00:00:02 Faculty

Application in section C, but iI will be around so I possibly can give you a bit of a hand, but if you could take over his care, that would be great.

00:00:07 Faculty

So this is Winston Moore, 75 year old. I think you know his vague history.

00:00:12 Faculty

So he, urosepsis, basically treated with drugs at home and fell off his perch. Changed his opiods when he came into ED.

00:00:21 Faculty

He had been responding antiobiotics really quite well. So currently he had been needing quite a lot of ventilator support, but now we're on to 30%. We're over 16 / 5.

00:00:31 Faculty

We're doing really well from ventilation point of view.

00:00:34 Faculty

And we really want to extubate him. But the thing is, he's not really waking up very much at all.

00:00:39 Faculty

From a cardiovascular point of view, he's been relatively stable. We're using ECHO guided fluid boluses, but he's just on maintenance at 8 mills an hour.

00:00:47 Faculty

He is on noradrenaline. He had been under quite high strength noradrenaline, now you're on 4 mills of 450 and that's been going down quite well, managed to keep him on a map of 75 and he has been peeing well.

00:00:59 Faculty

Sedation has been off for about 14 hours now.

00:01:01 Faculty

It's 10:00 o'clock at night.

00:01:03 Faculty

They are quite keen to get the CT scan done today. So they said that they would do it overnight just because they've been quite busy in CT scan.

00:01:10 Faculty

But they are going to do it overnight and and that's booked for about 2-2.5 hours time, OK and that's that's it.

00:01:18 Faculty

If you have any other questions let me know. OK. But he's got a central line in, he's got an art line in, fluids going by his side here. Everything else has been relatively stable.

00:01:30 Nurse 1

Lovely. Thank you.

00:01:36 Nurse 1

I'm just going to a quick assessment

00:01:43 Nurse 1

What did you say his name was?

00:01:45 Faculty

Winston Moore.

00:01:54 Nurse 1

We're not on any suggestion at the moment, are we?

00:01:56 Faculty

No, it's attached, but it's off, yeah.

00:02:08 Nurse 1

Hello, Winston. My name is NURSE ONE.

00:02:16 Faculty

Have you got a pentorch? So I can do my neurological...thank you.

00:02:35 Nurse 1

Winston, Winston can you hear me at all? No. OK.

00:02:39 Nurse 1

Anything, any response to pain?

00:02:40 Faculty

No, nothing.

00:02:48 Nurse 1

Just going to take this sheet down and have a little look over here.

00:02:54 Nurse 1

Is he warm and well perfused? Good cap refill?

00:02:57 Faculty

Yep, three two two and good pulses. Yeah, yeah.

00:03:12 Faculty

And no wounds or anything anywhere?

00:03:14 Faculty

No, no, no.

00:03:24 Nurse 1

23 at the teeth.

00:03:28 Nurse 1

Just going to take a blood gas.

00:03:43 Nurse 1

We've been very lucky.

00:03:45 Nurse 1

Are you able to get me a doctor, please? Thank you.

00:04:08 Doctor

Hello. Everything alright?

00:04:11 Nurse 1

Hi both of you. So Winston was admitted with urosepsis, tryiing to ween from the ventilator but not really working.

00:04:16 Nurse 1

I was just doing a bit of an assessment. He's just gone very tachycardic.

00:04:22 Nurse 1

Due to go in for a CT scan in a couple of hours.

00:04:26 Doctor

Why is he going for a CT?

00:04:28 Faculty

Because they're not working appropriately.

00:04:32 Doctor

CT head. OK. Well, if it's not stable then that can wait.

00:04:37 Nurse 1

I just checked his pupils, they are equal and reactive...

00:04:40 Nurse 2

Heart rate's going up and up and up.

00:04:42 Nurse 1

Yeah.

00:04:45 Doctor

Ok, let's see the electrolytes. Potassium is a bit low. So can we give a potassium load please?

00:04:51 Faculty

Yeah, I can start that.

00:04:49 Doctor

Chloride is a bit high, he's a bit acidic because of that, lactate's fine. Can we check the bloods? Can we check the blood from the morning? Just to make sure....do you know anything about the low magnesium or anything?

00:05:04 Nurse 1

I don't, I've not had a chance to get to the care view.

00:05:06 Faculty

Magnesium was just on the lower levels of normal.

00:05:11 Doctor

Ok we can top up that as well.

00:05:13 Doctor

Really awful, and he looks like MAF.

