

Ellis

38

██████: 2nd. Lt. ██████. Arm'd. Regt. P.E.

Injured: 16 June 1944 in automobile accident

Admitted: 23 June 1944 from 56th. E.H.

Died: 4 July 1944 Acute pulmonary edema from excess fluid administration postoperatively.

This 38 year old officer suffered a rupture of the bladder in a jeep accident 16 June. Because of mildness of symptoms the diagnosis was suspected but not operatively confirmed at the 56 E.H. Gross blood was present in the urine immediately after injury and the urine was consistently benzidine positive afterwards. He was received here under heavy sedation, with moderate abdominal distention, and marked abdominal tenderness especially over the lower half. There was frequent desire to urinate. The skin was slightly cyanotic, the pulse 120. Long tube drainage was started on admission and kept up. Fluid replacement was started on high level, the patient receiving 3000cc of "A" blood, 24 units of plasma and 45,000cc of intravenous fluids, and 3000cc of fluid by mouth. Cystoscopy on 29 June revealed a 3cm tear in the vault of the bladder and on day following this was repaired and an indwelling catheter inserted. A diffuse macular non-itching hemorrhagic rash appeared the day before operation and slowly subsided. Icterus developed day of operation and became progressively more severe. Sudden dyspnea, cyanosis and moist rales appeared two days before death. One hour after receiving penicillin the patient became restless and disturbed, pulse failed rapidly and ceased in half an hour.

Autopsy: 3,4,5.

A. The body is that of a slight, well-developed but rather poorly nourished adult white male of indeterminate age. The skin and sclerae are deeply icteric. A fading brownish macular rash is visible over the chest, face, abdomen, back and extremities.

B. The midline incision discloses a moderate amount of canary yellow fat. The tissues are strikingly edematous. The peritoneal surfaces are bile-stained and the cavity contains about 4000cc of deeply icteric fluid. There is moderate amount of shaggy fibrin about the posterior wall of the bladder and on adjoining loops of ileum, but none elsewhere. The omentum is folded about the transverse colon and appears somewhat hemorrhagic. The small bowel proximal to the terminal ileum is paralytic and fluid filled. The appendix is non-inflamed. The right lobe of the liver is very large and has shoved the right diaphragm up to the third interspace. The left is at the level of the fourth rib. The spleen is enlarged and tense.

C. The right pleural cavity contains 1000cc of canary yellow fluid. The lung is small and largely collapsed. The left chest contains about 500cc of bile-stained fluid and the lung there is also small and partially collapsed. The pericardium is distended, containing about 300cc of icteric serous fluid.

D. The right lung weighs about 350 grams. The lower and middle lobes are compressed, completely airless, and color of egg plant. The upper lobe is feebly crepitant, exuding much frothy bile-stained fluid under pressure. The hilar nodes and vessels are not remarkable. The left lung weighs about 300 grams. The lower lobe shows a patchy atelectasis of the base and elsewhere resembles the right upper lobe. Hilar structures are not remarkable.

E. The liver weighs about 2500 grams, and is largely right lobe. The capsule is thin and the underlying parenchyma tawny brown from bile staining. On section lobular markings are indistinct and much fluid blood pours from the cut surface. The gall bladder is thin and collapsed, containing but a few cc of ochre-colored bile. The extrahepatic passages are patent.

F. Both adrenals aggregate ten grams and appear grossly normal.

G. The kidneys together weigh 300 grams. They appear grossly unchanged except for a granular, gray-white color of their cortices. The pelves are intact. The ureters appear unchanged.

H. There is surgically sutured 3cm tear in the vault of the bladder (intraperitoneal portion). The bladder mucosa is clean except for several submucosal hemorrhages of considerable extent. The testes are not remarkable.

I. Liver (2 sec): There is considerable degeneration of centrally placed liver cells without evidence of necrosis, save for isolated liver cells. A prominent feature in some areas, and absent in others, is the presence of bile thrombi in the centrally located canaliculi. The liver cells elsewhere show only occasional and incidental fatty change. The periportal triads do not appear exceptionally infiltrated by chronic inflammatory cells and esinophils in these areas are lacking.

J. Kidney (2 sec): There is some dilation of the upper nephrons. Cellular casts are rarely noted in the distal tubules, but they are inconspicuous. Rarely, lemon-yellow bile casts are encountered. There is no evidence of a transfusion kidney.

Diagnoses:

CLINICAL DIAGNOSES

- (1) Ruptured bladder
- (2) Intestinal obstruction
- (3) Jaundice

PATHOLOGIC DIAGNOSES (gross)

- (1) Intraperitoneal tear of bladder fundus with recent surgical repair.
 - (2) Pelvic peritonitis, plastic, moderate
 - (3) Paralytic ileus, severe
 - (4) Ascites (4000cc)
 - (5) Massive atelectasis of right lower and middle lung lobes; patchy atelectasis of left lower lobe
 - (6) Pulmonary edema, severe, of left and right upper lobes
 - (7) Bilateral hydrothorax (right 1000cc: left 500)
 - (8) Hydropericardium (300cc)
 - (9) Subcutaneous edema, marked, of all body surfaces
 - (10) Right cardiac dilation, moderately severe
 - (11) Acute passive congestion of parenchymatous viscera
 - (12) Epidemic hepatitis, acute, early, severe
 - (13) Icterus, moderately severe, of all body tissues and fluids
 - (14) Bile nephrosis, moderate
 - (15) Indwelling catheter
 - (16) Traumatic ecchymoses of bladder mucosa
 - (17) Miller-Abbot intubation
 - (18) Acute esophagitis, gastritis, and duodenitis, traumatic, from 17.
 - (19) Recent sutured suprapubic celiotomy wound
 - (20) Disseminated macular skin rash, subsiding
 - (21) Numerous venepuncture wounds of all extremities
- Additional microscopic diagnoses:
- (22) Sulfonamide nephropathy, minimal, ancient
 - (23) Cystic dilation of the pancreas, marked
 - (24) Pancreatitis, early, diffuse, acute.