

Anaphylaxis (biphasic reaction)

EDU
Mini-Sim #1

Case title	Anaphylaxis (biphasic reaction)		Sim no.	EDU 1	
Setting	EDU	Patient age	25	Patient sex	F
Diagnosis	Biphasic reaction, known anaphylaxis to nuts. Patient on anaphylaxis pathway.		Curriculum code		
Equipment required	<ul style="list-style-type: none"> • Sim-Man torso or real patient • Defibrillator with training leads • Training cannulation set, simulated IM adrenaline. • Nebuliser Mask 				
Staff required	1x Junior doctor, 1x Junior nurse, 1x Senior nurse				
Learning objectives	<ul style="list-style-type: none"> • To demonstrate effective, structured A-E primary assessment & make a diagnosis of Anaphylaxis (Biphasic in this case) • Effective and appropriate clinical management of anaphylaxis (as per NICE guidelines/ED proforma). Quick administration of IM adrenaline. • Appropriate escalation of care: Adult 2222 call (patient develops stridor, needs to move to ER). 				

INITIAL SETUP

Observations				Arrival route	N/A
HR	120	GCS	E 4, V 5, M 6 = 15/15 (initially)	Carers?	N/A
RR	28			Progression: Patient develops hoarse voice and stridor. Presses buzzer. Nurse attends, pulls emergency buzzer. If IM adrenaline given, stridor improves but still struggling to speak in sentences. Patient will require transfer to ER with anaesthetic/ITU input. If no adrenaline given, patient goes into respiratory arrest.	
SpO2	91% on Air	Pupils	Equal		
BP	85/60	Temp	36.9°C		
CRT	3 seconds	Weight	60 kg		
Glucose	5.0				
Equipment on arrival	None	Additional info	Anaphylaxis to nuts, Asthma and Hay fever		

Instructions for patient

You are feeling extremely unwell and unable to speak in sentences. You are struggling to breathe.

If asked questions, you reply with 'Yes' 'No'. Hoarse voice and stridor until adrenaline given.

Despite initial treatments, you will remain unstable.

History from ICE discharge letter:

PMHx: Anaphylaxis to nuts, asthma, hay fever. One previous admission to ITU.

DHx: Salbutamol inhaler, Beclomethasone inhaler. PRN EpiPen.

SHx: Works at a bank, occasionally drinks alcohol, non-smoker.

