

**Final anatomical diagnosis :**

1. History of cervical squamous cell carcinoma, stage IIIB, S/P radiation therapy.
2. Atrophic uterus and adnexal with radiation effect including fibrosis, necrosis and abscess formation without residual squamous cell carcinoma.
3. Pulmonary lymphangitic carcinomatosis and severe diffuse alveolar damage superimposed by acute bronchopneumonia.
4. Coronary atherosclerosis, triple vessels.
5. Acute myocardial infarction of anterolateral wall of left ventricle.
6. Atherosclerosis of aorta and other major arteries including basilar artery.
7. Chronic pericarditis.
8. Radiation effect of large bowel, S/P segmental resection.
9. Chronic pyelonephritis, bilateral kidneys.
10. Hemorrhagic cystitis and urethritis with abscess.
11. Passive hyperemia of liver with early perivenular fibrosis.

**Clinical summary :**

Last admission : 1997. 08. 25

Brief History :

This 76 year-old female was a case of cervical carcinoma stage IIIB diagnosed since 1995. 10.30. She had received radiotherapy. One week prior to last admission, she was found hematuria, nausea, malaise and dizziness, and was admitted with impression of hemorrhagic cystitis with secondary urinary tract infection and anemia.

Pass medical history: 1995.10. ~ 1995.12.

Fist presented with vaginal spotting. After investigation, diagnosis of cervical carcinoma (squamous cell carcinoma) stage IIIB was made. She received whole pelvic radiotherapy, intracavity insertion of an application and brachytherapy.

1996. 9. 3

She developed radiation colitis, treated conservatively.

1996. 12. 3

Received loop colostomy operation due to radiation proctitis.

1997. 8. 6 ~ 1997. 8. 21

Surgical intervention due to radiation colitis operative methods: Hartmann procedure take done of colostomy, appendectomy.

Physical findings on last admission :

Conscious	Clear	
Vital sign	Blood pressure	192/100
	Pulse rate	84
	Respiratory rate	32
Anemic, non icteric		
Lung	Clear	
Heart	No murmur	
Abdomen	Colostomy opening at the abdomen, soft, non tender, hypoactive bowel sound.	

Investigation results:

1997.08:

Hb	9.7	Ht	27.5
WBC	10200	Platelet	160,000
BUN/Creatinine	12/0.8	Sugar	107
Na/K/Cl	136/2.7/105		

1997.09.10:

Bilirubin direct/total	1.1/1.9
BUN/Creatinine	26/1.0
AST/ALT	28/266
Bilirubin direct/indirect	2.9/4/1
BUN/Creatinine	27/1.6

Abdomen CT scan : No evidence of abscess formation

Liver echo (1997. 09. 11) : Liver parenchymal disease, ascites, bilateral pleural effusion

Anemia was corrected by repeat blood transfusion. Hemorrhagic cystitis was partially corrected by removal of blood clots in urinary bladder through cystourethroscopy. She developed pneumonia, septicemia and respiratory failure during hospitalization. Despite ventilator support, intensive medical treatment, her condition was progressively downhill. Acute renal failure, unstable hemodynamics hypoxemia and metabolic acidosis was noted then. She died on 1997. 10. 2 11:14 AM due to septicemia with multiorgan failure.

**Autopsy findings :**

(1) Body and external appearance :

Weight	No check
Length	150 CM
Development	Fair
Nutritional state	Fair

Central venous catheter puncture wound at right subclavicular and right neck.

Vertical surgical scar below umbilicus measuring 13 CM in length.

Oblique surgical scar at left lower abdomen, measuring 6 CM in length.

