

The 107th CPC

Sudden death with poorly differentiated adenocarcinoma of the Sigmoid colon

Meiwa Hospital

Case: 41 year-old man

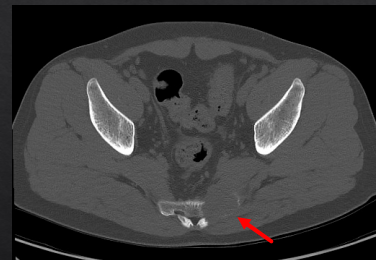
- ◆Chief complaint : Buttock pain
- ◆Past history : Not particular
- ◆Family history :
 - *Father / prostate cancer
 - *Mother / hepatitis C

◆Present history

A patient visited a local clinic because of the complaint of buttock pain in October 2016. X-ray did not show any apparent abnormalities, he was advised to have regular follow up session.

However, he visited to our hospital with continuous pain.

CT



Laboratory data

CBC		biochemical		Tumor marker	
WBC	6900	LDH	399	CEA	104
RBC	504	AST	101	CA19-9	64
Hb	14.9	ALT	175	SIL-2R	713
Plt	26.9	ALP	379		
		γGTP	115		

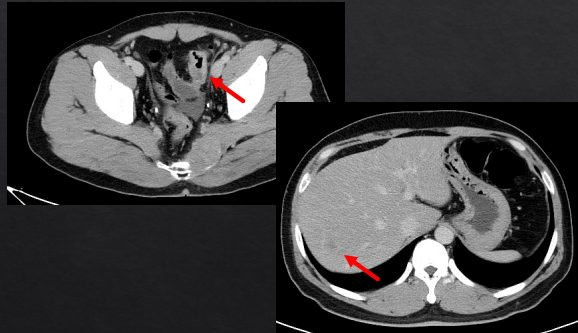
Colonoscopy



⇒Biopsy; tub2



Enhanced CT



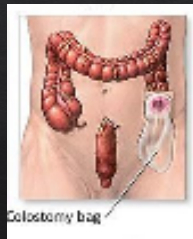
Diagnosis before surgery

Stage report				
Site	Pathology	M	N	St
Primary	CA	IIA		
Secondary	CA		IIA	
Primary	CA		IIA	
Secondary	CA		IIA	

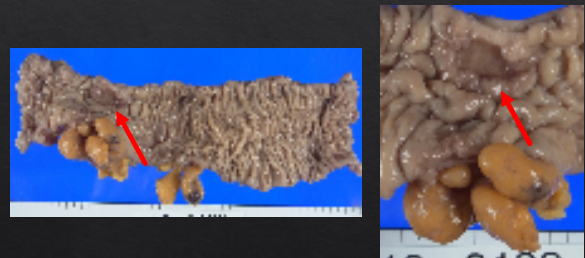
cTNM=IVB

Operation

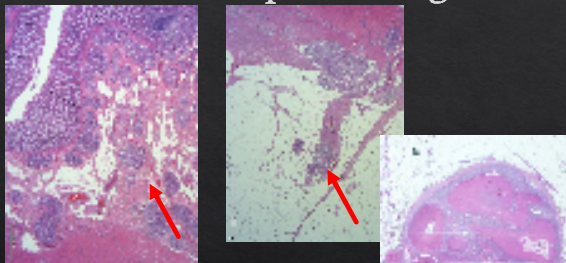
Operation method;
Hartmann's operation with D3



Resected specimen



Microscopic findings



Adenocarcinoma, por>tub2

pT4a,int,INFb,ly3,v2(SS),pN1b,pPM0,pDM0,pRM1

pTNM=IVB

Postoperative course

Chemotherapy (FOLFOX) and radiation therapy to brane and orbital metastasis started from POD17.

At 0:25 on POD21, 4th day of the chemotherapy, a nurse heard the sound of falling.

She found the patient in an unconscious state.

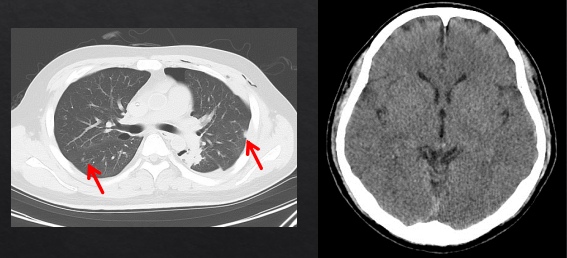
CPR immediately started but ECG kept recording PEA.

His death was confirmed at 2:16.

