

Abdominal Pain Management – Alternatives to Opioids

Transcript

Christopher Griggs, MD: We're going to move on to talking about abdominal pain in the emergency department and how to manage it with a multimodal strategy.

The first approach to abdominal pain, like any emergent condition or a patient presents to the emergency department is you want to identify: do you think this is a life-threatening condition. So, we need to think about abdominal aortic aneurysm; aortic dissection. Is this an obstruction? A perforated viscus? Do they have some kind of volvulus or torsion like testicular torsion? Is it mesenteric ischemia?

Your pain management in those situations is really going to be: Is the patient awake? Are they hypotensive? You're probably going to be using things like fentanyl, depending on what their blood pressure is, and opioids up front until you're able to stabilize them.

So, I would say the abdomen is this black box and you really have to go on what the patient looks like to decide what your pain management strategy is. If it's an emergent condition, use those things that prioritize what their hemodynamics are first. But if you think this is a mild abdominal pain, then I would say take a step back and break it down: is this acute or is it chronic abdominal pain?

In acute abdominal pain, we think about conditions that cause inflammation in either the gut or the structures in the abdomen. And so, we're talking about appendicitis, cholecystitis, pancreatitis. There could be gastric reflux or gastritis or gastroenteritis, diverticulitis, colitis, inflammatory bowel disease. And each of these kind of carries its own group of medicines that you can treat them with. Now, these diagnoses that are very inflammatory-based are different than a chronic abdominal pain.

Chronic abdominal pain conditions can be broken down into things like gastroparesis or irritable bowel syndrome. Sometimes we can get chronic abdominal pain that we don't have an explanation for and they're continuing to go through a workup and sometimes they've been in the emergency department quite a few times and we don't have an explanation. And there are different strategies that I think we can try to manage those with, because those patients can be at higher risk for developing a dependence on opioids if we treat them with opioids every time they come into the emergency department.

With acute abdominal pain, we definitely do not have to go to opioids always, and I think traditionally that has been a default mechanism for abdominal pain. But you can use a multimodal strategy that is stepwise. So, for GERD or gastritis usually my first approach would be, I'm going to give them a GI cocktail. And in our emergency department, that is viscous Lidocaine with an antacid. Then I might at an H2 blocker on. And if that doesn't work, you can

consider acetaminophen and you might consider opioids. But most of the time if it actually is those things, that works very well for treating GERD or gastritis. It's rare that I have to go to an opioid or some other treatment modality for that diagnosis.

Jeremy Driscoll, MD: Yes. I think if you're moving towards that and that's the diagnosis you're thinking of, you may need to reconsider some other things.

Travis Barlock, MD: Yes. And that's when you'd probably be thinking about doing a CAT scan to prove to yourself that this is actually gastritis. Because cholecystitis and gastritis can definitely sometimes mimic each other.

Christopher Griggs, MD: So, let's go on to cholecystitis. What surprised me when I was looking into this about managing cholecystitis is that there have been several studies that looked at NSAIDs in the treatment of cholecystitis and it kind of makes sense. It's an inflammatory condition and medicines like Ketorolac can be effective in treating cholecystitis pain.

For me, it's not that I'm not necessarily going to give an opioid if you have a cholecystitis, but I'm also not going to *not* give you an NSAID if it's so highly effective. I'm going to try a multimodal strategy and if I'm able to spare the amount of opioids you're exposed to, you may have a better recovery time. We've looked at a lot of the operative literature in patients who do not get as much opioids before and during surgeries, they have faster recovery times and less pain afterwards.

So, I think about this in the emergency department when I have inflammatory conditions. I can give acetaminophen and NSAIDs first; if it doesn't control your pain, I'm going to quickly add an opioid for cholecystitis. But at least try a multimodal strategy for that.

Same thing with appendicitis. There has been some study of using NSAIDs in the pediatric population. I didn't find any good literature for the adult population, but NSAIDs is a strategy you can use in appendicitis as well. And it makes sense. You're decreasing inflammation. I've done this in several of my patients and it has shown good effect even at times where all I had to give when it wasn't a severe appendicitis. I gave Tylenol and Ketorolac and they had good pain relief.

