ER-Infection combine meeting

- 新光吳火獅紀念醫院
- 急診醫學科 R3許哲彰/VS洪世文
- 101.07.21

Triage

- Vital signs: T/P/R: 39.7/ 165/ 22
- BP: 101/69 mmHg, SpO2: 96%
- Triage II
- GCS: E4V5M6
- 35 year-old man
- Chief complaint: 痔瘡出血疼痛

Present illness

- 痔瘡出血疼痛幾天了
- 說不出fever幾天
- No abd pain, no N/V, no diarrhea, no chills, no myalgia
- No animal contact hitory
- No travel history

Past history

- CKD

Physical examination

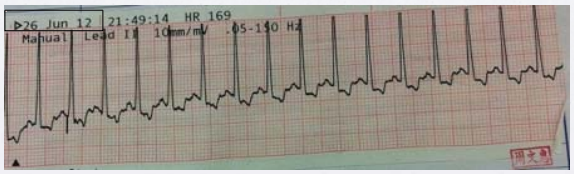
- GCS: E4V5M6
- HEENT: supple
- Chest: clear breathing sound
- Abdomen: soft, no tender
- Extremities: warm
- DRE: perianal abscess, internal hemorrhoid, no active bleeding

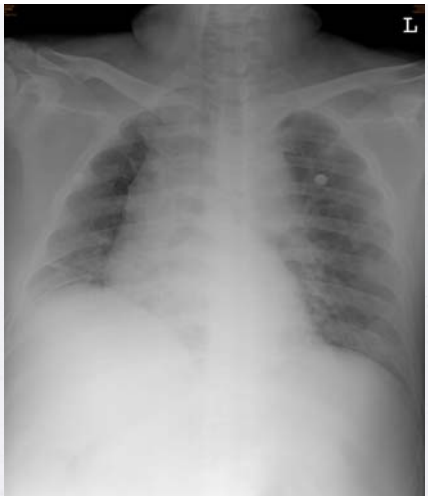
Order

- On monitor
- F/S(157)
- CBC/DC/PLT
- PT/aPTT
- BUN/Cr, AST, Na, K, Troponin-I, CRP
- Lactate
- N/S 500cc v st then 60cc/hr
- B/C x II
- ECG/CXR
- Tinten 2# po st

ECG

- Sinus tachycardia





Lab data

檢驗項目名稱	檢驗值	檢驗值單位	最小參考值	最大參考值	Hi,Lo值
CBC/Platelet/DC	**********				
WBC	13.7	X1000/ul	3.800	10.000	*H
RBC	4.58	million	4.500	5.700	
Hb	12.7	gm/dl	13.000	18.000	*L
Ht	38.3	%	40.000	54.000	*L
MCV	83.6	fl	81.000	98.000	
MCH	27.7	pg	27.000	32.000	
MCHC	33.2	%	32.000	36.000	
RDW	14.7	%	11.500	14.500	*H
Platelet	164	x1000/ul	140.000	450.000	
Differential count	**********				
Segmented Neutro.	85.0	%	37.000	75.000	*H
Lymphocyte	9.0	%	20.000	55.000	*L
Monocyte	4.0	%	4.000	10.000	
Eosinophil	0.0	%	0.000	5.000	
Basophil	0.0	%	0.000	2.000	
Atypical lymphocyte	0.0	%	0.000	3.000	
Band	1.0	%	0.000	5.000	
Metamyelocyte	1.0	%	0.000	0.000	*H
Myelocyte	0.0	%	0.000	0.000	

檢驗項目名稱	檢驗值	檢驗值單位	最小參考值	最大參考值	Hi,Lo值
GOT(AST)	20	U/L	5.000	35.000	
T-Bilirubin	0.9	mg/dL	0.200	1.300	
BUN	59	mg/dL	8.000	20.000	*H
Creatinine	3.9	mg/dL	0.500	1.300	*H
eGFR	17.68				
Na	138	meq/L	133.000	145.000	
K	5.1	meq/L	3.300	5.100	
Troponin I	0.048	ug/L	0.000	0.500	
CRP	26.400	mg/dL	0.000	0.500	*H

檢驗項目名稱	檢驗值	檢驗值單位	最小參考值	最大參考值	Hi,Lo值
Lactate	22.7	mg/dL	4.500	19.800	*H

Order

- Consult GS
- I & D
- sent abscess for pus culture
- Cefmetazole 1g v q8h + st
- IV lock
- (TPR:37.7/120/20, Bp:142/87)
- Abdominal CT without contrast

CT

Next step

- 轉ＥＣ
- 排Inf 床
- F/u Lactate, VBG (G6) cm
- What will you do next ?

