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EBOO FAQS

TUBING SET UP

1. What part of the tubing do I set up first?

The filter should be set up first. Blue end to the sky; red end to the ground

2 What is the minimum amount of fluid I need for set up and the 50 minute procedure?

You will need a minimum of 500 ml of NS or LR with 7500 units of heparin for set up and the 50 minute procedure. You may need 250 ml NS or LR to flush the blood back to the patient at the end of the procedure.

3. How do I attach the main red tubing?

You will connect one end at the bottom of the filter. You will place the larger diameter tubing in the peristaltic pump with the port on the right hand side of the pump.

4. Where do I connect the heparin line?

You will connect the heparin line to the port closest to the pump, not closest to the patient. This is a change from the original instruction. The heparin being placed here helps the pump move the blood through the tubing.

5. How fast does the heparin need to drip?

There is not a set calculation for the speed of the heparin drip. You will need to look at the pulse at the port connection. If you cannot see the pulse, the flow is too fast and needs to be decreased. If there is blood coming up the heparin line, the flow is too slow and needs to be increased.

6. What pump setting should I use?

The peristaltic pump should be set at 14 RPM (using the larger diameter of the red tubing). It can be adjusted based on the patient's blood flow if needed.

7. Can I use extension tubing on each access for the procedure?

We do not recommend using any extensions for this procedure. We recommend connecting the EBOO tubing directly to the hub of each catheter.

8. How far in advance of the appointment can I set up the tubing on the EBOO machine?

We recommend setting up the tubing before your patient arrives and then prime the tubing when your patient has arrived. We do not recommend setting the tubing up the night before a scheduled appointment. The tubing is sterile and needs to be opened close to the appointment time. Heparin in saline solution is only good for 6 hours.

PRIMING

1. When do I use the syringe to pull fluid into the chamber?

You will pull the fluid into the chamber using the syringe when fluid has passed the chamber about 10 inches or on a 3 second count using the pump or a 5 second count using gravity.

2. Which IV fluids can be used for EBOO procedure?

You can use Normal Saline, Lactated Ringers or D5 for priming and the procedure.

DO NOT USE: Sterile Water or ½ saline

PROCEDURE

1. When do I turn on the ozone?

The ozone (and oxygen) should be turned on when the filter is ¾ full with blood.

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2. **When do I start the timer?**

   Start the timer when you turn on the oxygen and ozone, when the filter is ¾ full with blood. A full treatment is 50 minutes and gives a dose of 150,000 mcg; a ½ treatment is 25 minutes with a dose of 75,000 mcg.

3. **When do I turn on the lights?**

   You will turn on the lights at the same time as you turn on the ozone, oxygen and lights (when the filter is ¾ full with blood)

4. **When do I turn on the Oxygen?**

   You will turn on the Oxygen when you need the ozone; when the filter is ¾ full with blood.

5. **What are the oxygen settings for EBOO?**

   The oxygen regulator should be set at 1 liter/minute. This gives an ozone concentration or 3-4 mcg/ml.

6. **What if there is red in the waste container?**

   If there is red in the waste container stop the procedure immediately and troubleshoot. There should not be any red foam or liquid in the waste container.

7. **What does it mean if the drip chamber levels are either rising or falling?**

   The level in the drip chamber should remain fairly constant throughout the procedure.

   If the level is rising there is a problem with the return access on the blue line. Assess and make adjustments to the return access on the patient. As this adjustment is made you should see the level in the drip chamber go down.

   If the level in the chamber is falling there is a problem with the draw line. Assess and make adjustments to the draw access on the patient. The tubing may not be tightly connected to the hub and air may be entering the line. If the chamber is very low you may need to make an adjustment to the chamber using the syringe. NOTE: The system is under pressure at this point, so make that adjustment cautiously.

8. **What happens if the pump starts 'clicking' or the tubing starts 'jumping'?**

   If the pump starts clicking or the tubing starts jumping, there is a problem with the patient access. Assess the access and make any adjustment until the blood is flowing well.

9. **What is causing the red tubing to flatten on the right hand side of the pump?**

   If the tubing is flattening out, there is a problem with the draw line. Assess the patient access and make adjustments until the blood is flowing well.

10. **Do I need to leave the tourniquet on during the procedure?**

    Yes, you will need to have a tourniquet on the draw arm while you are drawing blood. Once you stop the draw the tourniquet can be released.

11. **What should I expect to see in the waste container?**

    You should expect to see white foam, clear or yellowish fluid or nothing at all in the waste container. If you see red in the container, stop the procedure immediately. The chemical makeup of the waste has not been determined. Testing is ongoing.

12. **Should I ever be turning off the UV lights?**

    Anytime you pause or stop the blood flow or pump, you should turn off the UV lights. You can turn them off by the button or by lifting the lid of the light.

13. **Where do I access the patient?**

    You can access the patient in 2 different veins. This can be one in each arm, or two in one arm so long as they are different veins. It is tougher to do both in one arm because you need the tourniquet on. You can access the patient in one arm and one ankle or in two ankles.

DISCONNECTING

1. Should I use air or fluid to return the blood back to the patient?

You can use either air or fluid to return the blood to the patient once the treatment is complete. Practitioners are taught both ways and your office may have a preference as to one way or the other.

PATIENT CONSIDERATIONS

1. Does a patient need to have done a hi-dose ozone treatment prior to receiving EBOO?

Ideally, a patient would have received a hi-dose treatment prior to EBOO, but it is not necessary. You may want to adjust the treatment to 75,000 mcg (25 minutes) for the first treatment before going up to a full dose at 150,000 mcg. Many healthy patients successfully do a full dose on their first EBOO without any issues.

2. Can we use the patient's picc or port for one of the accesses?

Yes, you can use a picc line or a port for the return line only. Keep in mind that the return line may go slightly slower than the draw line, so the chamber will likely rise throughout the procedure. Pro tip: in this case, you may want to start with the drip chamber at a lower level than ½ as it will rise over the 50 minute procedure. Talk to your trainer about tips and coaching tips if you are using a picc line or port for access.

3. What are the recommended patient preparations prior to receiving EBOO?

The patient needs to have eaten, preferably a meal with protein and should be well hydrated prior to receiving EBOO.

The patient should not have consumed alcohol on the day of the procedure.

4. What are the post treatment restrictions or recommendations?

The patient should be aware that he or she has received a blood thinner, heparin, and should be cautious of any injury sustained after the treatment (the day of).

The patient should be advised not to consume alcohol for at least 24 hours after receiving EBOO treatment.

5. Where do I go for the latest updates on EBOO?

The best place to receive updates on EBOO would be to attend the monthly EBOO Mastermind which is held the 2nd Wednesday of every month at 8 pm EST via Zoom. The Mastermind is a great place to ask questions and share patient outcomes as well.

6. How do I contact a trainer to answer questions that I have?

There are 2 ways to contact one of our trainers.

Trainers are available live daily for Q&A via Zoom. To schedule go to:

MedMasters.org

Select the Training Tab/Daily Meeting with Lindsey and Jason/ Schedule Now

The other way to reach a trainer is to send an email with your question to: trainer@MedMasters.org