



Gastrointestinal Emergencies

drip 4

version 1

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Monitoring Surgical Patient

All patients should be monitored:

- ECG
- Blood Pressure
- Pulse Oximetry
- Capnography
- Temperature



Mechanical ventilation may be required in order to maintain

adequate oxygenation



We're going to go to surgery. All patients, we need to monitor them fully. these are at-risk patients, ECG blood pressure, pulse ox, capnography, temperatures. We may need to do mechanical ventilation in order to maintain adequate oxygenation.

If you have a surgery ventilator definitely put them on it because these guys have a huge stomach. And when you put them on their backs, where does that stomach go? It presses right smack down on that vena cava again.

So this is pressing up in their diaphragm. They're really struggling sometimes to breathe until we can go ahead and fully decompress that stomach.

Cardiac Arrhythmias

Most Common:

- Ventricular Premature Contractions
- Ventricular Tachycardia



Cardiac arrhythmias are pretty common with these guys. So the two ventricular pre-mature contractions, which, if you look on the left-hand side of this ECG, you can kind of appreciate those wide and bizarre complexes.

There's two of those. Those are VPCs. Fun, interesting fact, in human medicine, they're called premature ventricular contractions. But that med decided to be a little bit different, and we went ventricular premature contractions. Why? I have no idea, people.

So either PVCs or VPCs depending on whether or not you're in veterinary medicine or human medicine. Don't ask. Ventricular tachycardia just means a lot of VPCs. That's all it means.

And so when we look at the more right-hand side of that strip, that's ventricular tachycardia, a.k.a. V-tach.

Cause of Cardiac Arrhythmias



Generally self-limiting
Resolve on their own in 2-4 days

Cause:

- Acid-base abnormalities
- Electrolyte abnormalities
- Myocardial depressant factor
- Myocardial ischemia

So why do they get cardiac arrhythmias? Well, they generally are self-limiting. They resolve typically on their own about two to four days. But there's a lot of reasons that actually cardiac arrhythmias can happen. One is we see acid base abnormalities. A lot of these guys are in a metabolic acidosis. We can also see electrolyte abnormalities. Probably more commonly are the last two, something called the myocardial depressant factor.

Myocardial depressant factors live in the spleen and in the pancreas. We've already talked about how the spleen and the pancreas are going to be pretty angry with the lack of blood flow to them. And once you untwist that stomach, it's great because now blood is going back to that spleen and that pancreas. But they release something called a myocardial.

So myo is muscle. Cardia is the heart depressant factor. So we start to see, unfortunately, these myocardial depressant factors affecting the heart, causing cardiac arrhythmias. And then the other reason is just myocardial ischemia.

Ischemia is a decreased or complete cessation of blood flow to affected area. In the case of bloat, the ischemia is almost a body wide event, right? It's not just to the stomach.

Sure, you twist it off blood supply to the stomach. But it really is more than that. It's going to deliver, the spleen, the pancreas, your entire GI tract, the stomach and then conversely, even the brain. And so all of this area, unfortunately, especially the heart will take a hit.

We're not getting great oxygenation to the heart. So now we see a myocardia ischemia, which can set them up for cardiac arrhythmias.

Treating Cardiac Arrhythmias

Treat If:

- Greater Than 160-180 bpm
- Patient Is Clinical
(pulses weak, shocky, perfusion decreased)



Generally treat with lidocaine or procainamide

How do we treat them? We generally treat them if they're greater than 160/180 consistently and if the patient's also clinical. A lot of times in the beginning, we don't care so much. We just want to stabilize the patient. And through stabilization, a lot of times, the cardiac arrhythmias will resolve or be more manageable. I do not care if the patient's heart rate's 130, and it's got occasional VPC or even a good amount of VPC.

If the patient is doing well otherwise, I don't care about those. But if the patient is clinical and in people, they say it makes you feel lightheaded, that you typically have a weak pulse. They tend to be shocky. Your perfusion tends to be decreased. And so typically we treat it with [INAUDIBLE].

Really, they just tend to resolve on their own. There's very few patients I've had to send home with heart medication to treat cardiac arrhythmias. If we do have to send them home, like, say, a soda wall or something like that, we have them come back in to recheck. But typically, you resolve the GDV. Two to four days later, all the cardiac arrhythmias typically do resolve.

POST SURGICAL CARE



All patients should be given a guarded prognosis!!

Complications Include:

- Sepsis
- DIC
- Gastritis
- I/R Injury Complications: SIRS, MODS
- Cardiac Arrhythmias



So post-surgical care, we have to give them all a guarded prognosis even if it's just a little bit of bloat. The complications are huge. So we typically tell people that they're not stable until a week out.

Post-operatively, we can see sepsis. We have to cut into the stomach area. There may be that really red, maybe slightly necrotic with the area. We thought the stomach was going to do fine, and then it hisses and unfortunately we experience sepsis.

DIC, death is coming or disseminated intravascular coagulopathy. Gastritis. Yes, I'm pretty sure they're going to develop gastritis. I'm pretty sure there will be an inflammation of the lining of the stomach wall, pretty sure on that one.

I/R injury. So ischemia reperfusion injury complications, like systemic inflammatory response syndrome or multiple organ dysfunction syndrome. And then obviously, we've talked about cardiac arrhythmias.