AMA Episode 2 with Dr. Emeran Mayer

Q&A PDF

Welcome to the second edition of our Ask Me Anything AMA feature. We've got a few questions that might be of interest to you. I'll try to answer them to the best of my knowledge.

So let me start with the first one from Steven. So he's suffering from chronic pouchitis. So that's a feature of a total resection of the colon in patients with inflammatory bowel disease. And often this pouch that's created as a replacement for the colon gets inflamed and causes symptoms. So he has been recently hospitalized with obstruction and the tests have confirmed that his pouch is impinging on the small intestine causing stenosis and that he's suffering from diminished motility cramps and frequency. So I have to disclose, I'm not an IBD specialist and I cannot give any specific medical or surgical advice in this AMA session. So I would say this is definitely a situation that you should follow the recommendations of your gastroenterologist or the specialist that's following you for your inflammatory bowel disease.

The aspects of inflammatory bowel disease that I have been interested in, both in our studies and clinically is really the relationship or the influence of the brain, emotions and stress on the course, the severity and the trajectory of inflammatory bowel disease, primarily ulcerative colitis. So that's a subsection of inflammatory bowel disease management that has, in this case, very little to do with your problem. Sorry, I can give you a more practical answer. So the next question is from Dana. She states that she took a proton pump inhibitor like omeprazole for a year due to silent acid reflux. But her endoscopy was apparently normal, but she was positive for SIBO. Her doctor told her he would not treat it with antibiotics, small bowel bacterial overgrowth because it would clear up after discontinuing the proton pump inhibitor. So Dana asked, would you recommend antimicrobial or antibiotics in this situation or do you feel the gut can go back to normal?

So first of all, I've been in all my writings and teachings and interactions with patients, a skeptic of many diagnosis of SIBO, SIBO meaning that bacteria grow in the small intestine, in the proximal small intestine where they are normally in very low numbers. This happens often and causes patient symptoms. I do not think that that's really the case, both the test where this is being evaluated, but also the connection to the symptoms, causal connection to the symptoms has really not been well established or is controversial. So that's my first statement. Now, taking a proton pump inhibitor has been shown to affect the gut microbiome because normally the acid in the stomach is one of its main functions is to suppress the colonization of the intestine with bacteria that come in with the diet. And certainly taking long-term PPIs is not a good thing for the health of the gut microbiome in the small intestine.

So would I recommend antimicrobial or antibiotics in this situation? Again, both my skepticism about the diagnosis of SIBO and the relevance for symptoms, but also I'm more reluctant to recommend antibiotics. Antibiotics are sort of a carpet bombing of the microbiome. It's not selective for the small intestine if you want to target microbes there or reduce the increased number of microbes there. So what you do with a course of antibiotics, even if these antibiotics are not absorbed, they diminish compromise your healthy microbiome intestinal endothelium and

in the colon where they belong and where they're important. So I would agree with your physician. I would not recommend antibiotics in any case here. And keep in mind that our gut has a built-in mechanism to prevent microbes to grow in large numbers in the small intestine. And that is when your gut is empty, you trigger a motility or peristaltic pattern in your small intestine.

It's called the migrating motor complex, which are these really powerful waves that start in the esophagus go all the way down into the colon and it's the intrinsic cleansing mechanism. It's been called the housekeeper of the small intestine, but most importantly, it's a built-in mechanism that keeps the regional microbial concentrations low in the small intestine. And the way to activate this and optimize it is to make sure that you have a period of at least 12 hours, ideally 16 hours, where you've got this completely empty and this mechanism can do it, it's normal function. So my answer, a simple answer, antibiotics, no. If you want to do anything for these symptoms, you may think about this technique of time restricted eating. So Dana also ask, do you offer medical appointments? The answer is yes. I will start a telehealth practice in the next couple of weeks, and if you're interested, you can make appointments to talk to me then.

From Capri, I hope I pronounce his name correctly, he or she is asking how to heal gut nerves that are also causing tension headaches, sometimes panic attacks upon eating triggering foods.

So clearly this is an example of the gut brain or brain gut connection, which I've talked about many times and written about. It's an ongoing bidirectional dialogue from the brain to the gut, but also from signals from the gut that can reach the brain. So headaches have been reported in surveys quite often in patients with, for example, with irritable bowel syndrome or with disturbance of gut function. There's probably multiple mechanisms. I will not be able to tell you the details of this, but it's certainly something that other patients are also reporting panic attacks upon eating, triggering foods that's less well established. Certainly there are studies both in mice and some in humans that have linked different types of anxiety, increased anxiety with alterations in the gut microbiome. I would at this point be skeptical that this really plays a major role and that treatment targeted the microbes will actually be a satisfactory and effective treatment for anxiety disorders.

