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A Practical Approach to Severe Asthma Therapies

Announcer:

Welcome to CME on ReachMD. This activity, titled "Practical Approach to Severe Asthma Therapies," 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:

Even when asthma is controlled with appropriate treatment, many patients often continue to experience symptoms or exacerbations. That's why today we will be taking a look at practical therapeutic approaches for severe asthma and other key considerations through the lens of 3 patient cases.

This is CME on ReachMD, and I'm Dr. Sandra Adams. Here with me today is Dr. Anju Peters, Professor of Medicine and the Director of Clinical Research in the Division of Allergy Immunology at Northwestern University Feinberg School of Medicine.

Dr. Peters, welcome to the program.

Dr. Peters:

Thank you, Sandra, it's my pleasure.

Dr. Adams:

I'd like to begin our discussion, Anju, by setting up the framework of a severe asthma program. What's your typical approach when considering treatment options for a patient with severe asthma?

Dr. Peters:

Sandra, that's actually something very important because we know severe asthma leads to significant morbidity, significant cost to our healthcare system, and when I think of severe asthma, I think of it as part of a group of patients who are difficult to control, and they may have severe asthma due to their biology or comorbidities, and it's very heterogeneous. The main thing that I think of when I think of a severe asthma patient is that there should be a systematic approach, a multidisciplinary approach, so it doesn't have to be a severe asthma clinic, per se, or in 1 space all the different folks who are involved in treatment of severe asthma are there, but more importantly that there is a multidisciplinary approach where a patient could see all the different folks that are involved in severe asthma care. These could be healthcare professionals such as an allergist, like me, a pulmonologist, like you, ENT, gastroenterologists, sleep specialists, and in addition, allied health groups such as asthma educators, our nurses, our respiratory therapists, etc., to make sure we treat the patient looking at all different aspects of their treatment.

Dr. Adams:

That's really good information, the multidisciplinary approach. You mentioned the asthma specialist. I'm interested in knowing when you think people should really be referred to an asthma specialist and what groups could be taken care of in a general practice.

Dr. Peters:

Sure. Sandra, that I think is very important, and in my point, a patient should be recommended to an asthma specialist or a multidisciplinary clinic when a patient's asthma is difficult to control, and this could be for many reasons. It could be that they don't have a proper diagnosis and it's something else other than asthma, but also for other reasons such as, you know, to find out if they have comorbidities. In fact, there are 8 different ones that have been studied and a study showed that a meeting of 3 comorbidities is present in patients with severe asthma. So, it may be important to send a patient to a specialist or a multidisciplinary severe asthma clinic if these comorbidities need to be addressed. However, I think if a patient's asthma is difficult to control, no matter what reason, if they are having frequent or severe exacerbations, if they have poor lung functions, so the biology suggests it's severe asthma.

Dr. Adams:

Well, that makes a lot of sense. I want to dig into this subject a little deeper and discuss a few real-world cases. Let's talk about a first case of a 24-year-old man with allergic rhinitis and asthma with worsening symptoms. For the past couple of years, he has needed 3 courses of oral corticosteroids for asthma exacerbations. He is currently using albuterol almost daily and has nocturnal awakenings about 3 to 4 times a week for shortness of breath and coughing. He has a beloved cat who is in his bedroom and sleeps with him at night. He denies water damage in his home and his skin testing is positive for cat dander, dust mites and molds. His serum IgE is 220, absolute eosinophil count is 200, his FEV1 is 78% of predicted and his Asthma Control Test score is 14. He is currently on an ICS-LABA, so how, Anju, would you approach treating and managing this patient?

Dr. Peters:

Sandra, this is quite often the type of patient I'll get. When I would see a patient like this, who is 24 years old, who has allergic rhinitis, so it makes me think he is allergic, his asthma is getting worse, his Asthma Control Test score is 14, so we know his asthma is not controlled, and he is currently on ICS-LABA. So, he says he is on inhaled steroids and long-acting beta agonist, so when I think of someone like this, one of the first things I think of, you know I would have skin tested him like he was. He is allergic to cats, dust mites and molds, so he has, what I would say, perennial allergens, year-round allergens, per the patient, and he has a cat. We know patients who are pet-allergic and have a pet have increased likelihood of having more severe asthma with more ER exacerbations and urgent care utilization. So, one of the first things I would do in a patient like this, and this is where the interdisciplinary approach is important, in that I would make sure that an asthma nurse or an asthma educator makes sure and goes over proper inhaler technique, make sure there is adherence to his medications, and after that, in an allergic patient with known exposure to allergen, it's important that we talk about allergen avoidance with this patient. If he goes through allergen avoidance techniques, is using the meds correctly, he is compliant with them, and he continues to have symptoms and exacerbations, this is when I would consider a biologic on this patient as he has had 3 courses of steroids in the past couple years. In his case, omalizumab, which blocks allergic antibody IgE or anti-IgE, would be probably the best choice. It's been around for a long time. Omalizumab has shown to decrease exacerbations in an allergic asthmatic, and is FDA approved for treatment of moderate to severe asthma. So, that's how I would consider this patient, and he would be an ideal patient for a pulmonologist or a general physician to send to an allergist.

