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Best Ways to Follow Asthma Control

THE BEST WAY TO FOLLOW ASTHMA CONTROL.

Your are listening to ReachMD, The Channel For Medical Professionals. Welcome to Hot Topics in Allergy presented by the American College of Allergy, Asthma, and Immunology. Your host is Dr. Ketan Sheth, Medical Director of the Lafayette Allergy and Asthma Clinic in Lafayette, Indiana.

Asthma is an ever-growing health concern in the United States. It is chronic, but treatable. The new asthma treatment guidelines represent a paradigm shift toward control and monitoring. Joining us to discuss what's the best way to follow asthma control, is Dr. John Oppenheimer. Dr. Oppenheimer is Director of Clinical Research at Pulmonary and Allergy Associates as well as Clinical Associate Professor of Medicine at the New Jersey Medical School.

DR. KETAN SHETH:

Welcome Dr. Oppenheimer.

DR. JOHN OPPENHEIMER:

Thanks.

DR. KETAN SHETH:

Well, let's start with how prevalent is asthma in the United States?

DR. JOHN OPPENHEIMER:

Well, about 22-1/2 million people have asthma. That seems like an awful lot, but I think if we look at numbers daily, it's sort of frightening, 5000 people will end up in the emergency room a day, about 1300 people will be hospitalized and 11 people on average will die from asthma a day.

DR. KETAN SHETH:

What changes have there been in attitudes towards treating asthma?

DR. JOHN OPPENHEIMER:

When we look at studies as to how we were doing with regard to attaining control, whether it be exacerbation rate, hospitalization, etc., certainly we have seen a decrease in mortality, but we still see a lot of hospitalization. So, with that, as a background, the newest guidelines both the GINA International Guidelines as well as the NAEPP Guidelines in the US highlight a change from severity, mild, moderate, severe to that of control, somebody well controlled, poorly controlled. With that in hand, I am hopeful we can more quickly adapt that is changing therapy when somebody is not doing well.

DR. KETAN SHETH:

Why do you think they are moving towards this idea of control?

DR. JOHN OPPENHEIMER:

I think the moving really is the fact that we have to agree that we have not attained all of our goals. People go through the day having exacerbations. With that said, we certainly need to do a better job and we have to agree that the prior guideline or paradigm of severity isn't working. So, if we move to control and understand that the control may be variable, somebody may be in perfect control this week, but in poor control next week, so we have to adapt a change in medicines to address this quickly.

DR. KETAN SHETH:

So, in a sense, they have taken some of the ideas from other disease states, hypertension, diabetes, trying to adapt that towards asthma?

DR. JOHN OPPENHEIMER:

Exactly. I think the analogy is wonderful. In the study by Calhoun looked at people on a placebo arm of the study and followed them over 12 weeks and they found that on 1 week, patients may have symptoms every day, while on another week, not at all. So, how do we define that person's asthma is it severe having symptoms daily, or is it mild having symptoms hardly at all. With that said, if somebody gets a cold or other around the wrong allergen, their disease may significantly exacerbate, we need to address it.

DR. KETAN SHETH:

Well, can you describe some of the new methods that are being used to describe this control or to monitor asthma?

DR. JOHN OPPENHEIMER:

I think that is one of the biggest problems we have. We have now said that the litmus test is control, the problem is I don't know we have one perfect measure of control. We can look at thinks like spirometry. They are wonderful tools. In a study by Singer, they looked to see how well the spirometry correlate with other measures like symptoms or beta agonists. They found that it did not correlate well at all. So, with that said, people are now looking to newer litmus test or barometers, things like looking at ACT, the asthma control test. For those who are not familiar with it, it is really a 5-question self assessment that has been validated and what it does is it looks retrospectively what level of control people have had over the past 4 weeks and a perfect score would be 25. Those that are 19 or less indicate that there is not perfect control and they need to address with changing therapy or potentially trying to figure out what the trigger might be to moving forward. Also, looking at newer tools to measure inflammation, certainly a study by Sawn several years ago showed us that if we would have compared treating people based upon regular guideline care, that is spirometry and symptoms and compare it to say looking at something like BHR, looking at bronchial hyperresponsiveness, the bronchial hyperresponsiveness group required more meds, but have less exacerbation rate over time. So, with that said, people are now saying we need to find a better measure of control by thinking about inflammation and one of the tools that is involving is ENO or exhaled nitric oxide.

