JEFFREY STAAB: Hello, I'm Dr. Jeffrey Staab from the Department of Psychiatry and Psychology at Mayo Clinic in Rochester, Minnesota. I'd like to welcome you to the third of three talks on somatic symptom disorders. This time, we're going to focus on the fallacy of medically unexplained thinking. So I have no financial conflicts of interest, I am grateful to my colleagues and patients who bear with me every day in the Behavioral Medicine Program here at Mayo Clinic.

In a previous slide, we talked about the transformation from DSM-IV to DSM-5, especially about the fact that this concept of medically unexplained symptoms is no longer at the core of the diagnoses. So in DSM-IV, we diagnosed the various somatic symptom disorders on the basis of a physical symptom being present that couldn't be explained by known medical or surgical illnesses. And so we've changed that. And in this talk, I want to discuss the reasons behind that. Why is this idea beginning to be expunged from our diagnostic nomenclature?

So there are really two conceptual changes that we have to make, from what many of us were taught as we went through our training in the 20th century to our current practice here in the 21st century. The first conceptual change is the dichotomous hierarchy. This is absolutely what we've been taught and what many of us still teach our trainees. The dichotomy is that we have medical problems or psychiatric problems and the hierarchy is we've got to address the medical problems first and the psychiatric problems later. Now this has some real consequences.

The first is that we often forget the epidemiology behind the presentation of enigmatic physical symptoms, or physical symptoms that we can't necessarily explain in total. The epidemiology would suggest two things. One, that the coexistence of medical and behavioral factors, not necessarily psychiatric disorders, but medical and behavioral factors, is more prevalent than a symptom such as this being due solely to a medical cause or solely to a psychiatric cause. But if it does come down to psychiatric versus medical, oftentimes the psychiatric ones are more prevalent. And yet the dichotomous hierarchy, especially the hierarchy, would have us focus on the medical aspects first.

We're taught that we can't miss anything. And typically, miss anything means miss anything in terms of medical or surgical diagnoses. Somehow or another, missing something from a psychiatric standpoint doesn't seem to carry the same weight, although perhaps it should. Because when we're taught that way, when we practice that way, the can't miss anything approach often misses the thing that is the cause of the problems. It's also a very expensive and inefficient way to address physical symptoms, and can sometimes be misleading or even dangerous. I wish I couldn't tell you what the outcome is of doing a cardiac ablation for a young woman with a panic disorder, but I can, and unfortunately I've seen it more than once.

There's more consequences to this dichotomous approach, and that is that we tend to try and make artificial attributions of cause. Frequently, we'll get consultation questions that say, is this medical or psychiatric? And my answer is maybe. It could also be medical and psychiatric or it might be neither. And then my favorite one is, how much is psychiatric? And my answer is always 64.23%, because I want to be precise even if I can't be accurate. It also points out to the people that I'm working with how it's really not possible to answer a question like that, you can answer a question of are psychiatric factors contributing, but can't really give it a fraction or a how much.

Another one that I would imagine that everybody has done is that is to focus on these medical problems and kind of collude with the patients that we really won't address the behavioral or psychiatric things, because it's kind of messy or hard to do or uncomfortable for both the patient and the doctor. That results in patient's problems being abandoned. Sometimes patients entirely being dismissed and left to fend with symptoms that, we might know in our heart of hearts, have a behavioral cause, but have this collusion that we'll look at the medical stuff and then be done.

Now the second conceptual change really gets to the heart of this idea of the medically unexplained, and let's take a look at that. So when does B equal not A? That's what we're saying when we say we're going to make a psychiatric diagnosis because we don't have a medical explanation. And there is one situation in which that happens, and that is when the entire world of A is known, the entire world of B is known, and the border between them is a rigid and fixed one. Under those circumstances, we can say if I know that a person is not B, then they must be A. But that isn't the way it is in medicine. We have this other category of C, which we don't really know. And A and B are not rigid, fixed, but have diffuse borders of things that are kind of A but maybe not, kind of B, but maybe not, and may overlap with each other. Under those circumstances, it's absolutely impossible, logically impossible, to define something solely by what it's not. And yet that's what we've done up until these changes into the DSM-5.

So we have lots of terms that we've used. Physiologic versus aphysiologic, real versus not, organic versus whatever the opposite of organic is. Oftentimes, organic versus functional, as it was used in the 1800s. But really what they were talking about then was structural versus functional, and functional didn't mean psychiatric in the 1800s. Functional meant this organ system's not functioning right, and someday we'll figure out why it is, but we don't know right now. It was only in the 20th century that functional got all mixed up with psychiatric.