00:05:18 Nurse 1

Do you want me to do a 12 lead?

00:05:20 Doctor

Yeah, that would be fine.

00:05:22 Doctor

So currently we're at norad four...

00:05:24 Nurse 1

Yeah, been off sedation for a couple of days now.

00:05:26 Nurse 1

Now just on some noradrenaline, remains on by level.

00:05:33 Nurse 1

I just rechecked pupils, pupils are still equal and reactive.

00:05:36 Nurse 1

OK, no response to voice, no response to pain.

00:05:42 Doctor

So this situation is just we're assuming that's an AF. Yeah. He's not unstable. Is he passing good urine?

00:05:51 Faculty

So he had been passing quite adequate amount, about 75.

00:05:58 Doctor

Can we check his fluid balance?

00:05:59 Faculty

Fluid balance, he is being sort of positive everyday so nothing major.

00:06:07 Doctor

OK, but not negative?

00:06:10 Faculty

No, we've been doing fluid bolouses by ECHO.

00:06:14 Doctor

OK, he was trying there for today?

00:06:15 Faculty

He was echoed today and they were given through, he went through bolus.

00:06:23 Nurse 1

No AF past medical history?

00:06:25 Faculty

No.

00:06:26 Doctor

OK. Has he..is norad stable? All day or has it been up or down?

00:06:31 Nurse 1

4 mills an hour.

00:06:35 Faculty

It's been like that, it's been stable.

00:06:39 Doctor

OK, hasn’t changed?

00:06:40 Faculty

No.

00:06:41 Nurse 2

Do you want a fluid bolus?

00:06:43 Doctor

Yeah, let's try that.

00:06:44 Faculty

Potassium is started and magnesium is here drawn up for you.

00:06:52 Doctor

Calcium is on the limits so we can top it up as well.

00:06:56 Faculty

Here is your 12 lead.

00:06:59 Doctor

So it does look like an AF. Actually I don’t know if it’s a flutter.

00:07:08 Nurse 2

Just comparing the two.

00:07:09 Doctor

Lactate is fine, Hb is stable.

00:07:14 Nurse 2

Do you just want 250 of fluid?

00:07:16 Doctor

Yeah, let's see what he does with that.

00:07:18 Doctor

What’s beeping?

00:07:21 Nurse 2

That’s his heart rate. Shall I cancel it?

00:07:25 Doctor

Yes, please, that'll be fine.

00:07:29 Doctor

OK, so let's start with the electrolytes and the fluid. And if that doesn't work or he deteriorates, we'll start the amiodorane.

00:07:37 Faculty

Do you want me to get amiodorane drawn up?

00:07:42 Doctor

No, I would, I would wait.

00:07:45 Speaker 6

In his past medical history, what does this gentleman have?

00:07:48 Faculty

Past medical history is nothing, nothing major at all.

00:07:53 Faculty

Bit of hypertension and and I think it was on something for hypertension but that's it.

00:07:59 Doctor

So we can aim perhaps for a map that is above 75 that will have a bit and now after that it's more stable.

00:08:07 Doctor

So what day of admission are we on?

00:08:12 Faculty

You are day four on ITU.

00:08:17 Doctor

So do we have a summary? Just to know what he has been doing and so yeah.

00:08:21 Faculty

So he has been really, so he came in really quite sceptic and then was given antibiotics, he was really hypotensive, tachycardic. Then he responded really well to fluid then about three days ago, the CT scan at that time was normal. Came to ITU and he has just been following the normal trend, responding to antibiotics.

00:08:43 Doctor

Ok sorry to interrupt you, can we start giving the amiodraone please?

00:08:47 Doctor

OK, so was he any (unintelligible)?

00:08:49 Faculty

No, just noradrenaline.

00:08:53 Doctor

Now OK, is this the first time that he's on AF?

00:08:57 Faculty

He was on sinus when I handed him over.

00:09:05 Doctor

Can we give the FIU to 250 please?

00:09:07 Nurse 1

Yep.

00:09:15 Doctor

I'm increasing norad, if we are not able to go by with that and get a good map, we'll have to shock him.

00:09:22 Doctor

But I don't want to shock him right now because the electrolytes, he will go back into AF anyway.

00:09:28 Doctor

So how do we improve that? Sats above 95. Map above 50 but that doesn't seem like it's happening.

00:09:38 Doctor

OK, so can we lay him flat, please?