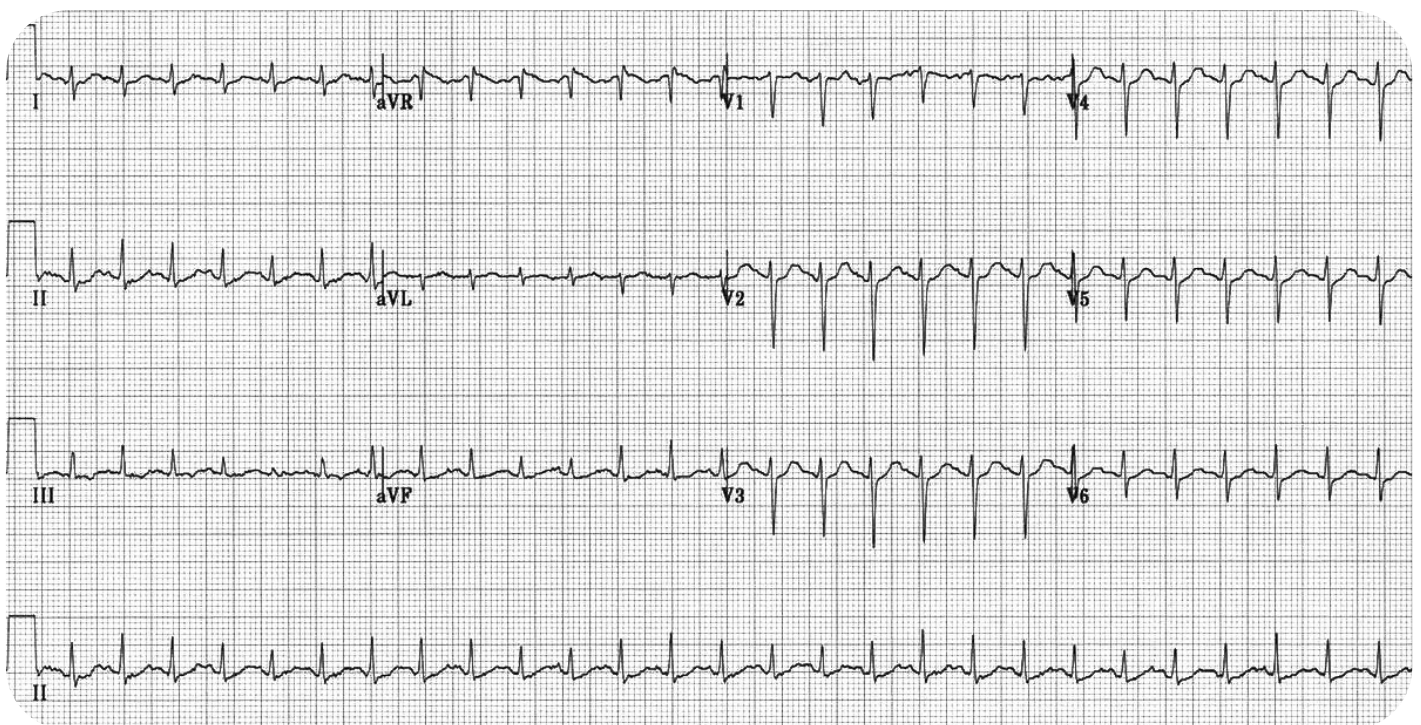
Instructions for EDU nurse

You are looking after the patient, she has been on EDU for 3 hours on the Anaphylaxis pathway. The patient presses the buzzer, you attend to her and find that she is struggling to breathe and has stridor.

You pull the emergency buzzer and start oxygen 15L, NRB mask.

Supporting investigations (VBG and ECG)

Gas type	VBG	Ref range
pH	7.36	7.35 → 7.45
pO ₂	8.1 (--)	10 → 14
pCO ₂	5.8	4.5 → 6
HCO ₃	22	22 → 26
BE	-3.5	-2 → 2
Na	136	135 → 145
K	3.0	3.5 → 5.5
Ca	1.32	1.1 → 1.35
Cl	106	98 → 106
Glu	5.5	4 → 6
Lactate	2.2 (+)	0.4 → 0.8
Bili	200	51 → 850
Hb	125	115 → 178



Generic debrief for scenario

There are lots of feedback models that can be used, but immediate feedback is essential to **aid learning**, to help **analyse the process** and **create solutions**.

For feedback to be effective and to improve patient safety overall, feedback should be:

S = Specific

M = Measurable

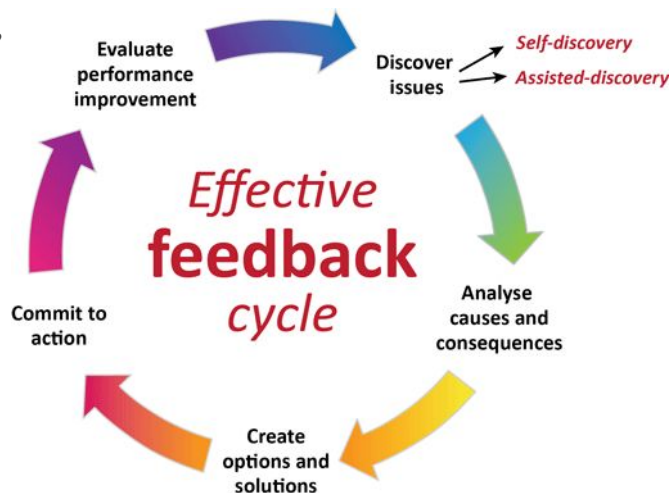
A = Achievable

R = Realistic

T = Timely

Example of a feedback model: (*Pendleton's Rules*)

1. Clarify any points of information/fact
2. Ask the learner what s/he did well (ensure that they identify the strengths of the performance and do not stray into weaknesses).
3. Discuss what went well, adding your own observations (if there is a group observing the performance, ask the group what went well – focussing on their strengths).
4. Ask the learner to say '*what went less well*' and '*what they would do differently*' next time.
5. Discuss what went less well, adding your own observations and recommendations (if there is a group observing the performance, ask the group to add their observations and recommendations)



Debrief specific for this scenario

Non-Technical Skills:

1. Was the Team Leader Role well defined?
2. Were other roles allocated and followed? (e.g. Were names used? Stickers used?)
3. Did the team communicate well? Use of closed-loop communication?
4. Did the team leader give clear instructions?
5. Did team members prioritise tasks effectively?

Technical Skills:

1. Safe and effective A-E assessment of patient, correctly identifying anaphylaxis with prompt administration of IM adrenaline.
2. Initiating correct symptomatic management e.g salbutamol nebs, IV hydrocortisone and chlorphenamine as per guidelines etc.
3. Escalating to EDU Consultant, presenting in SBAR format.
4. Rapid transfer to ER as patient has ongoing stridor, contacting anaesthetics/ITU.