Now this has real consequences in talking to patients. And as Josh Stone, in a very neat little study that he did with some medical students when he was a neurology trainee, asked patients what they thought about these different terms, functional, aphysiologic, organic, and so forth. And what he found was that if we use terms like aphysiologic, psychosomatic, psychogenic, that we would offend one out of every two patients. So he used the number needed to treat idea, but calculated number needed to offend. What he found is for every other patient that was talked to in those terms, they really felt turned off by the way that we were presenting this dichotomous hierarchy to them. It's pretty hard to successfully treat patients if we're first defending them.

So we've banished those terms from our practice. Sometimes our trainees get tongue tied when they try and present cases, but as they learn, they actually can become much, much more precise, both from the medical surgical side and also from the psychiatric and behavioral side. And patients understand these terms. We had the good fortune here at Mayo Clinic of doing the DSM-5 field trial in which we diagnosed patients using the DSM-IV right at the same time we were diagnosing them using the DSM-5, and there was a world of difference in the way that the patients came to appreciate what was happening to them when we use these more positively-defined disorders such as somatic symptom burden, illness anxiety, body vigilance, those kinds of terms, rather than you have an aphysiologic presentation.

So what's the consequence though, besides annoying patients? Well let's take a look at a couple of examples from past and present medical history. So when I was a medicine intern, we diagnosed lots and lots of people with stress ulcers. And here's a quote from the leading textbook of medicine at that time. Emotional stress is likely to be a factor in the pathogenesis of ulcer disease in some patients. Now that seems pretty vague, but it was in fact the strongest endorsement of any causality of peptic ulcer disease at the time. Now when this book was written in 1985, there were a couple of people from the land down under in Australia who begged to differ.

One, Robin Warren was a pathologist, the other, Barry Marshall, was a GI fellow. And they managed to culture and discover and then prove that heliobacter pylori was the stress underlying stress ulcers. Now if you look at the dates there, they were doing their work in the early to mid 80s, not a word of it was mentioned in the *Textbook of Medicine* in 1985, because we knew what the cause of peptic ulcer disease was. We knew it was stress. And these two wacky guys, who were infecting themselves with H. pylori to try and prove what was going on, really didn't didn't understand what they were up against. Fortunately, the Nobel Prize committee rectified that misconception in 2005.

Now here's another example. This is more current terminology. Psychogenic non-epileptic seizures. But if we think about it, that's the dichotomous illogic of B equals not A with a little hysteria thrown in plus a misnomer. Let me go through this with you. So psychogenic. We've all been taught that if someone has seizures or seizure-like episodes and the EEG is normal, then they must be due to psychological distress. In particular, we've been taught that it must become from childhood adversity, sexual or physical abuse. So a number of studies have been done looking at the fact that behavioral spells, patients with these kinds of behavioral spells, a quarter to a third of them do, in fact, have histories of sexual abuse. So that seems to fit with what we've all been taught. Except that our study done here by another one of our Fellows, and other studies elsewhere, have shown that the rates of childhood adversity are no different in patients with epilepsy versus those have behavioral spells. So there's a problem here. There's no difference in what we think is the causal factor, and that the majority of people who have behavioral spells don't have what we believe is the causal factor.

Physical abuse is a little bit of a different story. It looks like what happens with physical abuse is that if someone has post-traumatic stress related to childhood adversity, that that presence of abuse may well be a risk factor. Not a trigger, not a cause, but a risk factor for behavioral spells. Now we categorize these as non-epileptic, but what we really mean is non-lots of stuff. Non-syncopal, non-traumatic, non-cancerous, non-vascular, and on and on and on. And yet we don't always truly work through that differential diagnosis. We call them seizures, but for the most part when we say seizures, people tend to think about epilepsy, even though we're trying to say that it's not. So we have the illogic of B equals not A since the nons are a long, long list. We have the tradition of hysteria thrown in there with this psychogenic idea, and then a misnomer in using the word seizures.

So why does this matter? Let me give you a case example. 22-year-old woman, single mother of a toddler. First-year student in an LPN program. Great support from her family. Presented to our program because of three-year history of recurrent spells that had been diagnosed by her local neurologist and the University Medical Center in her home state as a conversion disorder or psychogenic epilepsy. She'd been very, very compliant with recommendations for psychotherapy. She and her family both attended psychotherapy sessions together. Her background was that she came from a very supportive family, she was the oldest of four girls and all maintained a close relationship. Now when we see these patients, our neurologists will proceed with the evaluation simultaneously with us, so a video EEG, confirm the absence of epilepsy, and our behavioral analysis went like this.

Patient reported the spells began with a few minutes of unsteadiness and ataxia followed by numbness on one side of her face, usually the right side. Then she had a period of altered consciousness, which could last for about 10 to 20 minutes, a little long for an epileptic spell, but she became dysarthric as her awareness would come back, and then she would have a headache. When I said, describe the headache to me, her mom said, it's a migraine just like what I have. And when I said, well how often does that happen, she said, every single time. I said, you mean you've never had a spell without a headache afterwards? And she said, no. And so our diagnosis was migraine and migraine triggered behavioral spells. Now as we started talking about this, Dad got a little teary eyed, and I said, what's the matter? And he said, you know, for three years we've been told my daughter had psychogenic seizures. And for three years, we've been told that that was because she was abused as a kid. And for three years, we've been told that I was the one most likely to abuse her, and I would never, ever do that to my daughters.