DR. KETAN SHETH:

Let's come back to this asthma control test. Certainly, it is in the new guidelines. How are you using it in your practice or in some of the research that you certainly have done in asthma?

DR. JOHN OPPENHEIMER:

I think it is a wonderful tool. It allows the patient to do it in the waiting room. So, while they are waiting, they will come to you with the score. I look at this plus spirometry and plus some sort of specialized questions that each of us has in our own repertoire to help me determine what level of control the person is in and what is interesting and I mentioned this before is not everything correlates. So, when we looked at the recent practice parameters on asthma, Jim Li, myself, and the practice parameter committee, we agreed that there is no one measure, probably the best tool is using something like ACT and some objective measure of lung function like spirometry in tandem.

DR. KETAN SHETH:

What are some of the difficulties with patients taking the ACT or what kind of resistance are you meeting, if any?

DR. JOHN OPPENHEIMER:

It depends upon the person's comfort level, may obviously can they read, there are validated tools for both children and adults and the other problem is that there is a new level of research that is highlighting the fact that when people are depressed or anxious, they may have higher scores because they perseverate over their symptoms. So, this is in the perfect tool by any means. Another thing worth mentioning, a really interesting study by McDonald several years ago in Chest, highlights that up to about 25% of people are poor perceivers of dyspnea. So, in essence, they may feel totally fine. If you ask them are you needing beta agonist, are you waking up at nighttime, we will say no to all the above, but when you look at their lung functions, they are diminished. In essence, they cannot perceive their dyspnea and what is really scary is this group of people has increased morbidity; ER visits, hospitalizations, and increased mortality. So, we really need to think about the fact that not every asthmatic is the same.

DR. KETAN SHETH:

Do you think the ACT score is going to be something like the A1c for he diabetics?

DR. JOHN OPPENHEIMER:

I think it may be one tool, it alone I don't think stands. I think we need to look at spirometry also, but I think ACT in tandem with spirometry is probably as close as we have the hemoglobin A1c right now.

DR. KETAN SHETH:

Well, as we talk about ACT a little bit more, can people just put it in their waiting room and have patients fill it out, is that a fair way to do that?

DR. JOHN OPPENHEIMER:

That is why we are using it. We actually, when we have an asthmatic on the clipboard, fits the ACT, and while they are awaiting and filling out whatever paperwork we have, takes it a few minutes and we have an ACT score by the time they come to visit us in the back.

DR. KETAN SHETH:

So, very useful, very quick information. What about our primary care colleagues? Can they be using it as a screening tool for may be picking up people who have asthma or who don't?

DR. JOHN OPPENHEIMER:

I think it may be a very reasonable tool as well as those have asthma following them overtime. I really encouraged my primary care colleagues to put a little “A” on the chart of those who have asthma and follow this. I realized that they have got very busy schedules and while people are waiting in the waiting room, it gives them wonderful chance to do something productive. I look at active spirometry, almost as a report card that I share with the patient. By the time they come back, I have a sense of what their ACT score is, what their spirometry is, and from that we can built upon, i.e. ACT and spirometry looks wonderful, lets talk about stepping down. If ACT and/or spirometry looks like there is a level of instability, what are we doing wrong. Is there adherence, is there some other comorbidity, are they needing to increase the dose of meds, so it acts as a wonderful tool for me to move forward.

DR. KETAN SHETH:

Now, one of the things you mentioned earlier was exhaled nitric oxide as a marker of inflammation, does that help us with better outcomes in control for asthma?

DR. JOHN OPPENHEIMER:

You know, we are all looking, mentioned that hemoglobin A1c, we are all looking for that perfect glucometer and hemoglobin A1c analogy . I don't think we have them yet in asthma. We are very hopeful that ENO would be for those who don't know much about ENO, it is a secretagogue of the eosinophils, so in essence, its exhaled breath condensate being analyzed for ENO, exhaled nitric oxide and it seems to correlate with inflammation. Certainly, once we began to inhale steroids, you can see it significantly diminish in its value. The problem is the preliminary studies look very impressive. It actually reduced the amount of medicine, the amount of inhaled steroids required overtime by allowing a quicker titration of therapy. The problem is in followup studies, the most recent being by Stan Zappler; it didn't look like it really provided such a wonderful outcome that is it didn't reduce exacerbation rate or meds required.

