00:00:20 Faculty

Ok, so I have been looking after Winston but sadly I have to go look after another patient in the other bay. You're going to take over Winston's care. He has been quite static to be honest. So just to give some background, urosepsis, came into ED about 4 days ago because his wife found him collapsed. Low GCS and tube, gave him fluid support and things like that. His requirements, he's on 4ml of noradrenaline now and that's getting us a map of about 75. That's come right down from what it was when he came in, he's getting more stable so been weening that down quite well. From a respiratory point of view he's only on 30%, he's 16 over 5 and his tidal volume is about 450-500. There have been no problems with that at all. The new thing that has happened today is we turned his station off to maybe ween him off the ventilator and he's not waking up at all. Did a CT scan when he came in and that was normal. But now we're a bit worried because he hasn't woken up so just wondering if anything else has gone wrong. He is booked for CT scan because we are a bit worried, they're gonna do it tonight, in a couple of hours time. So it’s 10 o clock now so they said they would do it. Unusually they said they will do it about midnight, 1:00. But he has been steady. So if you get yourself settled, I will be around. I can assist you.

00:03:05 Nurse 1

Sure, do you know what is tube at on the teeth?

00:03:08 Faculty

Tube is at 22 to the teeth. And that’s not moved at all, size 7 tube.

00:03:21 Nurse 1

What sort of access have we got?

00:03:23 Faculty

We’ve got central line here with noradrenaline going, propafol and fentanyl are still attached but turned off. And you’ve got arterial line here. And you have got peripheral access.

00:03:35 Nurse 1

Ok brilliant, so it’s just norad going?

00:03:37 Faculty

Just norad, yeah.

00:03:40 Nurse 1 (to patient)

Hello Winston, I’m the nurse who is going to be looking after you today. I’m just going to do a few safety checks and stuff, to make sure everything is alright. And then I’ll have a little listen to your chest, if that is okay.

00:03:59 Faculty

Just to say, safety checks, may or may not be there so don’t worry. Nothing to catch you out.

00:04:18 Nurse 1

I’ll put a set of obs on there. There’s no previous obs on there, is there?

00:06:28 Nurse 1

Heart rate is looking a bit erratic, isn’t it? Looking a bit crazy, I’ll just see if I can get a doctor to come and have a look.

00:07:10 Nurse 2

Hi, you alright?

00:07:12 Nurse 1

Yeah, I’ve just taken a handover for Winston. I don’t how much you know about him?

00:07:14 Nurse 2

Just, urosepsis.

00:07:16 Nurse 1

Yeah, urosepsis, plan to go for a CT because he’s not waking up after 10.5 hours sedation. I’m just not really sure...about his heart rhythm showing up. It seems to spiking at 137, when I came in, it was about..in the 90s.

00:07:34 Nurse 2

Ok, have we got an ECG?

00:07:36 Nurse 1

Um, I think the previous ECG is on the table there. We haven’t done a recent one.

00:07:44 Doctor

Hi, what seems to be the problem?

00:07:46 Nurse 2

So it might be a flutter...ish...something like that. We haven’t done a proper ECG yet, I don’t know what his electrolytes are because I just walked in.

00:07:54 Nurse 1

I haven’t done a blood gas.

00:07:58 Doctor

Ok, and how much oxygen is he on?

00:08:00 Nurse 1

30%.

00:08:02 Doctor

Let’s increase his oxygen a bit, maybe to 60%? And let’s do a blood gas. Are you alright to do that?

00:08:07 Nurse 1

Yeah, sure.

00:08:19 Doctor

Ok, and he was urosepsis?

00:08:21 Nurse 1

Yeah, that’s right.

00:08:23 Doctor

Can we do a temperature too if that’s alright.

00:08:26 Nurse 1

Yeah sure, I was just adding to the obs now.

00:08:34 Nurse 2

Potassium has been a bit low, magnsium 0.75 so could be topped up.

00:08:39 Faculty

Temperature’s 36.8.

00:08:40 Nurse 2

Phosphate 0.95.

00:08:42 Doctor

36.8...ok...potassium was 3.2 on this last one. Let’s see what it is on this one. Right, I’ll do a quick examination anyway.

