Expert Panel Discussions on Tardive Dyskinesia

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LESLIE LUNDT: Hello and welcome to a roundtable discussion of tardive dyskinesia-- workup and assessment. I'm Leslie Lundt, psychiatrist and medical director at Neurocrine Biosciences. I'm joined by Jeremy Schreiber, psychiatric mental health nurse practitioner at Coleman Professional Services; Dr. Carlie Tanner, professor of neurology at the University of California, San Francisco; and Dr. Andrew Cutler, chief medical officer at Meridian Research.

Today, we will highlight key aspects of the initial workup and assessment of tardive dyskinesia. Before we begin, would you please provide some brief background information about tardive dyskinesia, Dr. Tanner?

CARLIE TANNER: The term tardive dyskinesia refers to involuntary abnormal movements, or dyskinesia, manifesting in a delayed or tardive manner after prolonged use of dopamine receptor blocking agents, or DRBAs. Tardive dyskinesia is defined as involuntary athetoid or choreiform movements. Athetoid movements are slow, sinuous, and continual. Whereas, choreiform movements are rapid, jerky, and non-repetitive.

By definition, the involuntary movements must develop in association with prolonged exposure to antipsychotics or other DRBAs.

As stated, antipsychotics, also known as neuroleptics, are DRBAs. DRBAs are used to manage psychiatric disorders, such as psychosis, depression, and bipolar disorder, as well as gastrointestinal problems.

LESLIE LUNDT: Thank you, Dr. Tanner, for that overview. Let's begin our discussion about TD workup and assessment. What are the key initial steps in the workup for patients, Jeremy?

JEREMY SCHREIBER: Well, we always start with a history and clinical evaluation for distinguishing characteristics of TD.

LESLIE LUNDT: OK. So let's read you the distinguishing characteristics of TD.

JEREMY SCHREIBER: Absolutely. According to the Diagnostic and Statistical Manual of Mental Disorders, TD is diagnosed through confirmation of several defining features. When diagnosing TD, health care providers should note that the abnormal movement is involuntary and generally involves the tongue, lower face, jaw, and/or trunk, and the extremities.

As we mentioned before, the involuntary movements are associated with prolonged use of antipsychotics. Although, there are cases in which symptoms develop after a shorter period of medication use, such as in older patients. In some patients, dyskinesia may arise and persist after discontinuation, change, or dose decrease of medication.

Another movement disorder, called neuroleptic withdrawal emergent dyskinesia, can also arise after change or discontinuation of antipsychotics and usually lasts less than four to eight weeks. Dyskinesia that persists longer than this period is considered tardive dyskinesia.

CARLIE TANNER: It's also helpful to remember that TD can present essentially, in any part of the body, but patients and health care professionals may initially notice facial phenomenology-- otherwise, known as oral buccal lingual TD-- because it involves the cheeks, lips, and tongue.