DR. KETAN SHETH:

Is there another marker of inflammation or another way that we can measure it help our patients and get better control?

DR. JOHN OPPENHEIMER:

You know, that is the million dollar question. People are looking at acid content and other exhaled breath markers. I don't think we have a better one than ENO right now. You know, I would go back to ENO and say may be one of the problems with ENO is the fact that it is too quick a change, by that I mean, may be ENO should be our glucometer at home and if we can develop newer units and has been some preliminary research that looks very impressive, if we can have these units at home and people can measure their ENO on a daily basis, if we see a change in ENO, it could be the stimulant for them to call a doctor and institute intervention more quickly. You know, peak flows we believe to be that tool, but unfortunately the study by _____showed that peak flows did not really add a lot to actual patient's symptoms.

DR. KETAN SHETH:

So, should people be doing peak flows at home?

DR. JOHN OPPENHEIMER:

Well, at least the study by _____ would have us believe it may not be the answer. I might argue that in my group of patients that are poor perceivers of dyspnea, if they can't perceive that loss of control, any tool I have would be helpful and since they don't have ENO at home right now, I am instituting peak flows, but I think more data is needed.

DR. KETAN SHETH:

In the guidelines, are there other ways that the guidelines recommend that we should follow control?

DR. JOHN OPPENHEIMER:

You know, other valid data tools beyond ACT, there is the ATAQ. There are some other tools that are being investigated also. But, I think what the guidelines as a whole keep reinforcing is that there is no one perfect tool. We need to look at a tool like ACT ask questions how often are you using beta agonist, are you waking up at nighttime, have you had an exacerbation since the last visit, and

look at some objective measure of lung functions of spirometry. Put all of these various points together and from that develop a sense of level of control and build either increasing therapy or tapering down therapy based upon result.

DR. KETAN SHETH:

As we look at these questionnaires, and you mentioned a couple of other ones other than the asthma control test, the ATAQ and the ACQ, are there differences in them, is one easier to use than the other?

DR. JOHN OPPENHEIMER:

No, each have their proponents. I think what is nice about the ATAQ is it is a very small test, it has been well validated. There is also a tool for children, so it makes it quite useful. I think that each person has the tool that they are most familiar with, but as a whole, I think we are seeing the ATAQ used most commonly in offices.

DR. KETAN SHETH:

So, what I am hearing from you is one of these ways to really look at control in these new guidelines is getting these validated questionnaires in front of our patients so that we now how they are doing. Are there other things that you do besides spirometry in the questionnaires to try to follow this control overtime?

DR. JOHN OPPENHEIMER:

Well, I think those are the major tools I am using right now. We are using ENO in my office. We are doing some research with it and it has been a valuable tool in some patients, I cannot say everybody. You know, part of the problem is we look at asthma as being one illness and you know all to well; it's really a heterogenous disease. Some describe it as multiple syndromes layered with one name, we call asthma. Some patients are up regular with the eosinophils, while some may not be. So, the tools like ENO that we are using may not be helpful at all.

DR. KETAN SHETH:

We are using a sledgehammer approach when we just recommend peak flow or spirometry or some of these newer ideas that you are mentioning new ways that we are going to be able to sort out those different asthmatics you think?

DR. JOHN OPPENHEIMER:

I am hopeful. I think the really hottest topic in asthma right now is the fact that people are looking at phenotypes. They are looking at different, shall we say patient characteristics to help us choose the appropriate therapy and example is somebody that has got Samter's triad, nasal polyposis, aspirin sensitivity, as well as requiring steroids. These patients probably are the highest leukotriene producers, may be do very, very well with the leukotriene modifier, somebody that smokes as an example, the recent Smog study shows that these people don't do very well with inhaled steroids or steroids as a whole, so I think that we are going to really become much more sophisticated in our stratification of the illness asthma. With that in hand, I am hopeful we will have better measures based upon the illness, as an example somebody that has Samter's triad, may be we should be looking at exhaled leukotrienes, may be that is the best

tool for them. It's I think a little bit down the line yet before we see it implemented clinically, but I am really hopeful it will occur in the next decade.

DR. KETAN SHETH:

I would like to thank my guest from the New Jersey Medical School, Dr. John Oppenheimer, Dr. Oppenheimer, thank you very much for being our guest this week on hot topics in allergy.

DR. JOHN OPPENHEIMER:

Thank you for having me.

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