

A case of bradycardia / hypotension

18th May 2010

HKWC Toxicology Meeting

By Dr WL Yip / QMH

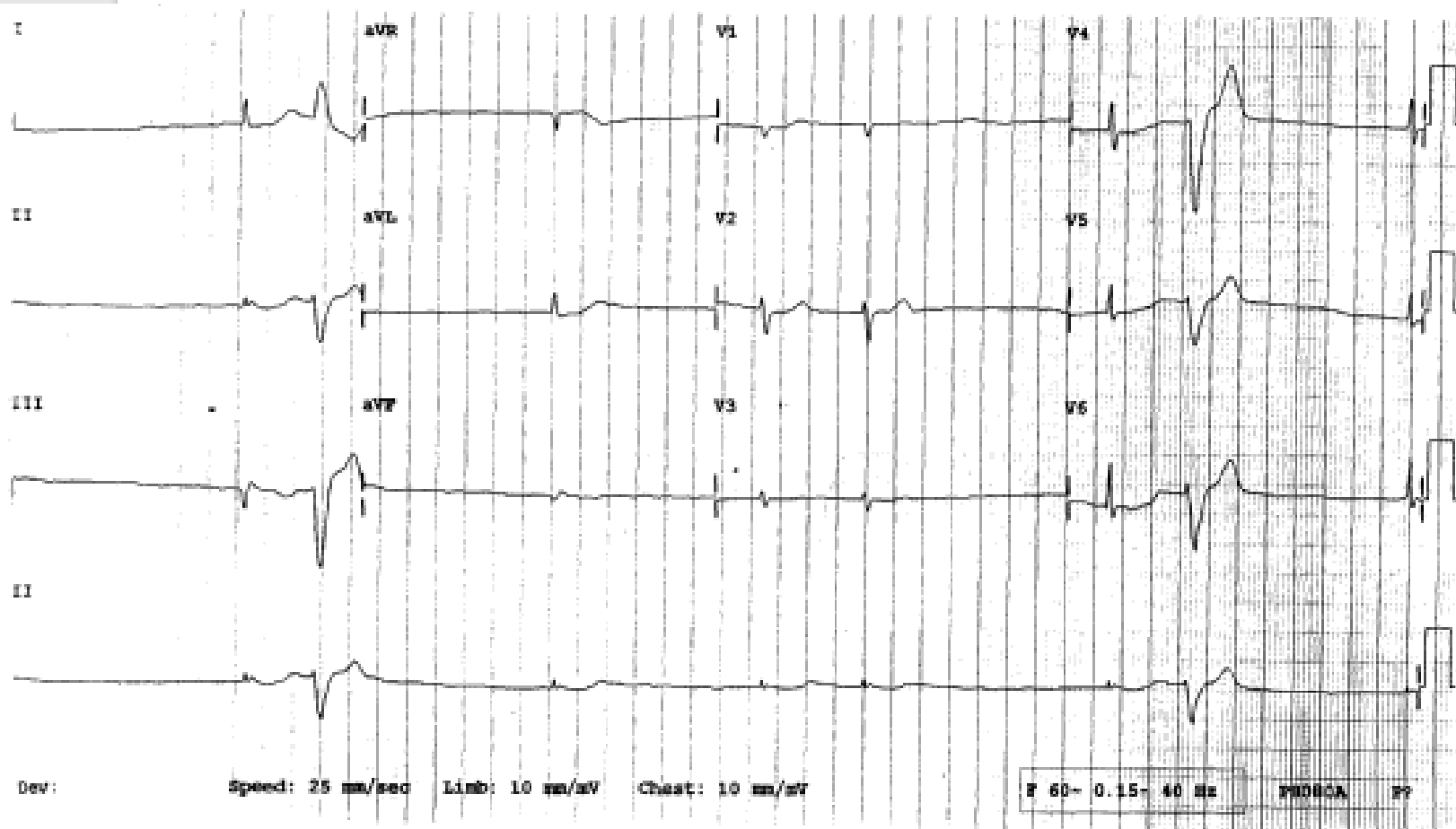
Clinical history

- M / 68 yo
 - Visitor from UK
 - AF, CHF, DM, hyperlipidemia
 - No recent change in medication
 - Recent GE 2/52 with diarrhea
 - Treated conservatively
- Diltiazem XL 120mg daily
 - Carvedilol 25mg daily
 - Digoxin 250mcg daily
 - Ramipril 10mg daily
 - Co-amilofruse 40mg daily
 - Metformin 500mg BD
 - Warfarin 4/3mg
 - Lipitor 20mg daily

Clinical history

- 2 episodes of syncope / fall recently without LOC
 - 1st 2/52 ago in UK
 - 2nd 3/7 ago
- Related to changing posture
- Attend AED with increase in weakness / poor appetite
- Fully conscious
- Pulse slow / weak
- Chest – creps+
- BP 140/50mmHg
- P 50/min
- SaO₂ 96% RA

ECG



Other investigations

- CXR – cardiomegaly with clear lung fields
- Bedside Echo – poor LV function, with no pericardial effusion
- I-stat – Na / K normal with no acidosis
- H'stix 10.2

F. OBSERVATION/VITAL SIGNS

BP	Pulse	A 142/100, 142/100, 142/100, 142/100, 142/100				
200	260					
180	240					
160	220					
140	200					
120	180					
100	160					
80	140					
60	120					
40	100					
R pappt	Stemmed Reaction					
L pappt	Stemmed Reaction					
T ₁ (R/T)(C)						
RR		18	18	18	18	18
SpO ₂ (%)		97	98	96	96	
O ₂ Used (%)		32	32	32	32	
ETCO ₂ (mmHg)						
CVP (cmH ₂ O)						
H's/six (mmHg)						
GCS	E	4	4	4	4	
	V	5	5	5	5	
	M	6	6	6	6	
TOTAL		15	15	15	15	