It's good as a adjuvant therapy. So in addition to other behavioral techniques to reduce anxiety, but certainly not a standalone treatment, panic attacks can be triggered. I mean typically a feeling from the pulmonary system. So certainly somebody who is conditioned that they or they have a disorder of panic, they have a panic disorder. Established diagnosis signals from the gut, either from contraction or distension or from certain dietary elements are certainly plausible mechanisms to trigger such an attack. But the main problem is really the underlying disorder of panic attacks. Next question comes from Eric. Eric writes, we are parents of a 3-year-old with autism spectrum disorder. They noticed that when the patient seems to be a girl, when her digestive system is better, her development is faster, her behavior is polar opposite. But they did some tests. She has an ultra-gut microbiome, yeast number of gut imbalances, and they went through an antibiotic cleanup.

But then I'll write back to where they started a few months later. So that's one general question. A specific question is that I was talking about a probiotic that was being developed by a company when I did an interview like seven years ago. They were wondering if this still being developed or has anything similar hit the market? So first of all, as you know, there is a definitely autism spectrum disorder. Alterations in the brain, gut microbiome system have definitely been studied in both in human and patients, but also in various mouse models. And the role of this dysregulation in the patient, it's likely so as you know, patients with autism, autism spectrum disorder, many of them have gut symptoms, probably multiple causes for these symptoms starting with restrictive eating patterns and to the significant emotional factors, anger, anxiety, frustration that we know have an influence directly on gut function, contractility transit through the gut and indirectly then on the gut microbiome.

So there's multiple factors that play a role in creating these GI symptoms in patients with autism spectrum. I personally don't believe that this dysregulation of the microbes in the patient or in the infant are causative for autism in general. I think this is something that happens much earlier, even in utero affecting brain development. But certainly as you have experienced, the symptoms of the patients are related to a healthy gut and a healthy gut microbiome. So what does this stand in terms of therapies? So therapies have not been as successful as has been hoped. Many therapies have been tried from gluten-free to ketogenic diets really without major success in, or there's actually a lack of clinical trials that would prove the effectiveness. Second question. This treatment that was developed several years ago based on findings in a mouse model of autism, to my knowledge, has not progressed to an effective therapy, certainly not available for clinical use.

The company that had this intervention in development is working on other approaches basically to decrease the number of metabolites that microbes generate in the gut, that they are prevented from reaching the systemic circulation and reaching the brain. So several ongoing trials from startup companies in this field, but no breakthroughs and unfortunately no drugs that are available clinically at the moment. Next question is kind of complicated and I'm going to have to summarize this because it would take a long time to answer each aspect, series of statements and questions. So Daron writes a couple of problems, including his unable to sleep. He has difficulty keeping his focus, but the evening he feels extremely exhausted. He has lost his motivation to do even simple exercises. He visits the restroom eight to 10 times a day. A lot of symptoms that some of my most complex patients indicate, or if he give a questionnaire to patients that participate in our studies, we will see that.

So for example, IBS or gut problems are not limited to the gut, but they have a lot of what we call comorbidities affecting other systems in the body, particularly things like sleep focus, motivation, vitality. And so I don't know what your diagnosis is if your primary diagnosis is irritable bowel syndrome. Our approach, my approach to a patient who has all these symptoms is to do a multimodal combination therapy, which includes diet, lifestyle recommendations, but also mind targeted therapies from mindfulness based stress reduction. There's also other things like gut focused hypnosis, gut focused cognitive behavioral therapy. And I think the secret is to incorporate multiple, this multimodal approach, not just one therapy. There's certainly not one pill, there's not one diet. It's really combining these and it will take time to change the whole

system around. In your case, this is clearly now a system disorder, not limited to the gut, but really affecting multiple systems, including the brain.

So then there were a couple of comments and questions about Ozempic. So I've written several posts on this topic, I've talked about it. So just to clarify my general view on this, it's certainly an evolving view because these are new drugs. The pharmaceutical industry has struggled for decades to develop medications that are effective, have few side effects and can actually treat the root cause of the problem, not just symptomatically and not just be effective as long as you take them. There's also behavioral therapies, which overall have been more successful. And again, for a lot of people it's not a solution to the problem, but 40% of the American population are overweight or obese. So this is a massive public health problem. It's increasing in prevalence and it's not just a cosmetic problem. Obesity is a serious risk factor for many diseases that make up our chronic disease epidemic, including type two diabetes, metabolic syndrome, but also going to very severe complications such as the long-term, Parkinson's disease and neurodegenerative diseases.

So that's as a background. So now these GLP one agonists and GIP agonists have come on the scene initially developed for the treatment of type two diabetes and were FDA approved for that specific indication. They are effective. The downside is they that they do have side effects. Many effective drugs that we have treating serious problems have side effects. You always have to look at the frequency, the prevalence of these side effects. Do they occur in every other patient to do they occur in one in a thousand patients? Are they life-threatening? Can they be reversed by stopping the medication? So these are all considerations now with this class of drug, something has happened that people have realized that they're not only effective and FDA approved for type two diabetes, which is a serious issue in itself, but they also have turned out to be very effective weight loss drugs, helping people to lose 20% of their excess body weight in the three months trial period.

