

Asthma: Critical Risk stratification to decide care

Transcript Details

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Dr. Domino:

You're listening to the first episode of PriMed's new podcast series, Frankly Speaking. I'm your host, Frank Domino. I'm a family physician at the University of Massachusetts Medical School in Western Massachusetts. The theme of each weekly episode will be centered on a specific primary care topic and along with my guests. We'll look at what's new in the news, the medical literature. And practice guidelines, and how these things will influence your care. Joining me today is my colleague, Robert Baldor, professor and senior vice chair in the department of Family Medicine and Community Health at the University of Massachusetts Medical School and the editor of Baldor's Family Medicine Board Review. Welcome to the show, Bob.

Dr. Baldor:

Thanks, Frank, it's a pleasure to be here.

Dr. Domino:

So Bob, I thought for today's session, we begin talking about asthma and review some of the key components of how we evaluate asthma and ultimately, how we treat it. For today's session, let's begin with asthma and how we go about classifying it with regards to patient care.

Dr. Baldor:

Thanks, Frank. Great topic. Certainly, we're seeing a lot of asthma this winter months, lots of folks coming in with respiratory problems and complaints and trying to tease out asthma versus just a common cold or other things there that are going on. The thing with asthma, I think the real issue in my mind with asthma is to try and determine whether or not this is an intermittent problem for the patients or whether it is more persistent. And that really drives everything. And you know me, Frank, I like to keep things simple, so the guidelines have lots of different details that are in them. I think of this as the rule of twos. And so, the thing about the rule of twos, it really gets down to having your patient understand this as well, what are they involved and what are their symptoms that they're having, how often are they using the rescue inhalers, are they getting up at night because of complaints and so on. So the rule of two is symptoms. How often are you having symptoms that you think are attributed to your asthma during the course of the week? And is it more than twice a week or less than twice a week?

Dr. Baldor:

And so, that's the threshold there. Are you waking up at night and is asthma making you wake up at night? Again, that rule of two, but this is over the course of a month. Are you waking up a couple of times a month or less than that because of your asthma? The rule of two here relates to the use of your rescue inhaler, and so we talk about short-acting beta agonist, your rescue inhaler, and it goes along with the symptoms. Say, how many times a week are you using it? Are you using it more than twice a week or less than twice a week? And so, that's that threshold. A couple times a month these things are happening, it's intermittent, more than a couple times a week, waking up more than a couple times a month, using your inhaler more than a couple times a week, it's persistent. And so that really is one of the key things that I try to focus on with individuals. And helping them think about that from your own care when they should be calling me, when they should be saying, "I think my asthma's acting up or not." So it's keeping a simple rule of twos.

Dr. Domino:

Let's get specific about that, Bob. You're saying if it's less than twice a week, it's an intermittent problem and if it's more than twice a week that you feel you need to use your beta agonist, your rescue inhaler, it's a persistent problem. How do we define it further than that? That rule of twos is fantastic but can it help us figure out when patients are moderate, persistent, or severe?

Dr. Baldor:

Once you cross over into the persistent category, then I rely a little bit more closer on the guidelines, looking to see is it mild, moderate, or severe. And the reason for that is because there's a therapy, the treatment that is attached with this, and depending on your level of classification depends on what you need to be thinking about for therapy. With the classifications again, I look at symptoms and symptoms also go along with the use of a rescue inhaler and asking people about that and now we've persisted a little bit. So using your rescue inhaler or having symptoms more than twice a week gets you into the persistent category. But if you're having symptoms and using your inhaler daily, you go from being mild to being moderate in your level. If you're using it more than once a day, you're into the severe category. That's the basic, looking at this. Also nighttime is important to ask about to couple that with that. I said that rule of two, a couple times a month, no big deal. But three or four times a month, almost weekly for nighttime asthma, you get into the mild. Moderate is where it's more than once a week but not nightly. And then severe where it's actually pretty much nightly you're being woken up. I think if you are having somebody who is struggling with persistent asthma, it's important to take the time to break it down and to understand whether they're mild, moderate, or severe.