Laboratory data

CBC		biochemical		coagulation	
WBC	15100	LDH	2457	PT-INR	1.76
RBC	508	AST	99	APTT	52.6
Hb	14.0	ALT	53	FDP	406
Plt	22.4	ALP	988	D-dimer	138
		γ GTP	94	Fib	162
		CK	94		
		BS	90		

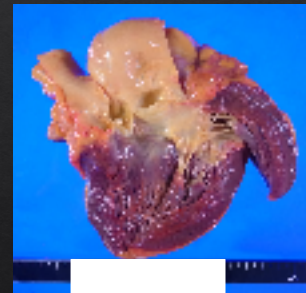
Autopsy Imaging



The purposes of autopsy

- ◆1: The spread of cancer
- ◆2: The cause of sudden death

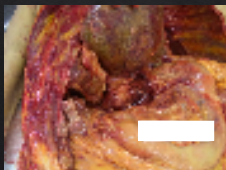
Heart



Stomach and Esophagus



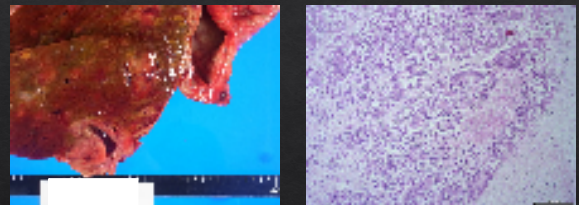
Stomach

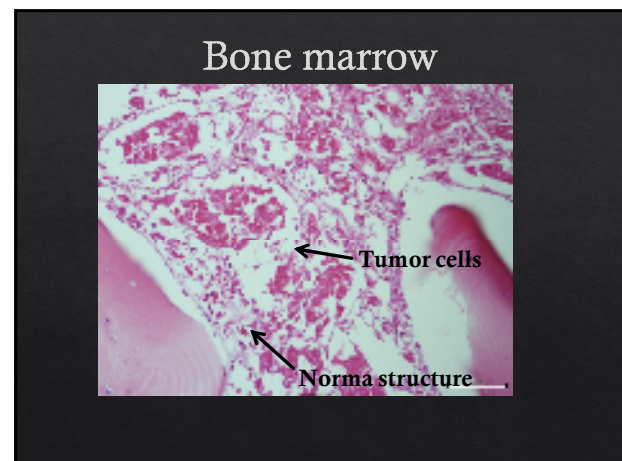
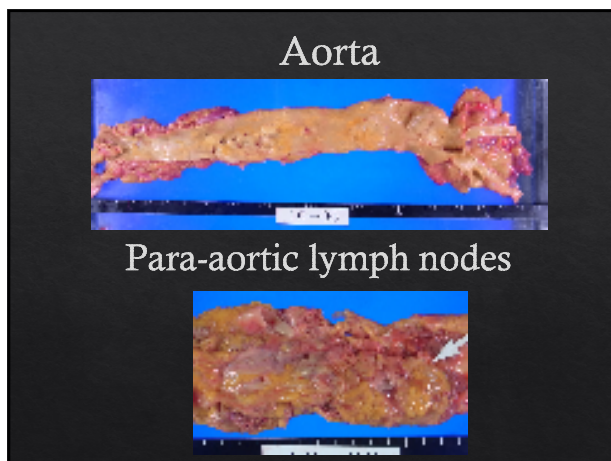
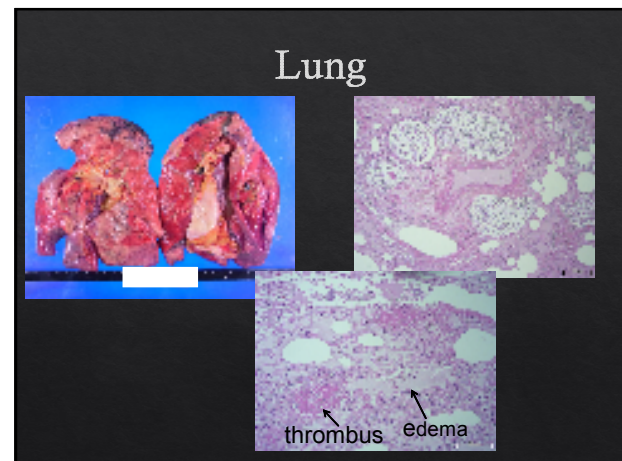
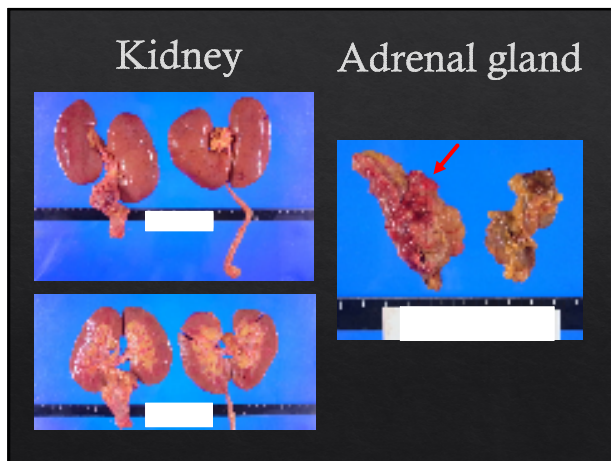