So these mindsets that we've brought with us, from the 20th century into the 21st, create a circumstance in which we're actually violating our sense of do no harm. Now this was not malpractice, both the neurologists and the psychologists here were practicing it as we've been told. But that didn't make it right, in fact, made it quite very wrong for this young woman. So now that would have been interesting if it was a one up, but one of our medical students decided to take a look at this a little bit further. And here we find that we've actually come across this in 50 patients. And when we looked at that, a consensus of an epilepsy specialist, a headache specialist, and a psychosomatic medicine specialist came to the conclusion that many of these patients had a mixed presentation of spells that seemed behavioral, but probably were triggered by a headache event. And it wasn't just any headache event, but it was an episodic migraine. Not tension headaches, not chronic headaches, but episodic migraine associated with these episodic behavior spells.

Now we don't know more about this except that we've treated about six or seven of these patients with anti-migraine medications, with nearly complete resolution of their spells most of the time. So we've had blinders about this relationship. Psychogenic non-epileptic spells of course are not related to migraine, they don't have anything in common. We wouldn't expect them to have anything in common if we think about them the way that we did in the 20th century. But perhaps those blinders, of the dichotomous hierarchy, have led us down a wrong path.

Let's take a look at one more thing. Let's say we have this young woman who presents to a primary care office, to our favorite major medical center. And what she comes in with her are symptoms referable to her head or nervous system, some symptoms in the chest, some in her belly, and some in her joints and muscles. She goes through the evaluation that's medically indicated and we come back and we tell her that we really didn't find clear-cut medical reasons for her to have these spells or symptoms. And so the ones that are referable to her head are due to a psychiatric diagnosis, a conversion disorder. Those in her chest have no diagnosis because they're non-cardiac chest pain. The ones in her belly though are medical diagnoses, functional GI disorders. And the ones in her joints are also medical diagnoses, fibromyalgia.

Now if she was confused by that, I wouldn't blame her. It really has to do with the fact that we are in different places in our different medical specialties in embracing and diagnosing the details of these various functional disorders. The GI docs are well ahead of the rest of us. Rheumatologists have caught up a little bit, but others of us aren't yet on board with this concept. It has consequences for this young woman and others like her. If she's sent off for treatment of her conversion disorder, she's likely to run into people who were not well versed in treating it and don't really produce good outcomes. She's not going to be offered treatment for non-cardiac chest pain because that's not a diagnosis, and yet for her functional GI disorders and fibromyalgia, she'll have the advantage of FDA-approved medications, off-label medications supported by good studies, and rather effective behavioral therapies too, especially for upper and lower GI tract symptoms.

So sometimes I challenge my colleagues about this, particularly the neurologists that we work with. And they usually struggle with this, but then I tell them, wait a minute. What about the headache disorders, aren't they functional? What if we called headache disorders psychogenic cephalalgia, would do we have FDA-approved medications? Would we have clinical trials of off-label medications? Would we have the effective behavioral therapies, dietary lifestyle, and other changes that can be useful for controlling migraines? My suspicion is that we wouldn't. But if we can apply this same strategy to other functional neurologic disorders, might we end up in a similar spot? Answers we don't know but we haven't tried yet.

So in conclusion then, if we're really going to move into embracing patients and helping them get better in 21st century medicine, we've got to banish these twin fallacies of the 20th century. There really isn't a place for the dichotomous hierarchy or the concept of medically unexplained symptoms. They're based on fundamental, logical failures. There's no way to make them better. There's no way to revise them, we have to abandon them and replace them by embracing diagnosable concept, explainable ideas, and fundamentally treatable conditions. We haven't mastered these yet, but in GI disorders, in headache disorders, in fibromyalgia, we're much further ahead than we are in some other areas of what used to be called medically unexplained symptoms.

So we have our somatic symptom disorder, we have our illness anxiety disorder, and we have a growing list of functional disorders with our GI colleagues really leading the way, our neurologists considering this kind of an approach to what we now call conversion, and with other specialties such as ENT and others beginning to catch on. And hopefully, this will lead us further and further ahead in tackling this rather difficult group of patients.

Here's a couple of resources of a book by Asmundson and Taylor called*It's Not All in Your Head: How Worrying About Your Health Can Make You Sick and What You Can Do About It,* a nice primer for patients on illness anxiety. A wonderful web site put together by Josh Stone and others called Neurosymptoms, which really explains functional neurologic presentations in a way that many patients find quite understandable and reassuring. And then the Association for Behavioral and Cognitive Therapy, for identifying cognitive therapists who may be well-versed in taking care of some of these patients. Thank you all very much.