Dr. Domino:

I like that, Bob. To recap, if you're using your rescue inhaler two or fewer times a week, it's a mild intermittent situation, but if it's more than twice a week, it's a persistent problem. And mild persistent is considered more than twice a week you're using your rescue inhaler, moderate

persistent is daily use, and severe is if you're needing to use the inhaler multiple times a day. So, Bob, tell us again about the asthma action plan.

Dr. Baldor:

Yeah. I think it's important that individuals have an asthma action plan. It's really nice with what's been done around this, thinking about green, yellow, and red as being the zones here. The green zone, that person's doing well, they're checking their peak flow, and their peak flow is more than 80% of predicted. That's great. Just keep doing what you're doing. The yellow here is things are getting a little worse. You're having more symptoms. We just talked about nighttime waking and so on. But the peak flow is part of this 50%-80% of their personal best. They're getting into that yellow zone. They need to be doing and thinking about other therapies at this point, being aware of the fact it's like you're driving, you get that yellow light, you're supposed to slow down here and be cautious about what happens next. Of course, I don't do that. I always step on the gas and go, but...

Dr. Domino:

I know.

Dr. Baldor:

And then, of course, the real thing here is the red light, when you hit the red zone. And the red zone here is more severe symptoms and the peak flow less than 50% of their personal best. That all flows into really thinking about the classification of asthma and how you're really helping the patient to understand where do they fit because it's a spectrum. And I think in another one of these sessions, we'll talk about treatment and how that's important and where we should go with treatment. But the first piece of this is really to get that patient to understand their asthma and to understand it from the perspective of the degree of severity and get them engaged in being patient-centered and caring for their asthma. And that's why the asthma action plan is so

important.

Dr. Domino:

That's great. That's an easy set of parameters to follow. Greater than or equal to 80% of your personal best, you're green; 50%-80%, you're yellow; and less than 50%, you need to recognize that is red and take action with it. Terrific. Let's step back and think about asthma. What is asthma? What's the pathophysiology that's actually going on and why is it important when we think about interventions and treatment?

Dr. Baldor:

Frank, when you say pathophysiology, I think of the first year of medical school and I'm not sure I want to go there. So let me go back to what I think makes sense from a day-to-day practice.

Dr. Domino:

Sounds great.

Dr. Baldor:

When I think about asthma... Asthma, it's reversible airway disease. The idea is that you've got a spasm in the bronchi, the airways are narrowing down, and you're having trouble breathing. But it's reversible so that the airways will open back up again and the air can come out. Underlying that whole thing from a pathophysiological basis is inflammation. There's something that's causing inflammation and irritation in those airways to cause them to spasm. As you think about symptoms, what happens is as the airways constrict, you can get air in but you have trouble getting air out. And that's what causes the wheeze that you hear as people are forcing that air out through these narrowed airways and you can hear the wheezing either audibly or obviously through auscultation. And certainly, when I'm doing the exam, I always try to have students and

residents to think about the I to E ratio, inspiration-to-expiration ratio. Normally, it's actually much easier to get air out than it is to get air in. The normal ratio is probably 2:1 and just phew! When you're listening, though, and it's like, hmm, it's taking them longer to get the air out than it is to get the air in, you're prolonging that ratio, then you have to worry, too.

Dr. Domino:

Great. So, it's a condition that involves inflammation and decreased ability to expire what's in your lungs. Very good. Are there any risk factors for asthma that we have to worry about? And what should we be encouraging our patients to do to try to prevent some of the problems associated with asthma?

Dr. Baldor:

I think about risk factors... Asthma tends to run in families. There's most likely an issue related to allergy that's part of this. But really, what I think about more is rather than risk factors, is counseling patients on things they can do to avoid exacerbation of their asthma. I don't think you can actually prevent asthma from that perspective. But you can do things to decrease the number of times you're going to have exacerbations. And so, typically, we think about allergens as being a piece of this. People love to have pets, dogs, and cats. I don't understand this myself because I don't have any as of yet. But a lot of people have... And animal dander is a big trigger for a lot of people. Also the other things though, dust mites that are part of this.

