Transcript Details
This is a transcript of an educational program. Details about the program and additional media formats for the program are accessible by visiting: https://reachmd.com/programs/clinicians-roundtable/insomnia-is-there-a-trait-predisposition/3890/

ReachMD
www.reachmd.com
info@reachmd.com
(866) 423-7849

Insomnia: Is There a Trait Predisposition?

INSOMNIA: IS THERE A TRAIT PREDISPOSITION?

Can cardiovascular stress research teach us anything about insomnia? Our guest today knows the answer. Welcome to the Clinician's Roundtable. I am Dr. Leslie Lundt and with me today is Dr. Christopher Drake. Dr. Drake is Bio-Scientific Staff Investigator at the Henry Ford Hospital Sleep Disorders and Research Center and Assistant Professor of Psychiatry and Behavioral Neurosciences at the School of Medicine at Wayne State University in Detroit, Michigan.

DR. LESLIE LUNDT:

Welcome to ReachMD, Dr. Drake.

DR. CHRISTOPHER DRAKE:

Hi Leslie. Great to be here. Thanks very much for having me on.

DR. LESLIE LUNDT:

Chris how common is insomnia in most patients that also have chronic medical condition.

DR. CHRISTOPHER DRAKE:

Well, of course it has been vary depending on what condition we are speaking about, but in most cases, if we are not talking about a psychiatric disorder-like depression. The actual prevalence of insomnia is only about 40 to 50% of patients within given medical disorder, say individuals for instance with cardiovascular disease or various types of things like hypertension or diabetes. Many physicians will often think or will sort of common almost obvious that the patient with that type of condition is going to have difficulty sleeping but that's actually not the case. When you bring those individuals in to the Sleep Laboratory and actually measure their sleep, we find very different kind of result.

DR. LESLIE LUNDT:

So, tell us about that. You have data and what these patients actually look like in the Sleep Lab. Yes, absolutely, we have done a number of studies, one of which were, we brought individuals from the general population with a variety of medical disease from heart

disease to thyroid problems, arthritis, migraines, and actually brought them in to sleep overnight in a Sleep Lab where were measured their physiological activity and can actually get assessment of their actual sleep as opposed to what they simply report, and what we find is interestingly enough individuals with a variety of diseases that you would expect to have sleep disturbance actually fall asleep pretty quickly and sleep very well. It's only a subset of these individuals who actually have a significant sleep disturbance.

DR. CHRISTOPHER DRAKE:

Does it vary by diagnosis or did certain medical conditions in general have worse insomnia associated with them?

DR. LESLIE LUNDT:

Well, it does in particular as I mentioned earlier, depressed patients typically have the most disturbed sleep, but after you go beyond that, most of the different medical disorders that one looks at in terms of sleep disturbance are pretty similar in terms of the amount of disruption they actually present with.

DR. LESLIE LUNDT:

And so that's when you get to that 40 to 50% level.

DR. CHRISTOPHER DRAKE:

That's correct.

DR. LESLIE LUNDT:

Now, Chris what do you see in terms of the practice that do not have easy access to a Sleep Lab, what is the difference between what people report as their sleep versus what you actually measure in the lab?

DR. CHRISTOPHER DRAKE:

Well, actually people typically report that their sleep is much more disturbed than it actually ends up being when you study it in the laboratory and people tend to over report how much sleep they lose during the night, how long it takes them to fall asleep. Those are common misperceptions in patients or it could be a fault of the equipment that we use actually to assess sleep in the laboratory and we may not be really measuring the right part of the brain to show the hyperarousal that is present in many of these patients who are complaining of insomnia but don't seem to have sleep disturbance when we look at it in the laboratory. So, there is some controversy there about where we should really look for insomnia in terms of physiological variables.

DR. LESLIE LUNDT:

Now almost 40 to 50% of patients that have a chronic medical condition that also have insomnia, does it mean that those disorders cause their insomnia?