4 Etomidate	/												
5 NaHCO ₃	/												
6 Rocuronium	/												
7 Succinylcholine	/												
8	/												
9	/												
10	/												
11	/												
12	/												

H. IV FLUID (P = Peripheral, C = Central, IOS = Intravenous)

Line A: (Site: <u>RT hand</u>) (P/C/IOS)	Line B: (Site: <u>LT hand</u>) (P/C/IOS)										
Time	Nature	Amt.	Rate	Give in	Amt. given	Time	Nature	Amt.	Rate	Give in	Amt. given
1:30	NS	500	HR	10/10	500	1:30	NS	500	HR	10/10	500
2:00	NS	500	HR	10/10	500	2:00	NS	500	HR	10/10	500
2:30	NS	500	HR	10/10	500	2:30	NS	500	HR	10/10	500

Line C: (Site: _____) (P/C/IOS)	FLUID GIVEN AT A&E	Fluid Warmer <input type="checkbox"/> Pass <input type="checkbox"/> Used							
Time	Nature	Amt.	Rate	Give in	Amt. given	Name of fluid	Total amt. given	Name of fluid	Total amt. given
						Bartmann's		Blood	
						NS			
						D5			
						Celestone			
TOTAL amt. of fluid given at A&E: _____									

I. IV DRUG INFUSION

1. Dopamine: <input checked="" type="checkbox"/> 2mg in 50 ml D5 started at <u>1:30</u> hrs Rate <u>10</u> via Line: <u>A/B/C</u> Given by: <u>[Signature]</u>
2. _____ (_____ mg in _____ ml D5) started at _____ hrs Rate _____ via Line: A/B/C Given by: _____
3. _____ (_____ mg in _____ ml D5) started at _____ hrs Rate _____ via Line: A/B/C Given by: _____

Defibrillation	Time/ Joule	Time/ Joule	Time/ Joule	Time/ Joule					
Syn. Cardioversion									
Cardiac Pacing	Time	pps	mA	Time	pps	mA	Time	pps	mA

J. DISPOSAL

Wristband: Yes No Record with Patient's Label Yes No X-ray Films to Ward: Yes No

TO: CT Scan OT ICU CCU Ward A2 Unit: A2 Transfer Informed: Yes No

Relative/Friend Present: Yes No Admission Informed to Relative/Friend: Yes No

Property: Yes No Kept by: Patient Relative Ward PC Yes No

Drugs AED at _____ hrs Escorted by: [Signature] Escort Box Manual Resuscitator Portable Ventilator

Physiologic Monitor Pulse Oximeter ETCO₂ Debrillator Infusion / Syringe Pump Drugs

For Trauma Case Only T¹ before leaving A&E T¹ before leaving CT Suite

Certified dead at _____ hrs Dead DAA

Name of Doctor: _____ Signature: _____ Name of Nurse: _____ Signature: _____

Clinical progress

- BP dropped 1 hour after admission
- Remained conscious all along
- Consulted CCU – bed N/A
- To medical general ward

Blood test result...

- Mildly impaired RFT: Cr 113 μ mol/L, Ur 6.6
- Na/K / CK / CBP unremarkable
- INR 2.9
- Digoxin 3.2nmol/L (2.5ng/mL)
 - Therapeutic range 1.3–2.6nmol/L

Clinical progress in general ward

- BP 87/39 → 74/45mmHg
- P ~50/min
- Bradycardia / hypotension due to…
 - Digoxin overdose
 - Other cardiovascular drugs (diltiazem / carvedilol / ramipril / co-amilofruse)
 - Dehydration with diarrhea

Management

- IVF infusion
- Dopamine infusion
- DigiFab
- Warfarin withheld

- To CCU



Collect Date :	21/12/09	21/12/09	22/12/09	23/12/09	24/12/09	Ref. Range	Units
Collect Time :	14:49	21:22	06:23	06:24	08:02		
Request No. :	CC210765	CC221255	CC221390	CC231369	CC241467		
Remark :	Hypotensi on	bradycard ia.digoxi n overdose	bradycard ia	bradycard ia	bradycard ia.AF		

Na	139	141	142	138	139	136 - 148	mmol/L
K	4.7	4.4	4.2	4.0	3.7	3.6 - 5.0	mmol/L
Chloride	101	107	106	103	104	100 - 109	mmol/L
Urea	6.6	6.0	4.5	3.7	2.7 L	3.0 - 8.8	mmol/L
Creatinine	113 H	89	76	66 L	78	67 - 109	umol/L
R Glucose	10.6 H	--	--	--	--	2hr pp < 7.8	mmol/L
Calcium	--	--	1.97 L	--	--	2.24 - 2.63	mmol/L
Adjusted Calcium	--	--	2.13 L	--	--	2.24 - 2.63	mmol/L
Phosphate	--	--	0.91	--	--	0.88 - 1.45	mmol/L
Total Protein	63 L	--	--	--	--	68 - 84	g/L
Albumin	36 L	--	34 L	--	--	39 - 50	g/L
Globulin	27	--	--	--	--	24 - 37	g/L
Total Bili	30 H	--	--	--	--	4 - 23	umol/L
ALP	57	--	--	--	--	42 - 110	U/L
ALT	25	--	--	--	--	8 - 58	U/L
AST	17	--	--	--	--	15 - 38	U/L
LDH	129	--	--	--	--	118 - 221	U/L
CK	64 L	61 L	51 L	--	--	65 - 355	U/L

Outcome

- Gradually improved
- RFT normalized
- Dopamine weaned off the next day
- BP back to 130/70mmHg
- Discharged after 3 days