00:08:53 Nurse 2

Shall I give him some magnesium?

00:08:55 Doctor

Yeah, why not?

00:08:58 Nurse 2

2 grams?

00:09:00 Doctor

Right, and he’s not waking up, is he? Propofol is off...

00:09:03 Nurse 2

He’s not waking up. Propofol is off. He’s just on 4ml an hour of norad.

00:09:21 Doctor

Let's look at it (the blood gas).

00:09:23 Nurse 1

Ok, pH 7.3, pCO2 is 4.7, PO2 is 13, Hb is 95, Sodium is 135, Potassium is 3, calcium is 1.08, lactate 1.6

00:09:41 Doctor

Potassium is a bit low isn’t it?

00:09:43 Nurse 2

Has he got a central line?

00:09:45 Nurse 1

He has got a central line.

00:09:47 Doctor

Let’s give, let’s top up the potassium. Could you see his magnsium, you’ve not given any magnesium?

00:09:56 Nurse 2

0.75.

00:10:04 Doctor

So norad, map of 69 which is quite reasonable. We can probably leave it like that for now. I think she said he’s on (atenalol?), are we giving him that?

00:10:25 Nurse 1

So, there’s nothing signed for on the drug chart. So we’ll just treat him as he’s had nothing? Has he had atenalol?

00:10:39 Faculty

No, he’s on the norad, so he’s not had it. He was on it previously but he’s been hypotensive.

00:10:50 Nurse 1

Ok, so he’s not had any atenalol.

00:10:52 Nurse 2

Need to give him some potassium after as well.

00:11:03 Nurse 1

Just gonna finish plugging these numbers in.

00:11:15 Doctor

How does he feel peripherally?

00:11:18 Faculty

He is a wee bit (unintelligible)

00:11:24 Nurse 2

Did you want any fluid at all? His lactate is 1.6, I don’t know what fluids’ he’s had.

00:11:27 Doctor

Has he got anything going through at the moment.

00:11:29 Nurse 1

No, he doesn’t had any fluids going through at the moment.

00:11:37 Doctor

Not at the moment, ok, have we given him any at all today?

00:11:40 Faculty

He has been on feed but we’ve tried to ween him off because he had to go for a scan. So he’s been on his feed...

00:11:53 Doctor

OK, we could give him, let’s just give him...he doesn’t sound, he’s not cold, clammy? He doesn’t sound wet on his cheat, so let’s give him 250ml.

00:12:09 Nurse 1

Of partments?

00:12:11 Doctor

Partments, yeah.

00:12:13 Nurse 1

Is that...

00:12:15 Nurse 1

That’s the potassium.

00:12:30 Doctor

Can I borrow a pen torch off someone? Thanks.

00:12:42 Nurse 2

Is he passing urine?

00:12:44 Nurse 1

Yeah, he has been, I haven’t checked his urine output.

00:12:47 Faculty

Yeah, I had put through a catheter before. About 60ml.

00:12:53 Doctor

Ok, blood pressure has dropped a little bit. So it’s now 82 over 43.

00:13:04 Doctor

Did you say the ECG...I’m not sure, was this the admission ECG?

00:13:14 Faculty

That ECG was taken 2 days ago, I think, that ECG.

00:13:18 Doctor

We should have another one, taken on admission into ICU.

00:13:26 Nurse 2

Shall we see if we can find an ECG machine?

00:13:29 Doctor

(unintelligible) by a couple of mls to 6. I think he is becoming a bit more compromised now.

00:13:38 Nurse 2

Do you wanna go up to 6mls?

00:13:40 Doctor

Yeah. I think he is more compromised now, because he wasn’t in AF before. So shall we think about cardioverting him?

00:13:56 Nurse 1

Yep, shall I get the trolley?

00:13:59 Doctor

Let’s get the pads on at least.

00:14:01 Faculty

The pump’s up.

00:14:05 Doctor

OK, so, pupils....

00:14:15 Doctor

I’m gonna go up on the oxygen as well. Sorry, so pupils, reactive.

00:14:26 Nurse 1

I just plug the defib into that?