Dr. Adams:

For those just joining us, this is CME on ReachMD, and I'm Dr. Sandra Adams. Today, I am reviewing 3 patient cases with Dr. Anju Peters to learn more about developing practical approaches when caring for patients with severe asthma. So, Anju, let's continue with our next case. The patient that we are going to talk about now is a 56-year-old woman with a history of reflux, GERD, and obstructive sleep apnea, who comes in with complaints of worsening cough, trouble breathing and wheezing. She has required 1 hospitalization and has been to the emergency department once an additional time for shortness of breath associated with viral infections in this last year. She is taking ICS-LABA and LAMA inhalers. She is also on a PPI and her BMI is 32. Skin testing is negative for the aeroallergens. Serum IgE is 28 with an absolute eosinophil count of 600. Her chest x-ray is normal and her FEV1 is 67% of predicted. Given all these details, what are your initial thoughts and approach to really optimally evaluate and manage this person?

Dr. Peters:

Sandra, if I were to see this patient, this is where I would think she is someone who probably has eosinophilic asthma which is not controlled, and I think she is ideal for a severe asthma interdisciplinary evaluation. If I were seeing her as an allergist, I would make sure there is no other medical condition going on that could be mimicking her symptoms. I may have my pulmonary colleague see her, and if that evaluation is negative, then in someone who has eosinophilic asthma that is not controlled, she tells us she has GERD or reflux, her BMI is 32 so she is obese, and we know she is not allergic, I would recommend that she see a sleep physician for regular CPAP use because we know sleep apnea is associated and is one of the comorbidities of severe asthma. In addition, I would consider a GI evaluation because we also know that GERD potentially can trigger pulmonary symptoms, as well. So, in this patient who

undergoes a multidisciplinary severe asthma evaluation, we make sure she is taking her meds correctly, she is adherent to them, she has seen a sleep physician using her CPAP machine regularly, has had a full GI evaluation, and is doing reflux precautions. If she is still not controlled, then I think a biologic could be considered and the best biologic in her could be an anti-IL-5 agent such as mepolizumab, reslizumab or benralizumab, those that are approved for eosinophilic severe asthma. We know they improve asthma specific quality of life and decrease exacerbations, and given her history of 2 exacerbations needing a hospitalization and another one needing an ER visit, I think a biologic, specifically an anti-IL-5 agent, would be appropriate.

Dr. Adams:

Okay, that's excellent information. Thanks for that review. Let's turn to our final case which focuses on a 46-year-old man with asthma, chronic rhinosinusitis with the nasal polyps and allergic rhinitis who reports worsening asthma symptoms despite high-dose ICS-LABA and montelukast. He also reports increased sinus infections with worsening congestion and the inability to smell. Sinus infections tend to cause worsening cough in him, worsening shortness of breath and wheezing. He has had 3 courses of oral corticosteroids in the past year and 2 courses of antibiotics for rhinosinusitis and asthma exacerbations. His skin testing is positive for dust mites. Serum IgE is 200, absolute eosinophil count is 350, and his FEV1 is 67% of predicted. So, with all this information in mind, what would you consider next, Anju?

Dr. Peters:

Sandra this is, again, a patient that's ideal for severe asthma interdisciplinary approaches, one of the first things I would think of is, yes, he's got asthma, he's got nasal polyps, he is allergic, he's had multiple courses of antibiotics and oral steroids, so one of the things I would consider is getting him an allergy evaluation like he did. I would do allergen avoidance and make sure he is taking his meds correctly. This is where the respiratory therapist, the nurses are important to make sure he has an asthma action plan. After that, I would consider an ENT evaluation to be seen for possible surgical options. As we know, sinusitis is associated with more frequent asthma exacerbation in those with severe asthma, and treating their sinus disease may improve their asthma. If this patient decides surgery, he could proceed that way, but another option to consider is dupilumab which is a biologic which is approved for moderate to severe type 2 asthma as well as for nasal polyps. So, in this patient with rhinosinusitis with nasal polyps and asthma that is difficult to control, you could consider dupilumab which blocks anti-IL-4 receptor alpha which is shown to improve asthma, decrease exacerbations, improve asthma control but also shown to decrease nasal polyps and improve symptoms associated with rhinosinusitis with nasal polyps including improving congestion and improving smell and improving quality of life in these patients.

Dr. Adams:

So, that's a lot of really good information. You've certainly given us a lot to think about. Just to bring our discussion to a close, what are the key takeaway points that we can learn from these 3 cases? Specifically, how long do you try to get them controlled before you would consider stepping up therapy, and is there any final word that you'd like to pass along to our listeners?

Dr. Peters:

Sandra, I think it's important to remember that patients with severe asthma often have comorbidities. These patients may have poor symptom control and exacerbations despite appropriate treatment, and it's really up to the referring physician or healthcare worker to consider sending these patients to the multidisciplinary asthma evaluation if a patient has poor symptoms control or exacerbations so that we don't use repeated use of medications such as oral corticosteroids in these patients. These patients should be assessed for contributing factors and to optimize their treatment, and like I've mentioned all along, requires an interdisciplinary evaluation. So, any patient who has difficult-to-control, frequent or severe exacerbations with comorbidities should be considered for evaluation in a severe asthma program.

Dr. Adams:

With those key learning points in mind, I want to thank my guest, Dr. Anju Peters, for sharing insights on practical treatment approaches for patients with severe asthma. Dr. Peters, it was great having you on the program.

Dr. Peters:

Sandra, thank you so much for having me on the program, and I just want to end by saying that a multidisciplinary severe asthma management program has shown to improve asthma outcomes, decrease exacerbations and improve symptoms, so thank you again.

Announcer:

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