Dr. Baldor:

There's indoor molds and pollen. Cockroach dander is... Not dander, but cockroaches are a piece for a lot of folks in different areas. And then clearly tobacco. Tobacco's a trigger whether it's people... And secondhand tobacco smoke is a big issue for a lot of patients that we see in children. I do want to talk about a couple of really... One other interesting thing, because I just read this in the paper this week. I don't know if you saw this. Worsening asthma is tied to sausage

and ham. This was just published, individuals here that were... It was published in the Thorax here, December 20, 2016. Having four more weekly servings of these processed meats: Ham, sausage, salami, and so on; those individuals had more exacerbation of their asthma. So what the heck's that about? Well, we've actually known for a long time that sulfites in foods are a trigger, and it's the sulfites that are being used in this. So I don't think it was necessarily telling us anything that we didn't already know. But it was just interesting that was in the paper.

Dr. Domino:

Thank goodness they didn't study wine.

Dr. Baldor:

Yes. You've got it. Okay. And the other thing, of course, when wintertime cold air trigger is a trigger for a lot of people's asthma as well.

Dr. Domino:

Sure. It sounds like you're saying there are a number of things in the environment, should we be aggressively treating allergic rhinitis? Is there a role for air filters?

Dr. Baldor:

Yeah. There's been a lot of data on that, people thinking about using air filters, using vacuum cleaners with HEPA filters, they call them, that are there. It turns out the data's not real good on that making a difference. People can spend a lot of money on these things, it doesn't seem to help when you study it rigorously from an evidence-based point of view. Part of that, particularly with the vacuuming, the vacuuming actually stirs up a lot of these things, stirs up a lot of dust mites and things, gets them into the air that people are inhaling them much more so than just leaving it there. But you shouldn't leave it there, you should always want to have a clean household and so on. But the use of an expensive... People can't afford expensive HEPA vacuum,

it's okay. It's not that we've actually been able to see that it makes a big difference in control.

Dr. Domino:

I think...

Dr. Baldor:

Yeah, the air filters are the same thing.

Dr. Domino:

I think you're absolutely right. The literature shows that it doesn't seem to help, although I have had some patients anecdotally say it helps. Same thing with bed covers and pillow covers; it makes perfect sense that it should help but a Cochrane systematic review found very little benefit, if any, to doing those things and recommended against it. I think we've got a good idea that if you've got a highly messy environment, appropriate cleaning might be helpful but mostly look at triggers that you can modify like smoke exposure and other allergens. I think treating allergic rhinitis fairly effectively can help those who have extremely sensitive asthma where allergies will set them off. And this time of year of course, we're thinking a great deal about flu vaccine.

Dr. Baldor:

Absolutely. And I want to come back to the other thing though is the pets. Some people have pets, pets are great, keep them out of the bedroom that's the key piece with the pets. And the other thing I'm thinking about is some of the issues around mold and dust mites and so on. You don't want to have a lot of stuffed animals and things surrounding the kids in their beds. There are things you want to think about minimizing the impact of those triggers on allergy but if somebody can't afford a fancy filter or a vacuum cleaner not to worry because it's not all that beneficial. Flu vaccine you mentioned, absolutely. It's not going to do anything to prevent an

asthma exacerbation but we do know that people who have problems underlying their respiratory tract are much more likely to suffer severely if they do get flu so you want to try and prevent it.

Dr. Domino:

Bob, thanks so much. We've done this morning a quick overview on how to classify asthma, what are some of the physiologic changes that occur with asthma, and a little bit about environmental factors that play a role in asthma exacerbations. Join us next time when we're going to review how to both strongly diagnose and manage asthma in adults and children. This is Frank Domino for Frankly Speaking.