(2) Body cavities :

Pleural	Unremarkable
Peritoneal	Ascites : 150 C.C. Straw-color
Pericardial	Unremarkable

(3) Cardiovascular system :

Greater vascular structures	
Gross	Atherosclerotic change calcified aorta
Microscopic Diagnosis	Atherosclerosis

Heart General :			
Measuring	14.5 x 10.4 x 6.2 CM		
Weight	410 GM	Pulmonary valve	7.8 CM
Left ventricle	1.2 CM	Mitral valve	5.6 CM
Right ventricle	0.4 CM	Aortic valve	7.1 CM
Tricuspid valve	4.6 CM		

Cardiovascular system	Gross	Microscopic Diagnosis
Valves	Unremarkable	No pathological diagnosis
Epicardium	Unremarkable	No pathological diagnosis
Myocardium	Fine fibrotic scars, left ventricle	Acute myocardial infarct of left ventricle
Endocardium	Unremarkable	No pathological diagnosis
Coronary arteries	Atherosclerosis with partial luminal occlusion	Intimal thickening and calcified wall in triple vessels

(4) Respiratory system :

Trachea and major bronchi	
Gross	Contents : Erythematous mucosa and shallow ulcer at vocal cord region
Microscopic Diagnosis	Congestion, erosion and chronic inflammation

Lung						
Gross	Weight	Right	945 GM	Size	Right	24 x 9 x 9 CM
		Left	760 GM		Left	17 x 15 x 4 CM
	Congestion, diffuse consolidation of both lungs.					
Microscopic Diagnosis	Lymphangitis carcinomatosis diffuse alveolar damage hyaline membrane formation acute and chronic inflammation bronchopneumonia.					

Mediastinum	
Gross	Lymph nodes : Multiple enlarged mediastinal nodes
Microscopic Diagnosis	No evidence of metastasis

(5) Gastrointestinal Tract :

Gastrointestinal Tract		Gross	Microscopic Diagnosis
Pharynx		Erythematous mucosa	Congestion
Esophagus		No pathological diagnosis	No pathological diagnosis
Stomach		20 CM along lesser curvature and 27 CM greater curvature, diffuse black discoloration of mucosa. No ulcer is seen.	No pathological diagnosis
Duodenum		Unremarkable	No pathological diagnosis
Small bowel		Marked adhesion	Autolyzed, mucosal atrophy, submucosal edema, fibrosis with dilated and congested vascular channels
Large bowel		Measuring 65 CM in toto marked adhesion, colostomy opening at left lower quadrant of abdominal wall	Autolyzed, atrophic mucosa chronic inflammation
Cecum and appendix		Absent	Absent
Pancreas	Weight	100 GM	No pathological diagnosis
	Size	13 x 3.5 x 2.0 CM	

(6) Hepatobiliary system :

Liver		
Gross	Weight	1400 GM
	Size	20 x 13 x 7 CM
	Out surface	Fatty change, no tumor
	Cut surface	Fatty change, mild
Microscopic Diagnosis	Passive congestion with early perivenular fibrosis.	

Gallbladder, Bile ducts		
Gross	Size	11 x 6 x 3 CM
	No lithiasis, containing biliary sludge.	
Microscopic Diagnosis	No pathological diagnosis	

(7) Hematopoietic-Lymphoid system :

Hematopoietic-Lymphoid system	Gross	Microscopic Diagnosis
Spleen	Weight : 320 GM	No pathological diagnosis
	Size : 15 x 9 x 3 CM	
	Unremarkable	
Lymph nodes	Enlargement of right clavicular nodes mediastinal nodes, paraaortic nodes.	Sinus histiocytosis
Bone marrow	Unremarkable	Normal hematopoietic activity

(8) Urogenital system :

Kidney		
Gross	Weight	Right : 150 GM
		Left : 150 GM
	Size	Right : 10 x 7 x 3 CM
		Left : 9.6 x 6.5 x 3 CM
Microscopic Diagnosis	Chronic interstitial inflammation, fibrosis Focal glomerular sclerosis	

Bladder and urethra		
Gross	Bladder	Size : 8 x 7 x 0.9 CM Thicked wall, containing blood clots
	Mucosa	Erythematous change
Microscopic Diagnosis	Ulcerated bladder mucosa with fibrinopurulent exudate.	