ANDREW CUTLER: We should also note what usually drives patients to see a clinician. Many times, patients initially seek medical help not because they become aware of their own abnormal involuntary movements, but because they notice others observing them. This is another key consideration in diagnosing TD. Many patients who have TD are completely unaware of the involuntary movements, but begin to feel embarrassed when they realize that others are noticing.
LESLIE LUNDT: OK. So when TD is suspected, how are the patients screened for TD and its severity?
JEREMY SCHREIBER: Health care providers may be aware of the abnormal involuntary movement scale, or AIMS, as a tool to screen for TD, as well as gauge anatomical distribution, disease progression, and severity. There are seven items from the AIMS assessment that specify which areas of the body are affected. In addition to anatomical region, assessment using AIMS focuses on involuntary movement factors, such as amplitude, number of movements per given time period, and persistence.
The quantification scale for each item ranges from zero, meaning no dyskinesia, to four, meaning severe dyskinesia. The sum of all seven items may be used to assess the severity of TD.
CARLIE TANNER: But we know that the AIMS is not a diagnostic tool. Right?
JEREMY SCHREIBER: Well, the AIMS is a good tool for clinical trials, especially if it's analyzed using different methods that provide clinically meaningful insights. But the AIMS is not a diagnostic tool, rather it is an assessment tool of involuntary and abnormal movements. A few TD diagnostic criteria-- such as the Schooler-Kane and the Glazer, Morgenstern, Doucette criteria-- incorporate the AIMS for research purposes, but certain key shortcomings of the scale, such as inter-rater variability, may limit its use in the clinical setting.
LESLIE LUNDT: OK. So AIMS shouldn't be used as a diagnostic tool, but is the total score-- that is items one through seven on the scale-- useful in determining a patient's overall TD severity?
CARLIE TANNER: The AIMS can help, but by itself, the scale may not give the entire picture. The range of the total score-- that is zero to 28-- is not linear because each item on the scale is scored separately. For example, if I told you my patient has a total AIMS score of seven, you don't know if the patient has minimal TD because all seven items on the AIMS are scored as one or if the patient has more severe TD because one item scored of three, another item scored a four, while all the other items scored zero.
ANDREW CUTLER: Also, patient factors play into the severity of TD. This is important because TD may negatively impact patients' physically, emotionally, and socially and can lead to social isolation. Unfortunately, there is no scale that appropriately measures the psychosocial and functional factors for TD so the field still needs to develop tools to more accurately gauge symptom recovery.
LESLIE LUNDT: Given these limitations, how do you believe that AIMS should be used in TD assessment?
ANDREW CUTLER: Well, the AIMS can be used as part of an overall assessment routine, but direct observation of abnormal involuntary movements and patient questioning can also be used by physicians or support staff, even without a rating scale to assess TD.
JEREMY SCHREIBER: Another important point health care providers and support staff should remember is that they should discreetly observe patients while, for example, they're in the waiting room, as well as when they first greet patients, before the official assessment begins in the exam room.
ANDREW CUTLER: Let's not forget aspects other than physical manifestations. Health care providers should consider emotional and social factors when assessing patients for TD. This means that HCPs should go beyond questions about basic awareness and include questions that address situations in

which abnormal involuntary movements can affect the psychological, social, and economic burdens of TD, activities such as using public transportation or seeking employment.

LESLIE LUNDT: But the severity of dyskinesia can change. For example, TD can become less severe due to factors, such as sleep, or more severe due to factors, such as distraction or emotional arousal. So isn't it important to monitor changes in TD symptoms over time?

CARLIE TANNER: It's very important. We know that TD can fluctuate over time so repeated assessments conducted a few months after a TD diagnosis are recommended to accurately gauge TD severity and persistence. Health care professionals should question and examine patients at every visit, especially for patients taking antipsychotics. And caregivers or patients should be informed of regular self-examinations.

LESLIE LUNDT: Thank you. In closing, would you please highlight the key takeaways for TD workup and assessment, Jeremy?

JEREMY SCHREIBER: Sure. In conclusion, clinicians should always start with the history and evaluation of TD features, which we know are involuntary athetoid or choreiform movements affecting any part of the body. In order to meet DSM-5 criteria, the involuntary movements should have developed after at least a few months of neuroleptic exposure and can be unmasked by medication discontinuation, switching, or decrease in dose.

In assessing TD, clinicians should note that patients may not be aware of their abnormal involuntary movements and may only go to HCPs after friends or family notice. Engaging symptom severity, the AIMS can be used as part of an overall assessment routine, rather than an exclusive tool of diagnosis. This is because of the various limitations of the scale in the clinic. Health care providers should use direct observation and questioning as part of the overall assessment and emotional, social problems should be addressed as part of the overall assessment.

Finally, monitoring symptom severity and persistence is important so health care providers should repeatedly assess for TD and patients or caregivers should be educated about regular self-assessments.

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LESLIE LUNDT: Thank you, Mr Schreiber, Dr. Tanner, and Dr. Cutler, for your input and thank you for joining the roundtable discussion of tardive dyskinesia-- workup and assessment.