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Chronic Cough Patient Journey: Recognition, Diagnosis and Management: Case Presentation

Announcer:

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Dr. Dicipinigaitis:

Hello, my name is Dr. Peter Dicipinigaitis. I'm a Professor of Medicine at the Albert Einstein College of Medicine and the Director of the Montefiore Cough Center in New York. Today's discussion will take the form of a case presentation, which will illustrate the journey of the patient with chronic cough in terms of recognition, diagnosis, and management.

We, as physicians, categorize cough in terms of its duration. Acute cough is defined as a cough of less than three weeks duration, subacute, three to eight weeks, and a chronic cough is a cough that's been present for more than eight weeks.

So, let's look at today's case. This is a 52-year-old woman who came to see me with a daily chronic cough for five years. She was a lifetime non-smoker. She had no history of previous pulmonary disease, no family history of asthma. She recalls that this cough may have begun with an episode of an upper respiratory tract infection five years ago. The cough is daily, it's dry throughout all waking hours, but once she does fall asleep, she typically sleeps through the night. She also has frequent throat clearing throughout the day and cannot describe clear triggers to her cough episodes. She coughs as soon as she arises from bed, but this isn't necessarily the worst part of the day. And she does not have associated rhinorrhea, nasal congestion. She has only rare heartburn symptoms and no shortness of breath when not coughing. Also, she has good exercise tolerance.

When we reviewed her previous evaluation and management, she reported that initially she was given several courses of antibiotics years ago, which were ineffective. She subsequently was given a trial of one week of albuterol MDI. She was given the first-generation antihistamine, loratadine, for a week, and when that was ineffective, she was then given cetirizine tablets for two weeks. And on her own, she tried several over-the-counter cough syrups, none of which were helpful. In the past, she had taken omeprazole occasionally, once daily, no more than 20 or 40 milligrams for her occasional heartburn symptoms. And she has been on omeprazole 20 milligrams daily for the past two weeks. And she does not have heartburn symptoms when she's on the proton pump inhibitor. She reports that two years ago she saw a pulmonologist, at which time spirometry, chest x-ray, and CAT scan of the chest were all normal. And back then, she was given an empiric trial of inhaled steroids for about two weeks, which she self-discontinued because the medication was ineffective.

Physical examination was fairly unremarkable. She was borderline overweight, had some mild cobblestoning of the posterior pharynx, but otherwise, lungs were clear, and the exam was otherwise unremarkable.

So, at this stage, what should our initial management be? So, let's recall our paradigm of chronic cough. If we have a patient with chronic cough who's a non-smoker, who's not on an ACE inhibitor medication, and has a normal or stable chest x-ray on evaluation, then it's highly likely that that patient's chronic cough is due to one or more of three baskets of ideologies. Number one is upper airway cough syndrome, which we used to call postnasal drip syndrome, asthma, and GERD reflux.

The patient says to me, "Well, I know my cough isn't due to postnasal drip, asthma, or GERD, because I've been treated for all those things. So, why am I still coughing?" Has she been treated appropriately for these things? The thing for us to remember is that we need to rule out these top three potential reversible ideologies of cough with proper drug treatment trials, with the right medication at the right dose, and for the right period of time.

So, what was missing in our patient's workup up until now? Well, as I mentioned, she had been tried on loratadine and cetirizine, both of which are newer-generation antihistamines, and they tend to be completely ineffective for cough. And the medications that are quite effective for cough are the first-generation antihistamines. And I personally use chlorpheniramine a great deal. In terms of her workup for asthma, she had a two-week course of inhaled steroids some years ago. We don't know whether her steroid inhaler use was appropriate, whether she was compliant. And she was not trying on leukotriene receptor antagonists and hadn't had a trial of oral steroids. And for reflux, she had intermittent treatments with omeprazole, but never more than 20 or 40 milligrams once daily. So, where did she fall short? Well, in my view, in terms of doing a full workup on this woman, I would start with a two-week course of chlorpheniramine, which, as I mentioned, is a first-generation centrally penetrating antihistamine, which can be very effective for cough due to upper airway cough syndrome. If that didn't work, I would either repeat a trial of inhaled steroids or give a more definitive short course of oral steroids to really rule out whether this cough is or is not steroid-responsive. And then the empiric treatment for reflux has to be much more aggressive than it's been, and I'd start with a twice-daily proton pump inhibitor half an hour before breakfast, half an hour before dinner, including anti-reflux lifestyle measures, which are very important, and that is sleep with the head of the bed elevated, do not eat for two to three hours before bedtime, and avoid foods and drinks that cause reflux, which are alcohol, caffeine, chocolate, peppermint, spicy foods, very acid foods like tomato sauce, citrus juice, et cetera.

So, what if we go through this entire algorithm and the cough still doesn't get better? Well, at that point, and only at that point, is it appropriate then to diagnose the cough as refractory chronic cough, meaning a chronic cough that has been treated with appropriate empiric drug trials against the known reversible causes and the cough doesn't get better.

So, once we're at the stage of having refractory chronic cough, what are our options? Unfortunately, our options here are not good. What we're limited to is a trial of narcotics, which isn't a very satisfactory option for what may be chronic therapy. So, we would tend to go with one of the two so-called neuromodulator drugs, amitriptyline, and gabapentin. And then I'll mention that a speech-language therapy can be a very useful adjunct for the patient with chronic cough.

So, with our patient, I did try amitriptyline, initially 10 milligrams nightly for a month and then followed by 25 milligrams nightly for a month, but unfortunately, she found this medication minimally effective. I then went to gabapentin, and my goal with gabapentin is to try to reach 300 milligrams three times daily, which I do first with just a nightly dose, then BID, then TID gradually. But unfortunately, none of my patients find the sedation intolerable. This patient found only slight improvement in cough, despite reaching that top dose. And she did not have a speech-language pathologist available to her near where she lived.

So, unfortunately, the options we have available to us at this point in time for refractory chronic cough are often either ineffective and/or not tolerated because of side effects, and therefore, we desperately need new, safe, effective antitussive drugs for our patients with the refractory chronic cough. Thank you very much for your attention.

Announcer:

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