00:14:28 Nurse 2

Has the fluid bolus gone through yet?

00:14:30 Nurse 1

Not yet, if I just pass that to you, I’m just gonna put the pads on, ok?

00:14:35 Doctor

Are these (unintelligible) on his pupils?

00:14:38 Faculty

No, they should be equal and bilteral.

00:14:43 Nurse 1

Should I...

00:14:45 Doctor

Yeah, just have a look at those pupils, what do you think? I think they’re equal, they’re both reacting.

00:14:58 Doctor

I’m just feeling his tummy, is that all ok?

00:15:02 Faculty

Yeah.

00:15:04 Doctor

And have we got a catheter in? Yes...

00:15:11 Doctor

Has he passed any urine at all?

00:15:14 Nurse 1

Yeah, just before we came on?

00:15:16 Faculty

Yeah, about...60ml an hour.

00:15:18 Nurse 1

Yeah about 40ml now.

00:15:20 Doctor

Alright. We’ve got pads on?

00:15:22 Nurse 1

Pads are on.

00:15:24 Doctor

Ok so, just running through it, what did you think, do you think the left is fixed...

00:15:29 Faculty

They are equal.

00:15:31 Nurse 1

Our map’s 54 now and our part’s 146.

00:15:34 Doctor

Ok so, let's just summarise quickly, we’re at 100% oxygen, sats are 94, I think that is perfusion related. We’ve got chest sounds ok, we’re cardiovascular compromised now, looks like AF. We can always get a printoff, can’t we? I think we need to cardiovert him. We’re giving potassium, yeah?

00:16:06 Nurse 2

Yeah. Potassium and magnesium are running.

00:16:09 Doctor

They’re running. Doesn’t seem to have done too much at the moment, does it?

00:16:15 Nurse 2

Did you want amiodorone?

00:16:17 Doctor

Well, according to the ALS algorithm, which might be in here I don’t know, we are meant to correct electrolytes and then cardiovert him compromised if they weren’t in...there we go. So, monitoring ECG, 12 lead ECG which we haven’t done. Which we could do now, couldn’t we?

00:16:42 Nurse 1

Yeah, if we’ve got time.

00:16:45 Faculty

Just put 80ml an hour, you can decide if you want a fluid bolus.

00:16:27 Doctor

Yeah, 250 if that is ok. Perfect, obtain IV access, which we have. Identify, treat reversible causes, which we have. And it says, stable DC shock. Yeah, so we should probably do that.

00:17:04 Nurse 1

We’ve got an ECG.

00:17:06 Doctor

Perfect. Right, um...

00:17:08 Nurse 1

Can you go over it again, I was just doing the ECG.

00:17:12 Doctor

Yeah sure, two seconds, I’ll just measure this out. Make sure it’s definitely in.

00:17:28 Doctor

Do we have to sign the drugs off?

00:17:30 Faculty

No.

00:17:31 Doctor

Ok, this is fast AF. That’s irregular, with 160 and a compromised blood pressure. I think we should do a DC cardioversion. So is anyone ALS trained?

00:17:41 Nurse 1

I’m not.

00:17:42 Nurse 2

ILS.

00:17:45 Doctor

ILS, ok so I’ll do it.

00:17:52 Doctor

Ok, we need to synchronise and do it too, shut up (to alarm), um here we go cardioversion, VT SVT, first 150 joules. So we need to go to 150 joules and we need to sync. Ok, so we are synced at 150 joules and we have a complete...circuit there, haven’t we? Is everyone else happy?

00:18:23 Nurses 1 and 2

Yep.

00:18:25 Doctor

Fine, so you alright there?

00:18:29 Nurse 1

Yeah, there’s a clamp on there.

00:18:34 Faculty

Yeah, that’s a part of our simulation.

00:18:40 Doctor

Fine, we’re clear. Head, middle, bottom. You alright?

00:18:52 Doctor

Shocking now, everyone clear.

00:18:57 Faculty

You just need to charge, the second.

00:19:00 Doctor

Sorry yeah, charging. Head, middle, bottom. Shocking now, all clear.

00:19:12 Doctor

Alright, what’s happened here?