DR. CHRISTOPHER DRAKE:

No, it's really best to think of these disorders as triggers of insomnia in a subset of individuals who are particularly vulnerable. This specific subset of patients is what we are really mainly interested in and what makes these individuals vulnerable to getting sleep

disturbance given a specific disease state versus individuals who are fairly resistant to any kind of sleep disturbance given any kind of medical disorder or other stressors.

DR. LESLIE LUNDT:

And do you have any conclusions about that who is likely to get the insomnia out of these people?

DR. CHRISTOPHER DRAKE:

Well, one of the things that we have been studying is this idea that there are individuals out there who have a particularly reactive sleep system similar to much of the research that has been done in cardiovascular disease where if we bring individuals into the laboratory and stress them, its those people who have big responses in terms of blood pressure who are normotensives, who go on after you know 10 or 15 years to develop hypertension. We are similarly looking at if you bring individuals who are normal sleepers into the laboratory and actually stress them with sleep challenge what we call sleep challenge, it shows individuals who have reactive sleep systems that we believe are the ones that are at the highest risk for going on to develop chronic sleep disturbance as precipitated by for instance a medical disorder or some other type of stressor in the environment.

DR. LESLIE LUNDT:

So, what is the reactive sleep system?

DR. CHRISTOPHER DRAKE:

Well, again, we can measure it with a physiological assay of sleep so we can measure how long it takes an individual to sleep, say for instance after one gives them a low dose of caffeine and we can see how long it takes an individual to fall asleep. At a very low dose of caffeine there is really about a 50% or so subset of individuals who actually have significant sleep disturbance from that kind of a challenge. Similarly, you can ask individuals to give a speech the following day and that will disrupt sleep again in only a very small subset of individuals is that sleep disturbance really reach a clinically significant level and these a normal individuals, and when you follow them along over the course of about a year, what we found is that its those reactive individuals who are at a much greater risk for eventually developing chronic insomnia over a longitudinal period of about a year or so, and those individuals, those reactive sleepers, those individuals with a high sleep reactivity again are the ones that we really want to concentrate in terms of our research, in terms of developing adequate treatments and so forth.

DR. LESLIE LUNDT:

So, back to my initial question, can cardiovascular stress research teach us about insomnia? Sounds like it can.

DR. CHRISTOPHER DRAKE:

Well, I think yeah, we sort of borrowed from some of their methodologies and now we are looking to see what specific aspects of that reactivity are predictive of long-term development of insomnia.

DR. LESLIE LUNDT:

If you are just joining us, you are listening to The Clinician's Roundtable on ReachMD, The Channel for Medical Professionals. I am Dr. Leslie Lundt, your host and with me today is Dr. Christopher Drake. We are discussing trait predispositions for insomnia.

Chris, your group in Michigan has developed the FIRST, tell us about that.

DR. CHRISTOPHER DRAKE:

This is really just a paper and pencil measure of what we consider to be an important trait in individuals that may determine whether or not they are at risk for developing insomnia given a variety of different participants. So, this is something we call the Ford Insomnia Response To Stress Test, and it really just measures how reactive individuals are in terms of their sleep system to a variety of different stressors probably about 9 questions but it was developed over many years out of about 50 or so questions that we thought might be predictive, and in fact this test really does give us an accurate prediction of individuals who may be at a much higher elevated risk for developing chronic insomnia.

DR. LESLIE LUNDT:

Can you give us a sense of what those questions are?

DR. CHRISTOPHER DRAKE:

Yes, we asked things like how do you sleep following stressful event during the day or evening, how likely is it for you to have sleep disturbance after seeing a frightening movie or TV show and even positive stressors such as going on vacation, which can precipitate insomnia and some people certainly can be a predictive factor as well. So, we have got a lot of psychosocial questions in there like after having an argument of getting bad news during the day and what we found is these specific questions are in general very predictive of, again, the development of chronic insomnia over time.

DR. LESLIE LUNDT:

Is this something that is ready for a prime time that we all can use or is it still in the research stage?

DR. CHRISTOPHER DRAKE:

Well, it is certainly something I think that can be helpful in identifying at risk individuals. Its something that probably is going to be improved upon over the next several years and it is certainly unclear at this point in time whether or not this particular measure predicts any outcome in terms of how one responds to say for instance, a sleep medication, but certainly those studies are undergoing testing at this point in time and we are sort of pretty positive about what we might find, but there is certainly a lot of work to be done here.