The problem again is they're not addressing the root cause of obesity. So once you're on these drugs and trials have shown this, you have to stay on them if you come off the drugs. For most people in the clinical trials that have regained their weight, they're also very expensive. So a treatment course for one month could cost a thousand dollars and it's not covered by all medical insurances. It's not covered by Medicare at this point, and it would have the potential of really severely compromising the ability of Medicare to come up with funding for this new treatment. So based on this background, let me just say a couple of things, comments I got from Amelia. She says it concerns me that many are talking about this being a miracle drug when eating real food does the same thing and benefits our gut microbes without the potentially severe side effects and need for long-term medication.

We need to address, we need to be addressing the root issues that are driving obesity instead of putting a band aid on it. Well, I couldn't agree with this statement more. The problem is many of these approaches, dietary approaches, both the healthy diet, Mediterranean diet, but also some of these more extreme diets have not prevented this epidemic to progress further. So it's not made a dent on this huge medical public health problem that we have. I totally agree on a healthy diet.

Your gut microbes are healthier, your gut health is improved and your weight will decrease and increase the amount of plant-based foods, decrease of animal fats together with lifestyle modification, yes, can do the same thing, but we're dealing with a huge medical issue that costs billions of dollars. The treatment or the prevention of dying from this chronic disease epidemic costs medical system billions of dollars, but it does not address the root cause of the symptoms.

So unfortunately, I think at this stage of the game, we have to look at drugs like that if that's a temporary solution until we find or it's a solution together with these lifestyle interventions, there's a lot of work that needs to be done to identify the proper place. Another common comes from sae. It's interesting he said, I'm a bit surprised of seeing Emran Mayer promoting and supporting this drug when he himself has always been a strong opponent of supplements and drugs. So first of all, I'm not promoting this class of drugs. I have absolutely no commercial financial interests in any of the companies. I am a scientist and I am following the evolving literature on this topic, and I should disclose 20 years ago when I did studies on some of these gut hormones, we studied GLP one agonists, we looked at the effects on how that affects the craving for food.

For example, looking at brain images of patients that took it at the time we had to stop this study because the medication or the treatment caused too many symptoms of nausea and people wouldn't continue taking it. So I'm not promoting it, but I am looking for ways to find recommendations that in combination with other treatments for obesity and not overweight, not cosmetic reasons, but people with obesity that already have health problems, how this fits into this multimodal therapy. So he also goes on, in fact, Al Mayer has encouraged to replace all supplements with healthy microbiome friendly diet, the majority of supplements. I do agree, I'm not a supporter of all supplements. I'm definitely not a source of my revenue, which it is for a lot of physicians and a lot of influencers. But there are certain exceptions to that and again, Ozempic is not a supplement, but just staying with that topic.

Supplements, there's a few supplements, handful that have undergone well controlled, large scale placebo controlled clinical trials. There's a few of these that I will endorse. Having worked with clinical trials myself and being totally convinced that under something is really supported by this kind of information, I would be very reluctant to support it. Maybe with a few exceptions. Compounds that have been around for thousands of years in traditional healing systems like Ayurvedic medicine or traditional Chinese medicine. There's a few of those molecules like turmeric, like ginger that people have continued to take for thousands of years. None of our medications will be around in a thousand years from now. So this clearly is a different kind of evidence and empirical evidence of usefulness and effectiveness that I think for me counts as well. I do not endorse anything that somebody has come up with a new fat that has been around for a couple of years and has miracle properties supposedly.

So hopefully this clarifies my view and my attitude towards drugs and supplements. So the last question is from Michelle. Our last comment, she says, disappointing to see this on your page. The side effects of these drugs far outweigh the benefits. I would say that statement applies to the people that take these drugs for cosmetic reasons because they want to lose a few pounds, but it

doesn't apply for patients that are taking them that already have medical complications and or are morbidly obese. So if you take it for cosmetic reasons, yeah, clearly the risk of having potential, even though rare side effects like pancreatitis, constipation, diarrhea, outweigh the benefits. But if you already have a serious disease which has life-threatening consequences in the future, such as heart attacks or cancer, I think the benefits clearly outweigh these risks. That's true about a lot of drugs that we have available today.

For example, for autoimmune diseases that increase the risk of some forms of cancer. This has to be balanced or defined by the patient, by the physician, just benefit risk ratio for each of those interventions, not just for Ozempic. And she goes on and the people taking them gain the weight right back as soon as they stop because they aren't changing. Lifestyle habits, as I said before, the prescription of these drugs should be contingent on the patient's willingness to change their lifestyle habits, not just for a short period of time, but permanently. This is a challenge for a lot of people. They're not able or willing to do that. But regular physical exercise, stress reduction, mind targeted therapies and dietary recommendations going to a healthy gut-friendly, largely plant-based diet are clearly essential if somebody starts on these medications. And then chance when use for their initial reason in those that are obese with type two diabetes should be the only use for them.

Well, this is how they were originally developed and FDA approved. I think the FDA approval for obesity kind of changed that a little bit. But I would agree that the indication and the physician's willingness to prescribe them should be contingent, should not be there for somebody for cosmetic reasons, but should be really contingent on the presence of a potentially serious medical complication of the obesity. Hope this answers your questions and I hope it also was useful for the people that have submitted. The other comments will come back with the third edition of this a A in a few weeks. We'll always invite you to submit your questions, your comments. I'm happy to answer them.