulty in swallowing because of thick tongue. Thickening and stiffening of skin of chin. Goiter had been gradually enlarging for past year and because of tachycardia, weight loss, increased appetite and nervousness she was thought to have hyperthyroidism. Given Lugol's solution. Also had amenorrhea for 4 months and a 31 lb. weight loss since July 1934.

Admitted

1-7-35 - Physical examination: undernourished patient. Tongue - markedly thickened and firm; surface red and smooth. Skin over chin thickened and appears adherent to the underlying structures. Submaxillary and submental glands are enlarged. Thyroid is diffusely enlarged and firm. Veins of neck are distended. There is a peculiar induration of the vulva, clitoris and vaginal walls; cervix very hard; corpus enlarged to size of 2½ to 3 months pregnancy, has irregular contour, is very firm. Biopsy of skin of chin and tongue - shows presence of amyloid; Congo red test within normal limits (70% still retained in blood). B.M.R. +12%.

1-17-35 - Developed clinical signs of generalized peritonitis.

1-24-35 - Expired.

Autopsy

Shows thickening and shortening of tongue, thickening of wall of left auricle, firm hard lungs and mediastinum, thick vaginal wall, cervix and uterus. Death was due to peritonitis, secondary to thrombophlebitis of left ovarian vein.

Microscopic: Enormous amyloid infiltration of all blood vessels (only arteries?). Infiltration of muscles of tongue.

Comment: C. W. Eklund

This is a typical case of that type of amyloidosis known as systematized amyloidosis, paramyloidosis or atypical amyloidosis.

Lubarsch gives the following 5 characteristics:

1. Complete absence of amyloid in the organs usually affected (spleen, kidneys, adrenals, liver intestinal mucosa, salivary glands).

2. The strong preference and unusual

amounts of the deposits in organs usually not at all or very slightly affected. (Heart, lungs, striated and smooth muscles, skin and serous membranes).

3. The property of forming nodular deposits.

4. The numerous variations in the results of the characteristic reactions (to stains).

5. The absence of any apparent underlying disease.

Clinically, these cases are characterized by symptoms referable to skin, tongue, voluntary muscles, intestinal tract and heart.

The patient may complain of nodules or thickened skin; large, firm tongue which interferes with swallowing and speaking; difficulty in various movements of body because of stiffness of the muscles, severe constipation, occasionally symptoms of ileus or severe gastro-intestinal hemorrhage; cough, shortness of breath and the usual symptoms of heart failure.

The disease is found in middle-aged or older people, the average age being over 50, the youngest case described was 38. There is no predisposition as to sex.

Pathologically, the muscular coats of the vessels are always more or less extensively involved, usually the arteries more than veins. The process begins predominately in the media and extends into the adventitia. The heart musculature is almost always affected. Other organs are involved in the following frequency:

1. Striated musculature, the tongue being most frequently affected.

2. Smooth musculature (excluding blood vessel walls); most frequently, the intestinal tract; less often, the urogenital tract.

3. Skin.

Nothing is known as to etiology. The following diseases have been described in association with the condition: kidney diseases, luetic infections, ulcers of gastro-intestinal tract, catarrhal gastro-enteritis, erysipelas, carcinoma, diabetes, chronic bronchitis, melanosis of colon, atrophic gastritis and multiple myeloma.

31. , 53
Surgery,
Third degree burn.
Bronchopneumonia.

32. ., 28
Medicine,
Reticulo-endotheliosis.

Comment:
Another case of reticule-endotheliosis with skin lesions.

33. ., 39
Gynecology,
Carcinoma of cervix.

34. ., 59
Otolaryngology,
Temporal lobe abscess, otogenous in origin.

Comment:
Brain abscess gave practically no symptoms and the first definite sign of an intracranial complication was meningeal involvement. Autopsy revealed purulent meningitis and an abscess in the right temporal region just above the tegmen tympany. The abscess was well encapsulated and about 2 cm. in diameter.

35. , 62
Surgery,
Adenocarcinoma, probably of the sigmoid.

36. , 62
Medicine,
Carcinoma of the prostate.

Comment:

A case of carcinoma of the prostate with osteoblastic metastases, the main clinical feature.

Case is that of white male, 62 years of age, admitted to the University of Minnesota Hospitals 10-23-34 and discharged 12-5-34 (43 days); readmitted 12-27-34 and expired 1-7-35 (12 days). Total stay - 55 days.

Back Pain

1934 - Felt perfectly well up until this time when he noted pain in the back and thighs. Since the onset of these symptoms, he lost about 50 lbs. in weight.

7- -34 - Experienced some nocturia.

Admitted

10-23-34 - Physical Examination: tenderness on pressure over lower lumbar vertebra and over the sacrum. Heart and lungs - negative; blood pressure 150/100. Rectal - small, hard, nodular prostate. Laboratory: X-ray - shows extensive metastases in the left descending ramus of the ischium, in left pubis, and about right sacro-iliac joint. Metastases are chiefly osteoblastic in character. There is evidence of moderate hypertrophic arthritis of the spine. Chest plate - negative. Intravenous pyelogram reveals the right kidney to be entirely normal; the left fails to fill completely so that the possibility of a tumor in the left kidney cannot be excluded. Urine - cloud of albumin, many pus cells. Blood - hemoglobin 92%, leucocytes 12,400, neutrophiles 82%, lymphocytes 16%, monocytes 2%. Wassermann and Kahn tests - negative.

Treatment

Course: Given a course of deep x-ray therapy over the pelvis and lumbar spine with marked relief of symptoms. Given codeine to control pain.