00:19:25 Doctor

Everything is just beeping today.

00:19:34 Doctor

Right, let’s see...looks like he’s flipped back, doesn’t it? Yeah ok, we’re gonna shock again.

00:19:42 Nurse 1

Did you want me to raise the amiodarone?

00:19:45 Doctor

Yes, that would be really good, yeah. Good idea. Can we give him a bolus of 300?

00:19:53 Nurse 1

You want another bolus of 300?

00:19:55 Faculty

250 going through now.

00:19:58 Doctor

Sorry, amiodarone. So we’ll give 300, it says 10 to 20 minutes is what we’ll do if this doesn’t work but I’m going to shock again everyone, ok?

00:20:07 Nurse 1

Shall we increase the norad?

00:20:09 Doctor

Um...yeah, you can increase it a little bit.

00:20:20 Doctor

Ok everyone, I’m charging again. So everyone clear.

00:20:36 Doctor

Have I synced again? Hang on.

00:20:43 Doctor

Is it synced? Oh sorry, it is. Fine. Charging.

00:20:52 Doctor

Top, middle, bottom. Shocking.

00:20:56 Doctor

Let’s see what that’s done.

00:21:07 Nurse 2

Do you want to check this amiodarone? It’s 350ml of high percent glucose.

00:21:11 Nurse 1

Yeah.

00:21:13 Doctor

So that hasn’t done anything. Ok, so we’ll go again. And um...are we missing anything?

00:21:27 Doctor

No right, we’ve definitely got potassium running?

00:21:33 Nurse 2

And magnesium. I’m just going up on the amiodarone.

00:21:37 Doctor

Ok fine, just charging again. So this is the third shock now. We’re still synced. Ok, shocking, top middle bottom, shosking now.

00:21:52 Doctor

Right, has that worked? Oh, it’s a flatline.

00:21:58 Nurse 1

Shall I get on the chest?

00:22:02 Doctor

Yeah, cardiac arrest.

00:22:11 Doctor

Can you go round and get the circuit and bag? In case we’re on the ventilator. Has the ECG come back while we’re doing this?

00:22:25 Nurse 1

There’s one that’s come up.

00:22:30 Doctor

Just stop a second.

00:22:35 Doctor

Ok, so cardiac arrest. Asystolic by the looks of the rhythm. We have to get the adrenaline out. And shall we put a cardiac arrest call out? To ICU.

00:22:57 Nurse 2

Just disconnecting the ventilator.

00:23:01 Nurse 1

How’s that now?

00:23:04 Doctor

Keep going, keep going.

00:23:20 Doctor

Can you just increase the oxygen?

00:23:31 Nurse 1

The thing’s come off the side. The defib.

00:23:42 Nurse 1

You wouldn’t be able to pass me a stool, would you?

00:23:47 Doctor

Right, we need to go for 2 minutes. FACULTY, where do I put the adrenaline?

00:24:15 Faculty

I think the team is around, but the other doctor is in ED.

00:24:22 Doctor

Can you time. I’m finding it difficult to time.

00:24:24 Nurse 1

Yeah.

00:24:26 Doctor

Ok, if we stop now, and say this is a 2 minute check. Ok, so stopping now. We look like we’ve got a rhythm but not a pulse. Oh, got one. Oh hang on hang on, got one. Ok, we’ve got a pulse, you can stop compression, put him back onto the ventilator.

00:24:56 Nurse 2

Do you want to see if one of the nurses on the unit can call the doctor in A&E, see if they’re free to come back?

00:25:01 Faculty

They said they’re going to be a while.

00:25:11 Doctor

It says “separate disconnect”.

00:25:13 Faculty

It is connected.

00:25:15 Doctor

Is it ventilating?

00:25:17 Faculty

It is ventilating.

00:25:21 Doctor

Ok fine, let’s go back to the beginning then. We are ventilating, we’ve got decent tidal volumes, we’re on 100% oxygen at the moment. Let’s just have a quick listen to the chest again. Shall we get a 12 lead?

00:25:33 Nurse 1

Yeah, sure.

00:25:55 Doctor

Chest sounds clear, good pressure.