C5L30 - Ashley Hay

(0:05 - 1:32)

All right, welcome back. We are on the very last lesson of course five. So moving right along, you have one more course to get through before you are totally done.

So we're going to look at vascular and microvascular surgery. One thing I really want to point out is you should be pretty well versed in the general pathology of the venous versus arterial blood systems, right? So venous blood is the blood that returns to the heart, whereas arterial blood is being pumped out of the heart. And, you know, you also want to make sure that you are aware of the difference, like what's the difference between an artery and a vein? Pretty simple.

If you've looked at the ebook, one is in the arterial system, one is in the venous system, right? So veins are in the venous and arteries are in the arterial system because they're carrying oxygenated blood. It's just been freshly oxygenated from the heart and it goes out throughout the body. But do you know the difference between an artery and an arterial or an arterial and capillary? So just looking at those little small differences will help not only give you a better understanding, but then also prepare for your exam a little bit better.

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So we want to also be aware of how the pulmonary system is, you know, working within, you know, and attached within the heart. So that's how, you know, the blood gets oxygenated and then kind of travels through the arteries to all of our major organs. So there's a really great picture where we see, you know, the circulatory pathway is split into two main pathways here.

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So there's the systemic system, which aids in circulation, and then the pulmonary circulation. So both of these are working together to ensure that all of the major organs are being properly oxygenated. And then, you know, that the blood that needs to be oxygenated is kind of getting back to the heart via the vena cava here.

So hopefully that little overview is helpful. Definitely dig into it deeper in your ebook. It really goes into some nice detail there.

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We talk about the differences in systolic versus diastolic pressure for blood pressure. So whenever you have a number, for example, 120 over 80 for blood pressure, the top number, the 120, is the systolic number. So that's the pressure noted when the ventricle is contracting.

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The diastolic number, 120 over 80, so the 80, that's the lower pressure. And that's, you know, the pressure when the ventricle relaxes. So just knowing those always in blood pressure, it's always systolic over diastolic.

Regulation of your blood pressure is definitely very heavily influenced by your autonomic nervous system, not sympathetic, important to know the difference. Hormones can also affect it as well. Some examples of low blood pressure causes fluid loss, shock, infection, hypertension.

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So high blood pressure can be caused by a number of different cardiac or cardiovascular diseases, kidney failure, and also metabolic conditions. And then some additional factors that can affect just your baseline blood pressure are things like gender, so male versus female, your age, your weight, your current exercise level, things like that. And then we covered a few different diagnostic procedures that might be used for vascular and microvascular surgery.

So these might include things like Doppler scanning or angiography. Angiography is where we can kind of create a map and an image of the arteries or veins that's needed. So that way we know what we're looking for when we go in via surgery.

And then some of the examples that you may see of patient's disease that are coming for vascular type surgeries, atherosclerosis, that's a pretty common arterial disease, and it causes just stiffening of the arteries and they lose some elasticity there. So there's atherosclerosis and then there's peripheral atherosclerosis, which really you'll see more like usually the feet are maybe more affected. It causes poor circulation and pain and can lead to other potential complications.

Thrombophlebitis, this is a clot formation in the leg. So the veins there, and that's basically due to what we call venous stasis. And what that means is that blood is just pooling and it's not being pumped back up to the heart properly.

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So it's just this unoxygenated blood kind of sitting. So that can cause some pain as well. In addition to deep vein thrombosis, which are blood clots in deep leg veins, and those need pretty prompt intervention to prevent any sort of life-threatening complications.

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So some symptoms of vascular diseases, for example, deep vein thrombosis as nurses were always trained that if a patient has a hot red calf and it's swollen and maybe has some pain when they flex their foot up towards their face, that is pretty indicative of a DVT, deep vein thrombosis. And we need to get that imaged kind of right away, ultrasound. Atherosclerosis, the warning signs can really be kind of vague in the beginning.

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So some chest discomfort, maybe during exercise or even emotional stress can bring on that same type of pain. They may notice some leg cramps, especially when they're walking and then shortness of breath with light activity. And then moving on to thrombophlebitis, it looks very similar to deep vein thrombosis.

So same thing, pain and swelling typically in the calf area. So we covered just some basic principles of vascular surgery, different kinds of techniques to work around different vessels and such. Again, just being aware that there are different techniques.

Try not to get too in the weeds on it. As our type of providers, we are not the ones performing the surgery, but we do need to be aware of the basic different principles of these types of surgeries. And especially if you're interested in this as a speciality, it will really help serve you when you get your hands-on experience.

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