

Case conference 2013.03.20

Supervisor: Dr.楊毓錚
Speaker: PGY 黃琬堤

General data

- Gender: male
- Age: 86 y/o
- Vital sign: T/P/R: 30.4/53/26 BP:125/55 mmHg
- Consciousness: E4V5M6
- SpO2:92%

Chief complaint

- Abdominal pain for several days

Present illness

- Bed-ridden status due to dementia for 2 months
- Oliguria since yesterday
- General edema for many days
- No fever, diarrhea

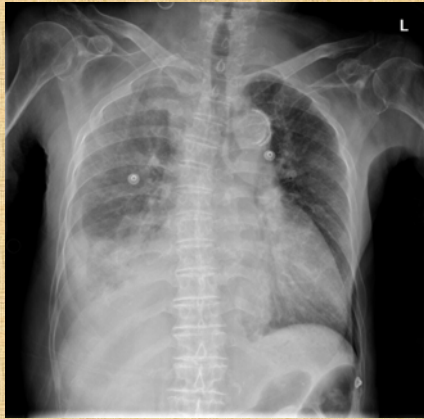
Personal history

- Occupation: retired farmer
- Medication
 - no DM
 - no HTN
- Surgery
 - hip
- Allergy
 - NKA

Physical examination

- HEENT: eyelid edema, pale conjunctiva
- Chest: bilateral rales, right> left side
- Abdomen: soft, diffuse muscle guarding
- Extremities: four limbs pitting edema, grade II

CXR-
day 1



KUB



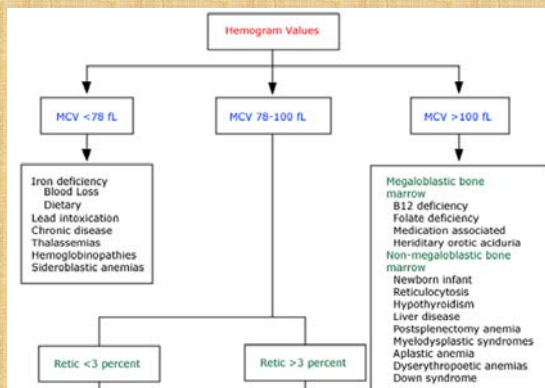
Lab data day1

CBC/Platelet/DC			PT		
WBC	6.9	X1000/uL	PT	19.4	second
RBC	2.76	million	Normal control	10.2	second
Hb	4.0	gm/dl	INR	1.89	Ratio
Ht	15.6	%	APTT	39.1	second
MCV	56.5	fl	Normal control	32.8	second
MCH	14.5	pg	APTT ratio	1.19	
MCHC	25.6	%			
RDW	23.1	%	Glucose	96	mg/dL
Platelet	110	x1000/uL	GOT(AST)	265	U/L
Differential count			T-Bilirubin	1.1	mg/dL
Segmented Neutro.	90.0	%	CFR	567	U/L
Lymphocyte	6.0	%	EUN	50	mg/dL
Monocyte	4.0	%	Creatinine	1.6	mg/dL
Eosinophil	0.0	%	eGFR	41.19	
Basophil	0.0	%	Lipase	988	U/L
Atypical lymphocyte	0.0	%	Troponin I	0.030	ug/L
Band	0.0	%	CRP	2.730	mg/dL
Metamyelocyte	0.0	%	albumin	3.4	g/dL
Myelocyte	0.0	%			

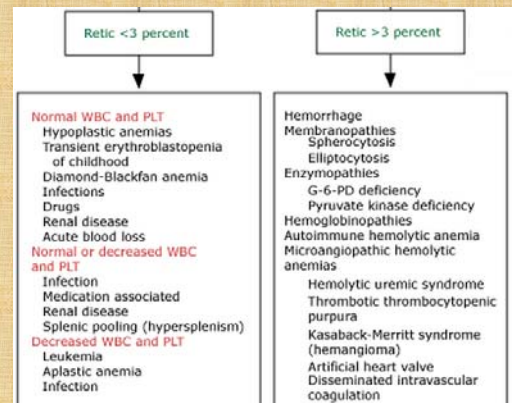
Tentative diagnosis

- 1. Abdominal pain, cause to be determined
- 2. General edema
- 3. Acute urine retention
- 4. R/o sepsis
- 5. Severe anemia

Anemia



Anemia



Hospital course

- Day 1
- Abdominal pain
 - Muscle guarding
 - Chest pleural effusion
- abdominal CT and chest CT
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- Severe anemia
- BT pRBC 4u

Hospital course-day 1

- peritonitis
- Invanz 1gm qd, iv

- Anemia survey
- biochemistry

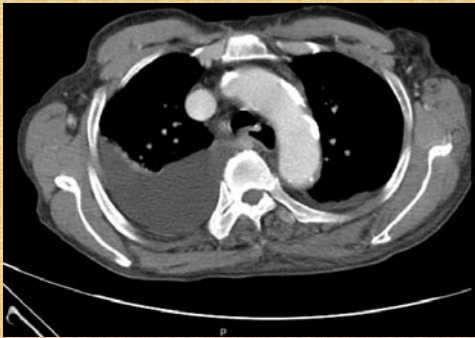
r-OT	66	U/L
Serum Iron/TIBC	*****	
Iron	13	ug/dL
TIBC	293	ug/dL
Iron/TIBC	4.437	
Ferritin	59	ng/mL

OPT(ALT)	518	U/L
T-Bilirubin	1.1	mg/dL

→ stool

Occult blood (Chem)	2+
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Hospital course



Hospital course



1. Acute pancreatitis.
2. CBD dilatation, cause

Hospital course-1/16

- Pleural effusion
- chest echo and thoracentesis for further survey

Right:
Moderate amount of pleural effusion was noted.
Ascites was also noted.
Thoracentesis was done and 1000 ml
yellowish and cloudy pleural fluid was obtained.

