Case conference

Supervisor: VS吳柏衡
Presentor: R1劉邦民
102.12.16

Visit ER at 10:43

- 60 y/o male
- Chief complaint: syncope
- Triage: I
- T/P/R:33.2/81/18, BP=78/41mmHg, SpO2=92%
- Conscious: E4V5M6

Present illlness

- Initial mild abdominal pain

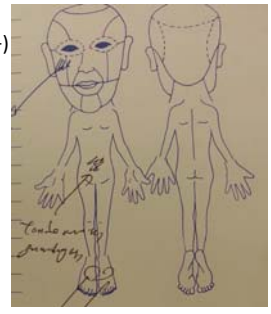
→喝了一瓶保力達B後肚子大痛(VAS:8)
→Syncope within minute(頭擦傷)
→醒來後complain 肚子痛, denied back pain, limb numbness

Past history

- Allergy: NKA
- Medical history
  - DM(+), Hypertension(+)
- Surgical history
  - Unknown
- Alcohol history:每天都喝

Physical examination

- Cons: E4M6V5
- Head & neck: Pupil: 3/3, light reflex: +/+
- Chest: clear breath sounds, RHB
- abdomen: Tenderness(+), guarding(+)
  no back pain and tenderness
- Extremity: freely movable
  no numbness
  symmetric pulse(dorsalis pedis a.)



Impression

- Abdominal pain r/o pancreatitis
- Head injury

Management(10:58)

- N/S 500 ml STAT, then 60 ml/hr
- FS(High)
- ABG(6)
- CBC/DC/platelet
- AST, Cr, Troponin-I, Lipase ketone, Cl
- EKG
- Morphine 5 mg IV ST
- Whole body CT

11:06

PH=7.274
PCO2=35.0 mmHg
PO2=113 mmHg
BE=-11 mmol/L
HCO3=16.2 mmol/L
TCO2=17 mmol/L
SO2=98 %
NA=133 mmol/L
K=3.7 mmol/L
HCT=32 %PCV
HB=10.9 g/dL

Management(11:13)

- RI 10 IV ST
- Check FS Q1H X2
- T.T 0.5 ml IM ST
- Bacitracin 1 tube EXT ST
- Wound CD
- On BP monitor(11:21)

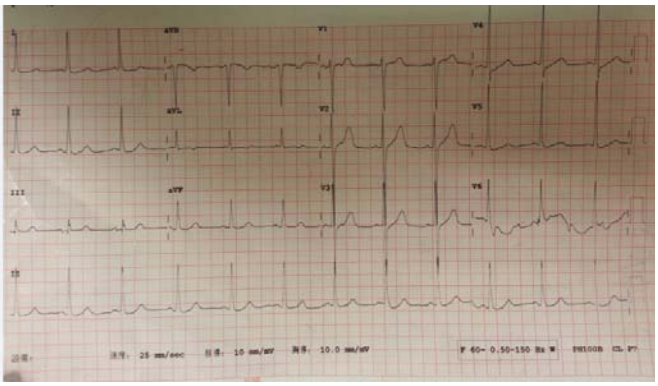
Management(11:26)

- N/S 500 ml IV ST
- Bedside echo (poor echo window)
  - No obvious AAA
  - Some ascites noted
- On line 2 with lock
- Check 四肢BP
- (1139) Warm N/S 1000 IV ST

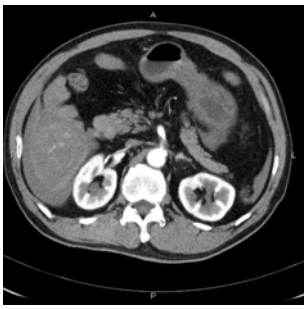
Management(1151)

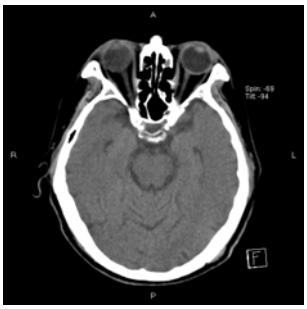
- Bain ½ amp iv st
- Aorta CT with/without contrast + brain CT
- DC whole body CT without contrast