EC doctor's order

- Due to perianal abcess & lung small nodule + previous steroid & skylofosfamide use for about 6 months => Shift antibiotics to Cravit + SABS cover atypical infection
- Check U/A, protein, BUN/Cr, Na

1	1MDC07	Syklofosfamid ta	TABL	1.00	PO	QN
2	1MIR05	Tritace 10mg	TABL	1.00	PO	QD
3	1MISO6	Sevikar 5/20 錠	TABL	1.00	PO	QD
4	1MIA10	Tonsaric 100mg/t	TABL	3.00	PO	QD
5	1MMM14	methylPREDNISOLO	TABL	6.00	PO	QD
6	1MQA06	Actein 200mg	PACK	1.00	PO	TID
7	1MQM02	Medicon-A cap	CAPS	1.00	PO	TID
8	1SOC01	Cough Mixture	CC	7.50	PO	TID

Next step

- fever around 38.5~40C and HR still around 130~140 in the early morning
- What do you want to do? Disposition?

Next step

- TSH, FT4, HIV
- Arrange heart echo
- Admitted to AICU

Data

檢驗項目名稱	檢驗值	檢驗值單位	最小參考值	最大參考值	Hi,Lo值
TSH	0.0924	uIU/mL	0.350	4.940	*L
T4,Free	0.66	ng/dL	0.700	1.480	*L

檢驗項目名稱	檢驗值	檢驗值單位	最小參考值	最大參考值
Sediment	**********			
RBC	1-2	/HPF	0.000	2.000
WBC	0-1	/HPF	0.000	5.000
Epithelial cell	0-1	/HPF	0.000	5.000
Cast	Not Found	/LPF		
.cast-amount	-			
Crystal	Am.phos	/HPF		
.Cry-amount	+			
Bacteria	-			
Others	Not Found			

```
PH=7.386
PCO2=32.9 mmHg
PO2=33 mmHg
BE=-5 mmol/L
HCO3=19.7 mmol/L
TCO2=21 mmol/L
SO2=64 %
NA=139 mmol/L
K=4.3 mmol/L
HCT=32 %PCV
HB=10.9 g/dL
```

檢驗項目名稱	檢驗值	檢驗值單位	最小參考值	最大參考值	Hi,Lo值	前次檢驗值	前次日期
BUN	***	g/day	10.000	20.000			
Creatinine	81.7	mg/dL				54.0	1010210
TP/Cr	***					***	1010210
Na	71	meq/L	40.000	220.000			

FENa: 2.44%

檢驗項目名稱	檢驗值	檢驗值單位	最小參考值	最大參考值
HIV Screen	0.16	S/CO	0.000	0.999

Next step

- Admitted to AICU at day2
- **Consult endocrine** => suspect sick euthyroid syndrome => check cortisol level

檢驗項目名稱	檢驗值	檢驗值單位	最小參考值	最大參考值	Hi,Lo值
**AM Cortisol	38.3	ug/dL	6.200	19.400	*H
**PM Cortisol	38.3	ug/dL	2.300	11.900	*H
**UR Cortisol	***				

- **consult infection** => suggest ABx:
- Teicoplanin 400mg iv Q12H x 3dose then 400mg QOD
- Fortum 2g iv st then 1g Q12H
- SABS 500mg iv Q8H

Next

- day4 Heart echo: EF59%, no vegetation, preserved LV contractility. vital sign stable => transfer to infection ward
- day6 B/C: Listeria & Samonella, pus culture:E.coli & proteus, shift ABx to Ampicillin + Ceftriaxone + SABS
- day6 headache in the night, Tinten was given by duty doctor
- day7 Left side weakness was noted. MP:right5/left2

- What's your impression? what will you do next?

CT

Next

- day7 Conscious drowsy(可點頭)，臉會抽筋，Neuro was consulted and suggest MRI, TCD, ECD, suspect brain abscess with complex partial seizure r/o stroke, add Depakine
- day8 Transfer to ICU for further observation
- day8 MRI: favor cerebritis
- day10 EEG: diffuse cortical dysfunction, no seizure wave; TCD/ECD: normal flow. P't conscious E4V4M6, slow response
- day11 E4V5M6, slow response MP: left 2, transfer to ward

Next

- day14 f/u Brain CT (no specific change)
- Now still on Ceftriaxone + SABS + Ampicillin
- MP: right 5/left 2-3
- con's: E4V5M6
- Keep rehabilitation

Discussion:

1999 NEJM

FEVER IN IMMUNOCOMPROMISED PATIENTS

PHILIP A. PIZZO, M.D.