Jeremy Driscoll, MD: Yes. I found personally this is all anecdote from my experience, but Ketorolac has worked quite well even in pediatric patients I've had with perforated appendicitis, waiting to go to the operating room.

Christopher Griggs, MD: Pancreatitis can be much more difficult diagnosis to manage. This is because it comes in several different flavors. There's definitely the acute pancreatitis patient who comes in. They were binge drinking the night before. They have a rip-roaring pancreatitis. You can usually manage those patients with some antiemetics, fluids, maybe some small doses of opioids. But then pancreatitis has that other flavor, the chronic pancreatitis. That's the

smoldering pancreatitis. The patients have been on multiple medications and those can be much more challenging.

So, I will definitely give these patients acetaminophen. You avoid NSAIDs because of the risk that pancreatitis can get worse with NSAIDs. So, we don't use NSAIDs in this population. I will use opioids. But if it's a patient who is chronically on opioids, I try not to escalate the opioids that they're always getting. And something that you can use is antiemetics like Promethazine and Metoclopramide.

Now, this will get a little bit into an area of why dopamine antagonists like Haloperidol and Metoclopramide and Promethazine have opioid-sparing effects, and I find are very good in abdominal pain. I use them quite frequently as a pain medication. And this is because dopamine-signaling in the brain, both in the brain stem and in the limbic system of the brain where all the pain signals are processed from the body, dopamine plays a key role in the experience of pain. So, when you give low doses of a dopamine antagonist like small doses of Haloperidol (2.5 mg, 5 mg) or the doses we give of antiemetics – of Promethazine or Metoclopramide – you actually are causing a pain-relieving effect in the central nervous system.

I will use Promethazine in my patients who have either pancreatitis that I can't get on top of and I don't want to keep escalating the doses of opioids, or also in patients who have gastroparesis, which we don't want to keep using opioids in gastroparesis patients, right, because gastroparesis is a problem of usually nerves in the gut are not working as well because of out of control diabetes and patients develop gastroparesis, but what do opioids do? It slows down our gut even more. And so, if we keep escalating the opioid doses, we can cause this kind of feedback loop that's worse.

We know that in these patients, actually they respond relatively well to low doses of Haloperidol. Droperidol is a similar medication that used to be used more frequently. And then, also, sometimes I will use Promethazine, which has that dopamine antagonism as well. And I find that it really works well in these kinds of chronic pancreatitis, chronic gastroparesis type symptoms. Have you guys used Haloperidol on any of these kinds of chronic pain? Pancreatitis and gastroparesis?

Jeremy Driscoll, MD: Yes. This is actually one of my first line agents I actually go to now because I've seen such a good response. Not only do I think it helps with a lot of the pathophysiologic as well as pain mechanism pathways, but it also acts somewhat like a sedating agent that helps the patient relax a little bit more too. So, kind of multi-targeted I think for both pain as well as a little bit anxiolysis as well. But specifically, for these chronic pain syndromes you mentioned for the abdominal pain, this is often my first line agent; with cyclic vomiting syndrome being one of those, alongside gastroparesis as well.

And then I think Droperidol is going to actually be making its way back here. As far as I know, the FDA has recently reapproved its use in the United States. So, I might be using that in the future as another agent.

Christopher Griggs, MD: Absolutely.

Travis Barlock, MD: Is Ketamine another good option in these patients perhaps?

Christopher Griggs, MD: There isn't in pancreatitis specifically that I could find. But certainly in chronic pain syndromes as we discussed in our discussion on back pain. But Ketamine is an NMDA antagonist in acute and chronic pain conditions. And if you have chronic pain in your abdomen, and I'm not able to get on top of it with my usual multimodal therapy and I'm using opioids, I might have already tried Ketorolac, acetaminophen, I would definitely use Ketamine as sort of that breakthrough agent because I'm attacking the pain in a different mechanism. And it's a patient I don't want to escalate your opioid usage, I think it's an adjunct for abdominal pain for sure.