EKG



Aorta CT + Brain CT





Laboratory data

檢驗項目名稱	檢驗值	檢驗值單位
CBC/Platelet/DC	**********	
WBC	7.3	X1000/ul
RBC	3.30	million
Hb	10.5	gm/dl
Ht	31.8	%
MCV	96.4	fl
MCH	31.8	pg
MCHC	33.0	%
RDW	12.6	%
Platelet	129	x1000/ul

檢驗項目名稱	檢驗值	檢驗值單位
Differential count	**********	
Segmented Neutro.	54.8	%
Lymphocyte	36.6	%
Monocyte	5.7	%
Eosinophil	2.6	%
Basophil	0.3	%

檢驗項目名稱	檢驗值	檢驗值單位
GOT(AST)	44	U/L
Creatinine	1.42	mg/dL
eGFR	50.85	
Cl	99	meq/L
Lipase	29	U/L
Troponin I	0.29	ug/L

檢驗項目名稱	檢驗值	檢驗值單位
Blood Ketone	0.2	mmol/L

Management (12:20)

- B/C X II
- VBG (4)
- 備血(PRBC:6, PLT:12, FFP:12)
- Jusomine 4 amp iv st
- Primperan 1 amp iv st
- (1229) TAE

12:33

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PH=7.150
PCO2=56.6 mmHg
PO2=20 mmHg
BE=-9 mmol/L
HCO3=19.7 mmol/L
TCO2=21 mmol/L
SO2=21 %
LAC=65.2 mg/dL
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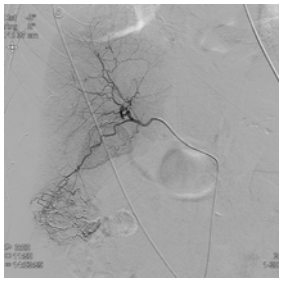
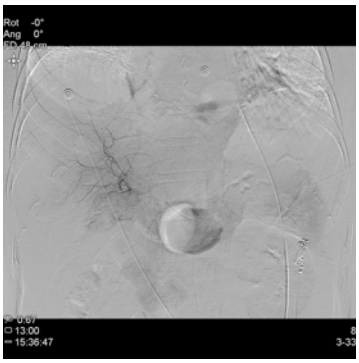
Management (1232)

- Morphine 6 mg iv st
- Pre-OP
- Sent patient to angioroom on call
- Contact GI doctor for admission(ward/ICU)
- (1256) 輸pRBC 2 U
- (1256) PT/PTT
- (1327) N/S 500 ML IV ST

檢驗項目名稱	檢驗值	檢驗值單位
PT	12.0	second
Normal control	10.8	second
INR	1.11	Ratio
APTT	27.4	second
Normal control	33.4	second
APTT ratio	0.82	

Angiography





Management(1550)

- 烤燈 use
- Morphine 7 mg iv st
- 輸 pRBC 2 u
- (1600) admission to RI-6

ICU course

D1 → D2 → D3

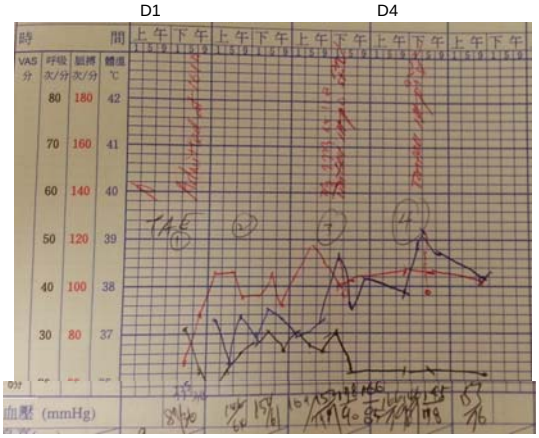
輸pRBC:2+2, FFP:8, PLT:12
(Hb:10.5->8.2->8.6)
On neck CVC
N/S 500+500 ml iv
Abdominal echo
Hyperkalemia episode(K:7.2-->4.9)
ScvO2: 52.6%→65.3%→86%
Lactate: 87.8→28.4 mg/dl