Peritoneum



Liver





Diagnosis by autopsy

♦ Major lesions

1. Sigmoid colon cancer after Hartmann's operation, chemotherapy and whole-brain radiation Stage IVB

*poor differentiated adenocarcinoma

<range of metastases>

liver, right adrenal gland, both lungs, peritonea and lymph nodes (left hilar, para-aorta, around the esophagus)

2. DIC

♦ Minor lesions

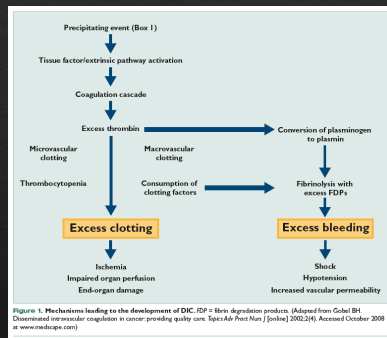
1. Pulmonary congestion

2. Renal tubular necrosis

Discussion

Why did the patient suddenly die?

DIC



Disseminated carcinomatosis of bone marrow

【Definition】

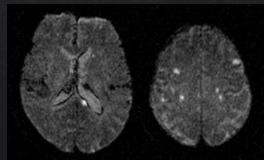
- ❖ Cancer invasion to multiorgan with a central focus on bone marrow. It destructs bone marrow tissue.
- ❖ Complicating with DIC and hemolytic anemia



Trousseau syndrome

【Definition】

- ❖ one type of brain infarction
- ❖ Chronic disseminated intravascular coagulopathy associated with microangiopathy, verrucous endocarditis, and arterial emboli in patients with cancer, often occurring with mucin-positive carcinomas.



After the patient's condition suddenly changed, blood tests, autopsy imaging and autopsy were performed.

We could find only sign of DIC.

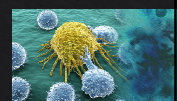
Once any types of coagulation disorder occur, the patient often gets to into fatal condition.

We have to immediately read signs of DIC and respond to it.

Frequent blood tests including coagulation system are necessary.

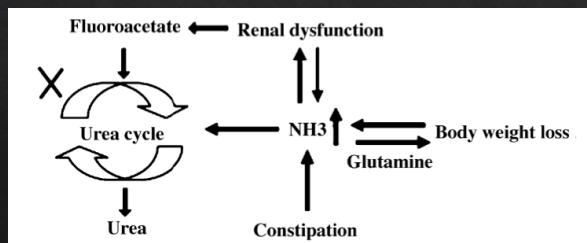
tumor lysis syndrome

CBC		biochemical		coagulation	
WBC	15100	LDH	2457	PT-INR	1.76
RBC	508	NA	126	APTT	52.6
Hb	14.0	K	6.1	FDP	406
Plt	22.4	Cl	95	D-dimer	138
		Ca	9.0	Fib	162
		P	11.3		
		BUN	35.7		
		Cr	1.17		
		UA	10.4		



Hyperammonemic encephalopathy related to 5-FU

Ammonia 328



Conclusion

We experienced the sudden death after Hartmann's operation, chemotherapy and radiation therapy to sigmoid colon cancer (stage IVB).

We have to immediately read signs of coagulation disorder, tumor lysis syndrome and hyperammonemia.

Frequent blood tests before and after invasive treatment are necessary.

Reference

1. Keiko Hamasaki: A case of trousseau syndrome after colectomy for descending colon cancer
2. Tomoyuki Momma: A case of trousseau's syndrome caused by colon cancer with liver metastases during chemotherapy
3. Yasushi Koishi: useful anticoagulation therapy with heparin for trousseau's syndrome in a terminally ill patient with rectal cancer
4. Makoto Kosuge: A case of poorly differentiated adenocarcinoma of the transverse colon in which mtX/5-fu therapy was effective for disseminated intravascular coagulation syndrome due to carcinomatosis of bone marrow
5. Kazuhiko uefuji: Oxaliplatin/5-fluorouracil/leucovorin treatment in sigmoid colon cancer involving acute disseminated intravascular coagulation
6. Masanao Kurata: Successful mtX-5fu sequential therapy for disseminated intravascular coagulation due to systemic bone marrow metastasis after operation for cancer of the sigmoid colon
7. Takayuki Tajima: A case of poorly differentiated carcinoma of the ascending colon with rapid postoperative progression suggesting disseminated carcinomatosis of the bone marrow