Ureters	Gross	Microscopic Diagnosis
	Not Dilated	No pathological diagnosis

Uterus / Ovaries		Gross	Microscopic Diagnosis
Uterus		Size : 8 x 4 x 2 CM	Atrophic No residual tumor is seen Fibrosis, necrosis and abscess formation
		Marked fibrosis, No tumor is seen	
Bilateral adnexa		Unremarkable	
Ovary	Size	Right : 2 x 1 x 0.8 CM	
		Left : 1.8 x 1 x 0.8 CM	

(9) Endocrine system :

Endocrine system		Gross	Microscopic Diagnosis
Thyroid	Left size	3.4 x 1.8 x 1.2 CM	No pathological diagnosis
Pituitary		Unremarkable	No pathological diagnosis
Adrenals	Weight	Right : 7 GM	Autolyzed No pathological diagnosis
		Left : 5 GM	
	Autolyzed		

(10) Central nervous system :

Central nervous system		Gross	Microscopic Diagnosis
Brain	Weight	1400GM	
	Shape	Normal	
Leptomeninges		Meningeal hyperplasia	Meningeal hyperplasia
Cranial nerves		Unremarkable	No pathological diagnosis
Circle of Willis		Mild atherosclerosis at basilar artery	Mild intimal thickening
Spinal cord		No atrophy, no herniation	No pathological diagnosis

**Section Taken and Labeled as :**

<b>Labeled</b>	<b>Section Taken</b>
<b>CER 1</b>	Cerebellum
<b>F 1</b>	Spinal cord
<b>F 2</b>	Cortex, frontal
<b>F 3</b>	Hippocampus
<b>F 4</b>	Substantia nigra
<b>F 5</b>	Cortex, parietal
<b>F 6-7</b>	
<b>AOR 1-2</b>	Aorta
<b>IVC</b>	Inferior vena cava
<b>RB</b>	Right bronchus
<b>LB</b>	Left bronchus
<b>RU 1-3</b>	Lung, right upper lobe
<b>RM</b>	Lunt, right middle lobe
<b>RL 1-2</b>	Lung, right lower lobe
<b>LU 1-2</b>	Lung, left upper lobe
<b>LL 1-3</b>	Lung, left lower lobe
<b>LN 1</b>	Paraaortic nodes
<b>LN 2</b>	Right clavicular nodes
<b>LN 3</b>	Left pulmonary nodes
<b>LN 4</b>	Right pulmonary nodes
<b>ES 1-2</b>	Esophagus
<b>ST 1-3</b>	Stomach
<b>D</b>	Duodenum
<b>SB 1-7</b>	Small bowel
<b>SB 8-9</b>	Ileocecal region



<b>Labeled</b>	<b>Section Taken</b>
<b>CEC 1-2</b>	Cecum
<b>LBW 1-5</b>	Large bowel
<b>PA 1-2</b>	Pancreas
<b>L1 1-4</b>	Liver
<b>GB</b>	Gallbladder
<b>SP</b>	Spleen
<b>BM 1-2</b>	Bone marrow
<b>RK 1-2</b>	Right kidney and ureter
<b>LK 1-2</b>	Left kidney and ureter
<b>BL 1-3</b>	Bladder
<b>UR</b>	Urethra
<b>RA</b>	Right adnexa
<b>LA</b>	Left adnexa
<b>U 1-5</b>	Uterus
<b>CX</b>	Cervix (缺蠟塊)
<b>EM</b>	Endometrium myometrium (缺蠟塊)
<b>PIT</b>	Pituitary gland
<b>RAG</b>	Right adrenal gland
<b>LAG</b>	Left adrenal gland
<b>RTHY</b>	Right thyroid gland
<b>LTHY</b>	Left thyroid gland
<b>MEN</b>	Meninges
<b>RCOR</b>	Right coronary artery
<b>LCOR</b>	Left coronary artery
<b>MYO 1-3</b>	Myocardium (anterior, anterolateral)
<b>MYO 4-5</b>	Myocardium, septum