Hb:8.9, K:3.8
GOT/GPT:311/70
D/T-BIL:0.21/0.77
HBsAg:932.6 IU
Anit-HCV:Neg
ScvO2: >90%

Transfer to 7B

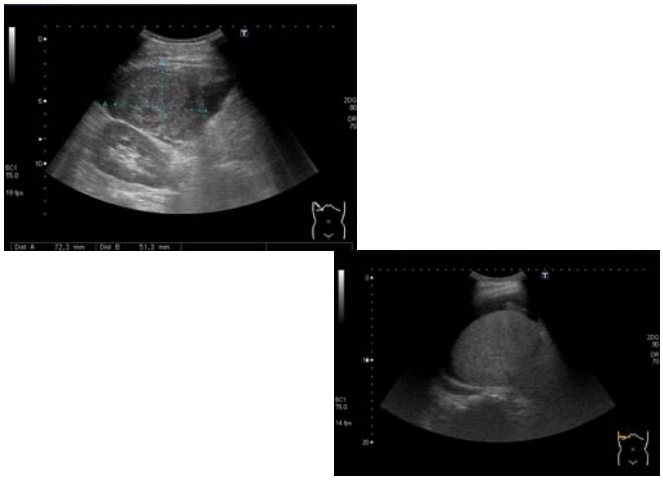
TPR

D1 D4

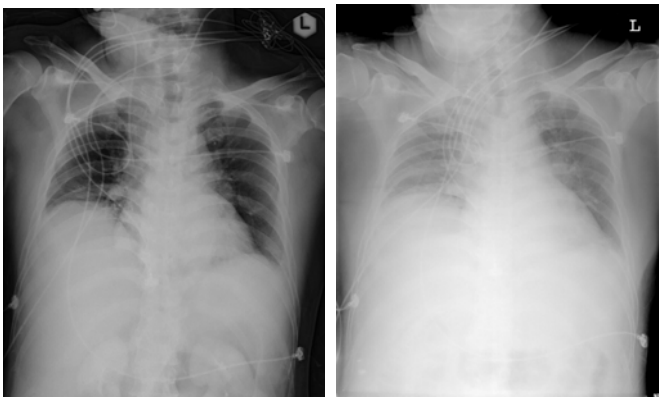


Abdominal echo

- Mild fatty liver
- Hepatocellular carcinoma, Posterior Inferior segment (S6)
- Cholecystopathy secondary to parenchymal liver disease,
- Ascites, bloody



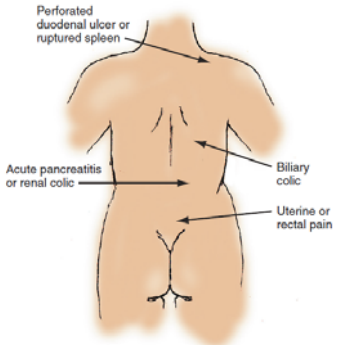
CXR(D1)



Discussion

Characterization of pain

- provocative and palliating factors
- Onset
- Quality
- Radiation
- Site
- Associated S/S
- Time course



High risk feature of abdominal pain

History
Age over 65
Immunocompromised (eg, HIV, chronic glucocorticoid treatment)
Alcoholism (risk of hepatitis, cirrhosis, pancreatitis)
Cardiovascular disease (eg, CAD, PVD, hypertension, atrial fibrillation)
Major comorbidities (eg, cancer, diverticulosis, gallstones, IBD, pancreatitis, renal failure)
Prior surgery or recent GI instrumentation (risk of obstruction, perforation)
Early pregnancy (risk of ectopic pregnancy)
Pain characteristics
Sudden onset → organ perforation or ischemia/ obstruction of a small tubular structure
Maximal at onset → abdominal or extraabdominal vascular emergencies
Pain then subsequent vomiting → more likely to a surgical process, such as bowel obstruction
Constant pain of less than two days duration
Exam findings
Tense or rigid abdomen
Involuntary guarding
Signs of shock