Something else that's come up in the literature a lot is the use of Lidocaine as a multimodal agent, in renal colic specifically, for abdominal pain. And I have used it a few times. The literature is somewhat conflicting right now, about how effective it is. In the times that I have used intravenous Lidocaine, the effect did not last that long for my renal colic patients. There isn't a lot of great evidence for abdominal pain diagnoses outside of renal colic right now. So, if I would use it, I would use it just within renal colic. But I certainly think it's a good multimodal strategy if the patient isn't responding to acetaminophen or NSAIDs. I might even try to throw that Promethazine in there to treat the patient. But it's a patient I don't want to go to opioids for – whether they've had a history of Opioid Use Disorder or I think opioids are for some other reason contraindicated in that patient or they have an allergy – Lidocaine might be a good another good step to use.

Have you guys had a chance to use Lidocaine in renal colic?

Jeremy Driscoll, MD: I've typically avoided it just because there's not good evidence out there supporting it or necessarily refuting it. I know a lot of providers, just due to the risk of adverse cardiac effects, are more against it. So, typically I just don't have that much experience myself in using it.

Travis Barlock, MD: Same. I've obviously had greater responses with Ketorolac, so I haven't had to go to IV Lidocaine.

Christopher Griggs, MD: Talking a little bit more about Ketorolac. Definitely, I want to emphasize things you want to avoid it in: for pancreatitis, GERD, gastritis and diverticulitis, colitis, the NSAIDs are contraindicated in these conditions. In colitis and diverticulitis, there's concern that it affects healing and could increase your risk of perforations. So, in general it's recommended not to use it in those conditions. But I still definitely use it in the appendicitis, cholecystitis realm of abdominal pain.

One other area we should talk about that we have to deal with in the emergency department, cannabinoid hyperemesis. That has been on the rise in the last five to ten years as use of

cannabis has increased. This responds pretty well to Haloperidol, probably through the dopamine antagonism. It both helps with nausea and the abdominal pain component. I only give 2.5mg intravenously. You can give up to 5mg. You definitely don't want to give real high doses. Capsaicin on the abdomen has shown some evidence that it can help. And then I will also use Promethazine or Metoclopramide, similar to the dopamine antagonism that you find with Haloperidol.

The other diagnosis that we deal with for chronic abdominal pain is irritable bowel syndrome. This is a really difficult one to treat. Definitely, you don't want to start a patient on opioids necessarily in the emergency department unless you're backed into a corner and you don't have any other options, because this is a pain that is going to be recurrent throughout their lives. And starting them on opioids when there might be other therapies that are better is something that we should try to avoid.

Things you can start in the emergency department: Dicyclomine or Hyoscyamine, both have shown to be affective in irritable bowel syndrome. You can give them acetaminophen. A lot of these patients might be started on something like an SNRI. But they should have a referral to a gastroenterologist because it's going to be something they need to learn to manage over time.

Did you guys have any other thoughts?

Jeremy Driscoll, MD: No. I think we hit a lot of the good points and specifically in these chronic abdominal pains that once you've ruled out some life threatening or emergent surgical condition, I think it's a good point that these d2 antagonists like Haloperidol should be considered as first line agents in addition to some other therapies here, because they have shown high success rates. And it's just another way to spare opioid use therapy in this patient population that is at high risk for developing opioid tolerance as well as chronic pain and chronic pain syndromes, requiring opioids long term.

Travis Barlock, MD: The only other thing I can think of, is in regard to chronic abdominal pain, specifically regarding abdominal migraine and how I know there are patients that benefit from tricyclic antidepressants actually with those. And I often don't see that treated that way too often in the emergency department, but I know that's an efficacious means as well.

Christopher Griggs, MD: Yes. I think some of the serotonin and other neurotransmitters that are targeted both in depression and other chronic pain syndromes, certainly chronic abdominal pain-type syndromes, can be treated that way. We don't tend to start those in the emergency department, but the gastroenterologists definitely you'll see patients get initiated on some of those medications.

Great. Well, this concludes our supplemental podcast. We thank you for taking the time to join us and have a good day.