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Uncovering Severe Asthma Mimickers & Drivers

Announcer:

Welcome to CME on ReachMD. This activity, titled "Uncovering Severe Asthma Mimickers and Drivers," is brought to you by CHEST. This educational activity is supported by an educational grant from GlaxoSmithKline and an educational grant from Genentech, a member of the Roche Group.

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Here's your host, Dr. Sandra Adams, a Professor of Medicine in the Pulmonary and Critical Care Division of UT Health San Antonio and Staff Physician at the South Texas Veterans Health Care System.

Dr. Adams:

Asthma can be a challenging condition to diagnose correctly, and since there are several other conditions that have similar symptoms, clinicians must maintain a high level of suspicion for those alternative conditions. So, when a patient fails to respond to conventional asthma medications, is it really asthma, or could it be one of the mimickers?

This is CME on ReachMD, and I'm Dr. Sandra Adams. Joining me to discuss severe asthma mimickers and drivers is Dr. Sumita Khatri, an adult pulmonary and ICU physician with a specialized focus in asthma patient care and clinical research. Dr. Khatri is also the director of the Asthma Center at the Cleveland Clinic. Dr. Khatri, welcome to the program.

Dr. Khatri:

Thank you so very much. It's my absolute pleasure to be with you.

Dr. Adams:

So, to start us off, Sumita, what are some of the common mimickers to consider when evaluating patients with what we think is asthma?

Dr. Khatri:

That's a very important consideration because there are several common mimickers almost as common as asthma itself. So, common mimickers include an upper airway cough from either chronic allergic or nonallergic rhinitis or sinusitis where drips go down the oropharynx and cause the cough very similar to asthma. Also, reflux, GERD, can mimic asthma because of the sensation it causes in the throat with throat clearing, which often seems like asthma. In addition, recurrent aspiration can also play a role, particularly in people with neuromuscular weakness, and that can also cause inflammation in the airways which can mimic asthma. Other pulmonary mimickers include bronchiectasis or structural issues, such as tracheobronchomalacia, airway and interstitial abnormalities from hypersensitivity pneumonitis or interstitial lung disease, or even pulmonary hypertension can mimic asthma with some episodes of dyspnea. Outside the pulmonary realm, however, we should think about cardiac conditions, such as CHF or valvular disease, which present differently by history and do not respond to therapy but do sound like asthma, which is why often when patients wheeze with volume overload, we call it cardiac asthma.

Dr. Adams:

That's really good information, and we need to keep a lot of that in mind. Now, keeping with that line of thought, how often is asthma misdiagnosed?

Dr. Khatri:

Since asthma often presents with a cough, other conditions can obviously cause a cough and a wheeze. In addition to a good clinical history, that's what I'm looking for for a diagnosis of asthma, and so, what you're normally looking for is the episodes of wheezing, chest tightness and shortness of breath brought on by triggers. It is still, however, important to get objective testing with spirometry before and after bronchodilator as well as bronchoprovocation testing if the spirometry is not diagnostic. What can otherwise occur is that a clinical suspicion without some objective testing results in treatment and either the patient won't get better or they have been unnecessarily on treatment without actually having asthma. So, one of the most important initiatives in the care of asthma and even all lung disease is to get proper objective lung function testing. Finally, if a patient is on a medication and they're not getting better but you thought they had asthma—things could change over time, so it may be reasonable to stop medications, monitor the patient and then repeat testing again, start all over with all the possibilities that it could be.

Dr. Adams:

Okay. In addition to when a patient is not getting better on medication, what are some other clues that make you think about asthma mimickers?

Dr. Khatri:

Ultimately, the patients know what's wrong with them. They may have some sense that somebody told them they had asthma, but the history and just listening without interrupting them and inserting our own opinion is really what's important, so I listen very intently to an episode as they describe it, and if it doesn't fit asthma, I start thinking of alternatives. In addition there is a certain type of symptom that occurs when the upper airway is involved, and it used to be called paradoxical vocal fold motion disorder, PVFM, and even before that it used to be called vocal cord dysfunction, which you can imagine is not the best name for it. Nowadays we actually call it inducible laryngeal obstruction, ILO, because this speaks to the fact that it's not a fixed condition, that it is inducible and reversible, and that is often a very common asthma mimicker.

Symptoms-wise, if we are thinking ILO or PVFM is an issue, mid-chest tightness is often a common symptom, or a person may feel like there is a change in their voice—it's rather sudden in onset—and there's a sensation in their throat or a tickle even. Often times patients who present with ILO over time have a history of multiple intubations in the ER.

And finally, to me, seeing is believing. If somebody's come into my office and there's that suspicion or perhaps second or third or fourth opinion for asthma and they're walking down the hall and they can barely make it, they have got a stridorous noise coming from them, they are working hard to breathe and it's really almost causing an emergency in the clinic, and you see it in person once you have known what to look for, it's so remarkable. That is a common occurrence for those patients with severe ILO, and I would say that combination of a clinical history, the history of multiple intubations and also even just seeing it happen really helps me make the diagnosis.

Dr. Adams:

That's a lot of great information. For those just joining us, this is CME on ReachMD. I'm Dr. Sandra Adams, and today I'm reviewing severe asthma mimickers and drivers with Dr. Sumita Khatri.

Now, Sumita, you had just talked about how inducible laryngeal obstruction, or ILO, can mimic asthma. Can you tell us how you evaluate a patient who you suspect this condition in addition to the flow volume loop that you mentioned? And what's the role of imaging or direct visualization and bronchoscopy here?