00:09:41 Nurse 1

Yeah.

00:09:54 Doctor

Shall we get the monitor and the pads to shock? I think we are going down that path.

00:09:58 Faculty

So I'm just drawing up the amiodorane now.

00:10:06 Doctor

Going up on norad. We were 4, go to 8.

00:10:16 Nurse 1

What was this electrolyte?

00:10:18 Nurse 2

Potassium and magnesium.

00:10:21 Doctor

And calcium.

00:10:23 Faculty

Did you do calcium yet?

00:10:26 Doctor

Oh we can do it. It was on the borderline, so if we do...

00:10:31 Doctor

OK, we're still on map of 60, not ideal but, ok 58.

00:10:36 Faculty

Just getting amiodorane now, so 350?

00:10:38 Doctor

Yeah. I am going to do whatever I didn’t have time.

00:10:46 Doctor

You can set it up while doing this, fine.

00:10:49 Nurse 2

I set it up.

00:10:51 Nurse 1

What access do we have?

00:10:54 Doctor

So we have a central line here...

00:10:56 Nurse 1

So that's Noradrenaline.

00:11:02 Doctor

OK. We have an A1 in here and we have a cannula, that's good.

00:11:10 Doctor

OK, he's not responding to norad. OK, so I think we'll have to shock him.

00:11:25 Faculty

So we've got potassium, magnesium, but that's including. But I will check that.

00:11:31 Faculty

What did you just add? Oh calcium.

00:11:37 Doctor

Does anyone you know how to synchronise?

00:11:39 Nurse 2

The sync button, just here

00:11:45 Doctor

OK, let's sync.

00:11:51 Doctor

Yeah. Why are you doing that?

00:11:53 Faculty

I'm setting up amiodarone.

00:11:58 Doctor

Ok set it up first, I'd rather have that running.

00:11:58 Nurse 1

Kind of running out of oxygen.

00:12:01 Faculty

I'll just use the noradrenaline second one. In fact I’ll use the propafol one since we’re not using it.

00:12:14 Doctor

We still have a decent output, good sats.

00:12:21 Doctor

My thought is that the amiodarone will be more effective than the electricity

00:12:30 Nurse 1

There was a spare, I used it for calcium.

00:12:36 Doctor

Are we giving the magnesium?

00:11:39 Faculty

Yes, and the potassium and now the amiodarone.

00:12:41 Nurse 1

How long has it been running?

00:12:44 Nurse 2

The magnesium is...

00:12:46 Faculty

Ok, you can go ahead.

00:12:51 Doctor

Yeah. Can we...

00:12:59 Doctor

Is everyone ready? OK. We have our charge. Synchronise. Everybody out. Shock.

00:13:13 Doctor

Ok, looks sinus. can we speed up the magnesium? To go almost as a push.

00:13:24 Doctor

So we have a good rhythm, we're in sinus, blood pressure seems to be picking up but we're still not at 12 so I'm hoping that corrects.

00:13:33 Doctor

So in terms of electrolytes, we were low...

00:13:36 Nurse 2

We're going in.

00:13: 39 Faculty

Potassium is running.

00:13:39 Doctor

Amiodarone, how long will it take?

00:13:41 Faculty

I've got it over an hour. But I can put it more if you want.

00:13:47 Doctor

It should be just 300 milligrams isn't it. Yeah, you should go as soon as possible.

00:13:51 Faculty

Yeah, that's as high as it will go.

00:13:59 Doctor

OK. So again, until we have electrolytes and amiodarone running, I'm not going to shock him because it will just fall again. So let’s wait, I know it’s not ideal 55, 50...

00:14:18 Nurse 2

Do we want more NORAD? Temporarily or...

00:14:22 Doctor

Yeah, I guess I'll try to increase, but it hasn't done much.

00:14:29 Nurse 2

Yeah, it would be difficult to implement again.

00:14:33 Doctor

Yeah, yeah. OK, now he's going really fast. OK, we'll have to try shocking again.

00:14:38 Doctor

And can you get me an ECHO machine please?

00:14:42 Doctor

OK. And we can see if there's not something wrong that I'm missing. OK, so we're saying we're 150, so we'll go to 200. That's everyone clear. Charging...charged, ok I’m going to shock, noone touching.

00:15:05 Doctor

Not that much.

00:15:07 Nurse 2

Blood pressure is looking worse.

00:15:09 Nurse 1

Anything else that we haven't done, we've done magnesium...I’ve done calcium.