DR. LESLIE LUNDT:

So, thinking back for those of us that work in the clinical situation and not in the lab, how might this help us think about treating patients with insomnia?

DR. CHRISTOPHER DRAKE:

Well, I think you have to think about insomnia as having really three different types of factors that come into play and one of those is obviously the precipitating factors that you want to identify and this is what most clinicians will focus on is what has triggered the insomnia, is there a medical disease, is there some kind of psychosocial stressor in the individuals environment and that certainly is a key factor. Another factor is how does an individual maintain and what sort of keeps the insomnia going even after that initial precipitant is gone. But the third key in the 3P Model as we call it is the predisposing factors and the predisposing factors really addressed by this reactivity measure that we have. So, as a clinician looks at a patient, not only should they look at how that patient has been exposed to a trigger or how their maladaptive sleep behaviors might be maintaining the sleep disturbance over time, but should also look at the inherent vulnerability in that individual, what is that sort of level of predisposing factor in that particular person and that goes back to how they slept in early childhood, how they responded prior to getting insomnia, how they responded to stressors with regard to their sleep system. So, it is really important I think for the clinician to look at all 3 of those factors particularly in someone who may be about to be exposed to a stressful event like a surgical procedure in the hospital or something like that. If there is vulnerability in that individual, it is certainly someone where you might want to direct some prophylactic preventative measures to in terms of their sleep.

DR. LESLIE LUNDT:

So that's usually really have not thought about preventing insomnia before?

DR. CHRISTOPHER DRAKE:

Absolutely, and I think we really need to begin to understand what some of the tools the patients can obtain to improve their ability to cope with stressors to reduce the chances that a particular precipitant, whether the medical disease or psychosocial stress produces long-term insomnia.

DR. LESLIE LUNDT:

Vow, lots to think about. Now, if people want to get more information about this Chris, any ideas where they can look?

DR. CHRISTOPHER DRAKE:

Well, there is certainly a growing literature on the predisposition to insomnia. The National Sleep Foundation really has a great website at www.sleepfoundation.org and that website really has a lot of good information on the 3P model and what assessments are out there in terms of using this, and of course the scientific literature is beginning to increase the number of studies that have been done using these kinds of models and looking at the vulnerability factors.

DR. LESLIE LUNDT:

Thank you so much for being on our show today.

DR. CHRISTOPHER DRAKE:

Sure, thanks Leslie.

DR. LESLIE LUNDT:

We have been speaking with our guest, Dr. Christopher Drake who is the Bio-Scientific Staff Investigator at the Henry Ford Hospital Sleep Disorders and Research Center in Detroit, Michigan.

I am Dr. Leslie Lundt. You are listening to ReachMD, The Channel for Medical Professionals. Please visit our web site at www.reachmd.com, which features our entire library through on-demand pod cast. Give us a call toll-free with your comments and suggestions or ideas for future shows. Call us at (8880 639-6157). Once more that's (8880 639-6157). Thank you for listening.

You are listening to ReachMD XM 160, The Channel for Medical Professionals. I am Dr. Larry Kaskel. Please join me on the next Lipid Luminitions. I will be talking with Dr. Peter Toth, Director of Preventive Cardiology at Sterling Rock Falls Clinic. We will be discussing key clinical lipid trials of 2008 and beyond.

I am Dr. Lauren Streicher. Join me this week. I will be speaking with Dr. Susan Love. We will discuss Dr. Love's Research Foundation, which has recently launched the Army of Women Breast Cancer Research Initiative.

And this is Dr. Lee Freidman. Please join me this week on The Clinician's Roundtable. We will be discussing enriching the residency experience with Dr. Ken Ludmerer and Dr. Dan Munoz; both were on a committee that recently published recommendations about how to change the residency experience.

Download complete program information live streaming, on demand pod casts and free CME at REACHMD.com. ReachMD online, on demand, and on air at XM-160.