Dr. Khatri:

Yes, so the flow volume loop can be helpful, but as many of the speech therapists and ENT physicians I work with say, that the gold standard is to actually see it happening, and in that case performing laryngoscopy in the office can be quite helpful, flexible laryngoscopy. And if you are doing that, you would rather perform that without the lidocaine on the vocal cord so it doesn't numb the motion, if that is to occur. So visualizing this episode from above the cords or even asking them to breathe deeply or somehow strain their breathing may actually help demonstrate that ILO and helps make the diagnosis. On the same note, bronchoscopy can be performed too, especially if you are really trying to rule out asthma or something else going on, but while performing bronchoscopy, it's recommended that we don't sedate them until we pass their cord so we can see it that's really an issue as well.

Meanwhile, imaging with CT chest to rule out structural abnormalities is important. Inspiratory and expiratory films to evaluate the level of excessive dynamic airway collapse, tracheobronchomalacia, is also important, and I'd pursue that if we're not able to do that via

bronchoscopy.

Dr. Adams:

Okay, that's great information. And once the diagnosis is made for inducible laryngeal obstruction, or ILO, how do you actually help these patients? How do you manage it?

Dr. Khatri:

Well, if I'm lucky enough to see it happen in front of me, even if it's mild, one of the most powerful things that I am able to do is to help walk them through managing it, so that could be the whole diverting of attention, the stress release techniques that some of the speech therapists use or calming down the breathing or sniffing or nasal breathing and slowing down the turbulence of airflow if they're mouth breathing. There's also another technique which is where you take a straw and you cut it in half and you really just purse your lips and breathe through the straw, and that helps reduce the turbulence of the flow and helps perhaps reduce the duration of that symptom or maybe stop it all together.

However, there are other things that can contribute to it. For instance, reflux, laryngopharyngeal reflux disease, LPRD, can be a confounding problem. So, if somebody has reflux and it's going up and it's irritating the vocal cords, naturally you can imagine that the vocal cords would be spasming even more or having some inducible laryngeal obstruction, so if there is any evidence of reflux when the cords are visualized, I treat reflux aggressively for 2 to 3 months and see if that can at least reduce some of the stimulus.

Finally, other conditions that can make ILO worse, including not only stress but also certain scents and particles, suggest that there is some irritability of the larynx, and the use of neuromodulators to try and reduce that irritability or even reduce the muscle tension in the strap muscles of the neck can help at least either reduce the initiation of ILO or reduce the severity of the ILO.

It's a multifactorial process, but I think one of the most important things to have a good therapeutic response is to have a good relationship with the physician who's helping treat it. And often it's amazing how relieved the patients are, that as scary as this is, that there is an answer. And some patients get significantly better, and some take some more time or don't get fully better, but just having an answer often helps them at least manage the stigma and help them feel heard, and I think that's the first important step to recovery is feeling heard and not judged.

Dr. Adams:

Sure. That's encouraging information. Finally, Sumita, can you share a memorable patient experience or two that maybe can help bring these ideas into context for the listeners here and for us in general?

Dr. Khatri:

I think we've all seen patients like this. It's not uncommon at least once or twice a month that there is an emergency in the waiting room as somebody new is coming in to see us whose been in the emergency room multiple times, who you can hear walking down the hall breathing, and they are calling for emergency response team. And so you walk in not knowing what it is, but then you recognize it right away and just immediately sort of—at least even if you start a nebulizer to calm down the breathing and really just sit next to the patient. This has happened countless times where you just sort of sit with the patient; don't let them talk; you don't talk. You basically beat away the first responders because really you don't need them. That just adds to the problem. I have had so many of these patients it's almost hard to even separate all of them except to know that there is a pattern one gets used to, and if you have a practice where you see patients like this, everybody knows how to respond, which is to not panic and work with that person through the episode. I'm sure I'm not alone in a pulmonary practice to say that we know these patients well, and we always hope and wish for their full recovery and maintenance of a normal life.

Dr. Adams:

For those that maybe haven't seen as much of ILO as you have seen, do you have a specific example and kind of context where you might actually have a patient that you're thinking of that you could share with us?

Dr. Khatri:

One of the more dramatic presentations to the clinic was with a woman who was about 55 years old, very well-dressed, lots of beautiful jewelry, ready to go, tan, and beautiful hair, comes in, and she's in the waiting room, and you know you're in trouble when the front desk people ask for you to come out immediately and they're thinking about calling the emergency response team. I went out there, and I saw that she's working extremely hard to breathe, her face is red, and she's making a lot of loud noises. We brought her into a room. We had her sit down, and I could see just by the way she was struggling so hard that she was having real difficulty breathing. After we calmed her down and we gave her a nebulizer and just basically had her slow down her breathing, I came to find out that she's a hairdresser, and she's been a hairdresser for a very, very long time, and she noticed that over time and then maybe even more suddenly after she had had excess amount of hair chemicals mixed in her proximity that she had developed this sort of ongoing issue, which was

just going from bad to worse. The way she presented was just so dramatic that it fit the profile perfectly, and I'm just happy to say that she was able to, with a lot of hard work and a lot of help, start reducing that frequency, and her life was changed after that. We did really suggest that perhaps she could do hair but maybe not with as many chemicals after that.

Dr. Adams:

Well, that's really helpful and gives us a good mental image of how these patients might present. So I want to thank my guest, Dr. Sumita Khatri, for joining me to cover severe asthma mimickers and drivers. Sumita, it was great speaking with you today.

Dr. Khatri:

Thank you, Sandra. It was my pleasure as well.

Announcer:

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