00:15:17 Doctor

My only concern is that it could be cardiac driven. And then it is worsening.

00:15:20 Doctor

I'm going to go down again and see what happens. If I go down and if you could get me the ECHO, it would be lovely to see.

00:15:30 Doctor

I suspecting there will be some cardiac origin of this because he's not liking it.

00:15:35 Faculty

I've asked somebody go and get that ECHO machine.

00:15:39 Doctor

The other thing is, we can have ready some adrenaline and that will help us see if it's that...

00:15:45 Faculty

Or do you want an infusion of adrenaline?

00:15:50 Doctor

No, this will be so this is 1 milligram already.

00:15:54 Doctor

We'll start with one mil only, which would create .1 milligram.

00:16:00 Doctor

Because if it's cardiac driven that will increase the cardiac contractility. Because it hasn't done much difference, I reduced the norad to 10 and it's the same, yeah.

00:16:15 Nurse 2

Oh, no, there's something on everyone now.

00:16:17 Doctor

But I think you can use this fluid one. It will be fine.

00:16:20 Nurse 1

What we got attached to this?

00:16:22 Nurse 2

OK. Yeah. That's the amiodarone, yeah.

00:16:26 Doctor

Can you put this through?

00:16:30 Nurse 1

Just one mill you said?.

00:16:35 Faculty

Two, that's adrenaline 1.1 of them.

00:16:55 Doctor

OK, the blood pressure is dropping again. I think we'll have to try to shock him again.

00:17:05 Doctor

I'm just worried if I give my adrenaline, even if his heart is going to go more tachycardic. OK, so we're 200, we are synced, I'm going to charge.

00:17:21 Doctor

I'm going to shock.

00:17:26 Doctor

Is it possible, Oh, God. OK, he's arresting, lovely start compressions, please.

00:17:35 Doctor

OK. Can we get some help from someone else like a reg? And is it possible to flush the amiodarone and flush the magnesium as welll?

00:18:00 Faculty

Yeah. Let me know what you want me to take over.

00:18:06 Doctor

CPR, so we're timing.

00:18:16 Nurse 2

Oh you've got a stool, fabulous.

00:18:46 Nurse 2

I'm ready and waiting.

00:18:54 Doctor

I'm going to change the vent to manual.

00:19:02 Nurse 2

Where are we for time?

00:19:04 Doctor

We are on one minute 26.

00:19:28 Faculty

The ITU consultant is in ED

00:19:37 Doctor

OK. Do you mind doing another gas?

00:19:41 Nurse 2

OK, OK.

00:19:46 Doctor

We are still with no pulse, OK.

00:19:49 Doctor

I prefer this one milligram which is full. Can we give it the full, the adrenaline?

00:19:56 Doctor

So we've given the electrolytes, given the amiodarone, and the magnesium is running on the...

00:20:05 Faculty

Adrenaline's in.

00:20:11 Doctor

Do you mind the giving the magnesium as a push?

00:20:13 Nurse 2

This one?

00:20:14 Doctor

Yeah.

00:20:36 Doctor

Dunno if he has rhythm. But we completed 2 minutes.

00:20:53 Faculty

Hi sorry guys. Trauma call, could you bring me up to speed?

00:21:02 Doctor

So 75 year old.

00:21:04 Faculty

Yeah, I remember him actually this morning.

00:21:06 Doctor

OK, so basically he was on four of norad. He was on AF, 100/60 of rhythm

00:21:11 Doctor

Normal potassium magnesium in the morning. So I gave him some because it was borderline.

00:21:21 Nurse 1

We're just pushing it in.

00:21:24 Doctor

And he was holding the map, and then he dropped. So I increased norad to 10 from 4, it didn't do much.

00:21:33 Doctor

When we went further, blood pressure dropped, cardiac....

00:21:36 Nurse 2

Two minutes now

00:21:40 Doctor

OK, we have rhythm. OK, thank you.

00:21:41 Faculty

We have output.

00:21:43 Faculty

Great. So, So what have you had to do?

00:21:49 Doctor

I was trying to optimise the AF and gave adrenaline.

00:21:57 Doctor

He started dropping blood pressure while we were doing that, so I shocked him three times.

00:22:07 Doctor

When you gave the adrenaline what happened?

00:22:12 Doctor

So the first shock his map was around 50.

00:22:16 Faculty

So you got him back in sinus?

00:22:18 Doctor

Yes.