DDX of Abdominal pain+ shock

Table 74-2 Grouping of Known Abdominal Diseases by Symptoms		
Pain/vomiting/± rigidity	Pain/vomiting/distention	Pain (± vomiting)
Acute pancreatitis	Bowel obstruction	Acute diverticulitis
Diabetic gastric paresis	Cecal volvulus	Adnexal torsion
Diabetic ketoacidosis		Mesenteric ischemia
Incarcerated hernia		Myocardial ischemia*
		Testicular torsion
Pain/shock	Pain/shock/rigidity	Distention (± pain)
Abdominal sepsis	Perforated appendix	Elderly with bowel obstruction/volvulus
Aortic dissection	Perforated diverticulum	
Hemorrhagic pancreatitis	Perforated ulcer	
Leaking/ruptured abdominal aortic aneurysm	Ruptured esophagus	
	Splenic rupture	
Mesenteric ischemia (late)		
Myocardial ischemia*		
Ruptured ectopic pregnancy		

Life threatening condition

- Abdominal aortic aneurysm
- Mesenteric ischemia
- Perforation of gastrointestinal tract (including peptic ulcer, bowel, esophagus, or appendix)
- Acute bowel obstruction
- Volvulus
- Ectopic pregnancy
- Placental abruption
- Myocardial infarction
- Splenic rupture (eg, secondary to EBV, leukemia, trauma)

REVIEW ARTICLE

Spontaneous Rupture of Hepatocellular Carcinoma

A Systematic Review

Eric C. H. Lai, MB, ChB, MRCSEd; W. Y. Lau, MD, FRCS, FRACS(Hons)

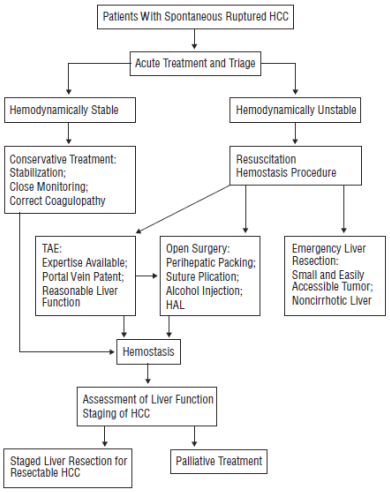
Arch Surg. 2006;141:191-198

epidemiology

- Ruptured HCC: 3-15%
- Mortality rate of rupture HCC in acute phase: 25-75%
- Liver failure during acute phase : 12-42%

Clinical manifestation

- Sudden onset of abdominal pain(66-100%)
- Shock(33%-90%)



TAE

- Contraindication: complete occlusion of main portal vein
- Successful rate: 53-100%

Table 2. Results of Transarterial Embolization for Ruptured Hepatocellular Carcinoma in the Acute Phase

Source	Sample Size	Size of Tumor, cm	Success Rate, %	Liver Failure Rate, %	In-Hospital Mortality Rate, %	30-Day Mortality Rate, %
Nouchi et al,[14] 1984	4	NA	75	NA	25	NA
Sato et al,[20] 1985	6	NA	100	33.3	NA	16.7
Chen et al,[46] 1986	3	NA	100	NA	0	NA
Hsieh et al,[21] 1987	17	NA	100	11.8	NA	29.4
Okazaki et al,[22] 1991	38	NA	100	26.3	NA	36.8
Corr et al,[23] 1993	15	Mean, 9 (range, 3-12)	53	13.3	NA	22.2
Ngan et al,[24] 1998	33	Median, 12 (range, 3-32)	97	27.3	NA	36.4
Castells et al,[47] 2001	7	NA	100	NA	28.5	NA
Liu et al,[18] 2001	42	NA	83	29	NA	36
Leung et al,[25] 2002	31	Mean, 9.8 (3-23)	100	19	NA	26

- Complication:
  - postembolization syndrome(26-85%)--fever, abdominal pain, nausea, and liver enzyme elevation)
  - Liver failure (11.8%-33.3%)

Prognostic factor in acute phase

- The serum bilirubin level(T-BIL>2.92 mg/dl)
- shock on hospital admission
- prerupture disease state

Conclusion

- Transarterial embolization is effective in controlling bleeding for ruptured HCC in the acute phase
- It is still unclear whether the long-term outcome of curative liver resection for HCC with previous rupture is inferior to that for HCC without rupture