TYPE OF EVALUATION	CANCER		TRANSPLANTATION					SPLENECTOMY	HIV INFECTION OR AIDS	
	LOW RISK	HIGH RISK	BONE MARROW	KIDNEY	LIVER	LUNG	HEART		CHILDREN	ADULTS
History and physical examination	+	+ (repeat daily if fever is present)	+ (repeat daily if fever is present)	+ (repeat daily if fever is present)	+ (repeat daily if fever is present)	+ (repeat daily if fever is present)	+ (repeat daily if fever is present)	+	+	+
Hematologic										
CBC and differential count	+	+	+	+	+	+	+	+/−	+/−	+/−
Platelets	+	+	+/−	+/−	+/−	+/−	+/−	+/−	+/−	+/−
Coagulation studies	−	+/−	+	+/−	+	+/−	+/−	+/−	−	−
Microbiologic										
Nose and throat	Sx	Sx	Sx	Sx	Sx	Sx	Sx	−	−	−
Urine	+	+	+	+	+/−	+/−	+/−	−	Sx	Sx
Stool	−	−	−	−	−	−	−	−	Sx	Sx
Blood	+	+	+	+	+	+	+	+	+	+
Cytomegalovirus antigen	−	−	+	+	+	+	+	−	Sx	Sx
Epstein–Barr virus PCR	−	−	Sx	Sx	Sx	Sx	Sx	−	Sx	Sx
Cerebrospinal fluid	−	−	−	−	−	−	−	+/−	+/−	Sx†
Radiologic										
Chest	Sx	+	+	+	+	+	+	+	+	+
Sinus	−	+/−	+/−	−	−	+/−	+/−	−	Sx	+/−
Special studies§	Sx	Sx‡¶	Sx‡	Sx	Sx	Sx	Sx	Sx	Sx	Sx

*A plus sign denotes indicated; a minus sign, not necessary; a plus sign and a minus sign, may be necessary; Sx, when symptoms are present; CBC, complete blood count; and PCR, polymerase chain reaction.

†An evaluation of cerebrospinal fluid is especially important in patients with persistent fever.

Approach to immunocompromised patient with fever and pulmonary infiltrate

- CXR is NOT sufficient
- DDX include infectious and noninfectious
- Historical clues
- Sampling
- Selection of initial therapy

Rev Neurol. 2005 Feb 16-28;40(4):219-21.

[Brain abscesses due to Listeria monocytogenes].

[Article in Spanish]

Adeva-Bartolomé MT, de Castro-García FJ, Castellanos-Pinedo F, Zurdo-Hernández JM.
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- must be investigated in all patients with cellular immunosuppression who present febrile symptoms.
- The central nervous system may be the only area of the body infected.
- CNS system will need studying in patients who present neurological focus data or an alteration in the state of consciousness and bacteraemia due to L. monocytogenes.

Enferm Infecc Microbiol Clin. 2010 Feb;28(2):87-94. Epub 2009 Oct 3.

[Brain abscess due to Listeria monocytogenes in adults: six cases and review of the literature].

[Article in Spanish]

Moragas M, Martínez-Yélamos S, Murillo O, Fernández-Viladrich P.
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Abstract

INTRODUCTION: Listeria monocytogenes is a gram-positive bacillus, with special tropism for the central nervous system (CNS). Brain abscess caused by Listeria has not been extensively studied, although it accounts for 10% of CNS infections due to this microorganism.

METHODS: We present 6 patients with Listeria brain abscess consecutively admitted to Bellvitge University Hospital over the last 7 years. A literature review covering 40 years retrieved 70 patients with Listeria brain abscess. The epidemiologic, clinical, microbiological, and radiological findings related to this entity, and the outcome features are described.

RESULTS: Brain abscess due to Listeria has a poor prognosis and is associated with elevated mortality.

CONCLUSION: A high index of suspicion is needed to reach an early diagnosis and establish appropriate antibiotic treatment, which will improve the outcome of this condition. Suspicion is based on the presence of fever and neurological symptoms, particularly in immunodepressed or diabetic patients.

Discuss this case

- 一開始的抗生素選擇是否恰當？
- 如何選擇經驗性抗生素？ Why Teicoplanin + Fortum + SABS
- Next time, what should we do ?

- Thank you for your attention !