Color	Yellow	
Appearance	Cloudy	
Sp-gr.	1.016	
Rivalta's test	Negative	
RBC	324	10 ⁹ /ul
WBC	68	10 ⁹ /ul
L:N	61%:39%	
Glucose	89	mg/dL
Total-protein	1.35	g/dL
LDH	133	U/L

Left:
Moderate amount of pleural effusion was noted.
Ascites was also noted.

Hospital course-day 2

- suspected biliary pancreatitis
- ERCP was suggested

Parasite Ova-Direct Hook worm

→ Mebendazole 500mg qd

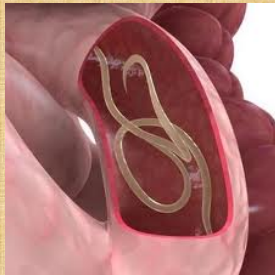
Hospital course-1/16

- desaturation through non-rebreathing oxygen mask after ERCP
- respiratory distress → intubation
- transfer to ICU



- 1 Hook worm infestation, migration related pancreatitis
- 2 Pneumonia with respiratory failure
- 3 Four chambers dilatation, severe TR, and moderate pulmonary hypertension
- 4 Pleural effusion and ascites
- 5 Severe anemia

Discussion HOOK WORM



Ancylostoma duodenale 十二指腸鉤蟲 Necator americanus 美洲鉤蟲

• Morphology

Ad : ♀ : 8-11x0.6mm

♂ : 8-11x0.45mm, 尾部有交尾囊

egg : 56-75 X 36-40 um



• 生活史 (直接)

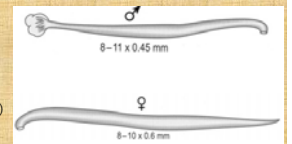
終宿主：人

感染方式

- 絲狀幼蟲 (L3) 鑽入皮膚
- 食入絲狀幼蟲 (十二指腸鉤蟲)

• 寄生部位

成蟲寄生於小腸



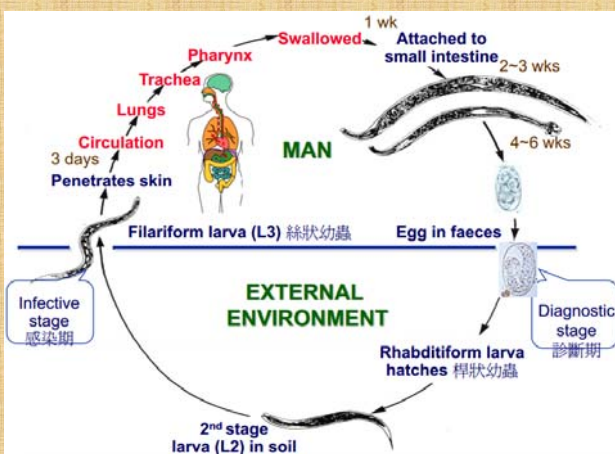
Clinical Pathology Penetration of skin by F-form larvae (L3)

• Gound itch

- Skin reaction (urticaria 蕁麻疹) at the site of larval penetration stinging sensation followed by irritation, erythema, oedema and papulovesicular eruption

• Creeping eruptions 匍行性疹

- *A. braziliense* and *A. caninum* wandering through the cutaneous layer (cutaneous larva migrans) cause intense irritation and inflammation.
- Most of the larva die in the skin.



Clinical Pathology

Migration of F-form larvae (L3)

- **During invasion of the circulation:**
Usually no ill-effects
- **During migration through the lungs:**
Pneumonitis (肺炎) with cough (咳嗽), wheeze (哮喘), fever (發燒), transient X-ray shadows

Clinical Pathology

Established intestinal infection by adult worms

- Epigastric duodenal-type pain, indigestion, loss of appetite or diarrhea
- **Hookworm anaemia (HWA)**
 - Losses of blood, iron and proteins
 - Occasionally associated with folate deficiency
 - Adult worms attach to duodenum and jejunum by teeth or cutting plates (mechanical)
 - Worms move every 4-6 hours (blood leaking)
 - Worms feed on blood from cut vessels and mucosal tissue (chronic blood loss)

Ancylostoma duodenale 十二指腸鉤蟲 Necator americanus 美洲鉤蟲

- Diagnosis- stool
 - Direct smear for eggs
 - Egg culture for 1st stage larva (L1)
- Treatment
 - Mebendazole
 - Albendazole
 - Levamisole

Ancylostoma duodenale 十二指腸鉤蟲 *Necator americanus* 美洲鉤蟲

□ 流行病學

- 全球性分佈 (溫暖潮濕地區)
- 熱帶、亞熱帶地區

□ 病變 & 臨床症狀

- 皮膚癢、皮膚炎、爬行疹 (creeping eruptions)、咳嗽、肺炎、哮喘、發燒、下痢、腹痛、嗜酸性白血球增多
- 貧血 (Hookworm anaemia)
造成缺鐵性貧血、葉酸缺乏
- Spoon nail
- Ascites



Thank you for your listening!