12-5-34 - Discharged with advice to return to the Tumor Clinic in one month for further observation. Final diagnosis - osteoblastic and osteoclastic carcinomatous metastasis to the pelvis, probably from a primary carcinoma of the prostate.

Pain

12-27-34 - Admission: Complaints - pain in lumbar spine, involuntary urination, involuntary stools. Neurologic examination - loss of deep reflexes of lower extremities and marked impairment of sensation below the 3d lumbar segment on the left and the 1st sacral segment on the right. Patient had already been given all the deep x-ray therapy permissible.

1-7-35 - Discharged to a rest hospital. Death 1-30-35.

Autopsy

The body is that of a somewhat emaciated, normally developed, white male, 62 years of age, measuring about 174 cm. in length, and weighing approximately 175 lbs. There is rigor and posterior hypostasis. No edema or cyanosis. The pupils are equal, each measuring about 4 mm. in diameter.

The Peritoneal Cavity contains no excess fluid.

The Pleural Cavities contain no adhesions, nodules or excess fluid. The Pericardial Sac contains no adhesions or excess fluid.

The Heart weighs 400 grams. The valves are smooth. There is no fibrosis of the cardiac muscle. The root of the aorta is smooth. The coronaries are soft and patent.

The Right Lung weighs 475 grams, shows no nodules or consolidation. The Left Lung weighs 350 grams, shows no nodules or consolidation.

The Spleen weighs 210 grams, is somewhat soft and shows no nodules.

The Liver weighs 2025 grams, shows no nodules, necrosis.

The Gall-Bladder contains no stones or tumors.

Gastro-Intestinal Tract: shows no hemorrhage or tumors.

The Pancreas shows no tumors, hemorrhage or necrosis.

The Adrenals show no tumors, hemorrhage or necrosis.

Each of the Kidneys weigh 200 grams. The pelves are somewhat dilated and injected. The kidney substance itself is pale, probably represents pyelonephritis.

The Bladder shows no tumors or hemorrhages or stones.

The Prostate seems to be of normal size. In the left lobe of the prostate, there is a firm, yellowish area. This may represent a carcinoma.

Head: Brain is negative. No hemorrhage or metastases.

Spinal Cord: appears normal grossly. No definite area of compression. On gross section of the spinal cord, there is an area of cavitation, about 4 mm. in diameter, in the lower thoracic and upper lumbar region.

Diagnosis:

1. Pyelonephritis, bilateral.
2. Osteoblastic metastases to the bone (X-ray diagnosis).
3. Cavitation of spinal cord.
4. Probable carcinoma of prostate (to be determined on microscopic examination).

Note: The thyroid is removed and examined. No evidence of tumor is noted.

Microscopic: Of the nodule removed from the left lobe of the prostate shows numerous, small, irregular alveoli with cords of epithelial cells interspersed.

Diagnosis: Carcinoma of prostate.

ABSTRACT:

Carcinoma of the Prostate.
E. G. Muir,
The Lancet 226, #5770:
667 (Mar. 31) 1934.

By Alex Blumstein.

Incidence

"Albarran and Halle found carcinoma in 10 per cent. of prostates removed surgically. Young, from clinical observations, considered "that four men in every hundred who live to be 60 years of age will have cancer of the prostate." Prostates removed at autopsy and submitted to a routine histological examination show the disease to be yet more frequent. In 54 prostates removed post mortem from men over 60 years of age in the Middlesex Hospital, unsuspected carcinoma was found to be present in 13 per cent. In those over the age of 70 carcinoma was found in 23 per cent."

Pathogenesis.

"Of 134 prostates removed post mortem the pathological changes of benign prostatic hypertrophy were present in 80 per cent of men over the age of 60. Considering the great frequency of this change it is not surprising that almost all cases of carcinoma are associated with it."

"Carcinoma may arise in a normal prostate, in areas of benign hypertrophy, or in a gland which is the seat of chronic inflammatory changes. There is no evidence of any predisposing cause. Age appears to be the only factor influencing its development."

Clinical Types of the Disease

"In most cases the symptoms of prostatic carcinoma are similar to those of benign enlargement, and it is only on rectal examination that the correct diagnosis is made."

"In an interesting group the initial symptoms are caused by metastases in bones or in glands, and in a few cases urinary symptoms are absent throughout the course of the disease. Of these extra-urinary symptoms, pain in the back, lumbago, and sciatica frequently bilateral, are the most common." X-ray examination is often very helpful in these cases.

Histology

"With the exception of epithelioma, a very rare growth, all prostatic carcinomata are adenoid in nature, though the tendency to tubule-formation varies with different growths and to some extent in different areas of the same growth."

Metastases

In a study of 24 autopsied cases, the author gives the following incidence:

(1) Glandular involvement - 77%, internal iliac 73%, external iliac 50%, lumbar and aortic 42%, inguinal 23%, thoracic 19%, and supraclavicular 19%.

(2) Visceral metastases - 34%, lung 19%, liver 15%, suprarenals 8%, kidney, skin, dura mater, heart, and wall of ureter 4% each.

(3) Bone metastases - 28%. "The most common sites for metastases appear to be the fourth and fifth lumbar vertebrae and that part of the bony pelvis which forms the pelvic brim."

"Kaufmann, in 24 autopsies, found bone metastases in 16."

"Skeletal metastases in carcinoma of the prostate are characterized by their osteoblastic character, this change being present in about 80 - 90 per cent of bone metastases."

37. , 72
Surgery, no autopsy.
Carcinoma of prostate.

II. MOVIES

Title: Roots of Plants

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