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Lindner Center of HOPE is launching its new Adolescent Comprehensive Diagnostic Assessment and Intensive Treatment Program, which opened May 12, 2014, and is inviting professionals to join us for a free networking, dinner and a continuing education lecture.

Work in Progress: Adolescence and Mental Health

1.5 CEU Credit Hours

Presented by:
Elizabeth Wassenase, MD, Lindner Center of HOPE Adolescent Comprehensive Diagnostic Assessment and Intensive Treatment Program
Nicole Gibler, MD, Sibcy House at Lindner Center of HOPE, A comprehensive diagnostic assessment and short-term intensive treatment program for adults

As adolescence is such a tender time, accurate diagnosis, effective treatment planning, and the development of a solid blueprint for treatment success and realistic future focus is even more crucial. This lecture will enhance your understanding of the adolescent brain and mental illness in adolescence, while providing insight into the potential life-savinng impact of thorough and accurate diagnosis.

By the end of this presentation, attendant will be able to:
• Identify the developmental tasks of adolescence
• Identify brain changes in adolescence
• Understand mental illness in adolescence and the challenges of diagnosis
• Describe components of a complete diagnostic workup and their value

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6:00 to 8:30 p.m.
Portofino
249 E. Main Street
Lexington, KY
Register by July 7, 2014
Register by contacting: Pricila Gran at pricila.gran@lindnercenter.org or (513) 536-0318.

More on the Web - lindnercenterofhope.org

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Library of Resources
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A short-term residential treatment center where clinicians are dedicated to bringing the latest treatment methods to optimize successful patient outcomes.

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Clinical Manifestations and Treatment of Catatonia

By Nelson F. Rodrigues, M.D., FAPA, Medical Director, ECT Service, Lindner Center of HOPE and Adjunct Assistant Clinical Professor Department of Psychiatry and Behavioral Neuroscience, University of Cincinnati

Catatonia is a motor dysregulation syndrome with features including fluctuating stupor, negativism, posturing, stereotypy, automatic obedience and mannerism. The motor dysregulation can present either as immobility or profound motor excitement. 90,000 cases of catatonia occur each year in U.S. Hospitals. (Taylor, Fink, 2003) Eight percent to 38 percent occur among inpatient psychiatric clinics and 2 percent to 3 percent in psychiatric consultations.

Catatonia was associated with another psychiatric disorder in 55 (96.5%) of 57 patients. • 59% to 63.2% have mood disorders • 20%-30% of Bipolar Disorder patient will experience catatonia at some point, as manic • 29.8% have psychotic disorders • 10% to 15% of catatonic patient met criteria for schizophrenia, or 15% t of the cases

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• 59% to 63.2% have mood disorders
• 20%-30% of Bipolar Disorder patient will experience catatonia at some point, as manic
• 29.8% have psychotic disorders
• 10% to 15% of catatonic patient met criteria for schizophrenia
• Medical conditions accompanied catatonia in 20% to 30% of the cases.

There are two forms of Catatonia due to psychiatric conditions:
• A retarded-stuporous type
• An excited delirious type

Then there is Malignant Catatonia which is a triad of severe rigidity, autonomic nervous system instability, and altered mental status.

Medical complications of catatonia include:
• Venous thromboembolism
• Pulmonary embolism and death
• Deep venous thrombosis
• Nutritional deficiency, Vitamin K deficiency, hypoalbuminemia
• Pressure ulcers, decubitus ulcers
• Pneumonia
• Constipation

According to DSM-5, diagnostic criteria states that the clinical picture is dominated by three (or more) of the following symptoms.
1. Stupor
2. Catalepsy
3. Waxy flexibility
4. Mutism
5. Negativism
6. Posturing
7. Mannerism
8. Stereotypy
9. Agrammatism
10. Grimacing
11. Echolalia
12. Echopraxia

Continued on page 2
The DSM-5 also indicated that catatonia can be associated with another mental disorder:

- Major depressive disorder
- Bipolar Disorder
- Schizophrenia
- Schizoaffective disorder
- Neurodevelopmental disorder
- Brief psychotic disorder

And catatonic disorder can exist due to another medical condition:

- Neurological conditions
  - Neoplasms
  - Head trauma
  - Cerebrovascular disease
  - Encephalitis
- Metabolic conditions
  - Hypercalcemia
  - Hepatic encephalopathy
- Homeostasis
- Diabetic ketoacidosis

**Diagnosis of catatonia can occur via:**

- "The Duck Principle"
- If it looks, walks, and quacks like a duck, it is a duck.
- Sedative (lorazepam or amobarbital) Challenge Test:
  - An intravenous injection of 1-2 mg lorazepam (0.5mg/ml) or up to 500 mg amobarbital (50mg/ml) over two minutes should relieve mutism, posturing, and rigidity.
  - The relaxation of posture, increased speech, fewer mannerisms, and response to commands confirm the presence of catatonia.

**Differential Diagnosis:**

- Elective Mutism
  - Failure to speak and respond to questions, occurring as a singular feature. It is a conscious withholding of speech in an otherwise vigilant person.
- Parkinson's Disease
  - Bradykinesia, rigidity, resting tremors, pill-rolling finger movements, short-stepping, shuffling gait.
- Delirium
- Neuroleptic Malignant Syndrome
  - Acute onset of fever, autonomic instability, rigidity and changes in mood and alertness, after the introduction of antipsychotics. As described in 1980, CPK level was elevated, low serum iron level and leukocytosis.
- Toxic Serotonin Syndrome
  - Patients exposed to rapid increase in SSR or when SSR is combined with MAOI, NMAI /MC with gastrointestinal symptoms: salivation, nausea, diarrhea and abdominal pain.

There is evidence that catatonia is related to abnormal gamma ammhibobutyric acid (GABA)-ergic, dopaminergic and glutamatergic systems. The GABA-A has been particularly emphasized. It too little GABA-A and too much GABA-B activity contributes to the expression of catatonia. GABA-B agonists (e.g. baclofen, muscimol, valproic acid) induce catatonia.

It is also proposed that caudate nucleus, putamen, parietal and temporal lobes, and orbitofrontal and medial prefrontal cortex are involved in catatonia.

Sato and colleagues (1993) observed frontal lobe and posterior temporal and parietal lobe hyperperfusion on SPECT in their catatonic patients.

From a psychology perspective, intense fear is pictured as an evolutionary basis for both tonic immobilization and for catatonia. For example, defenses of prey animals include flight, fight and dissimulation—stupor, mutism and immobility or tonic immobilization. The DSM-5 also indicated that catatonia can be associated with another mental disorder:

- Major depressive disorder
- Bipolar Disorder
- Schizophrenia
- Schizoaffective disorder
- Neurodevelopmental disorder
- Brief psychotic disorder

The research at Lindner Center of HOPE began recruitment this month for a Smoking Cessation Study. The Research Institute is conducting a clinical trial of a non-invasive, investigational medical device, Deep Transcranial Magnetic Stimulation, that may help people quit smoking.

**In the News**

**The Research Institute at Lindner Center of HOPE is one of 17 sites in U.S. to conduct Smoking Cessation Study**

The Research Institute at Lindner Center of HOPE began recruitment this month for a Smoking Cessation Study. The Research Institute is conducting a clinical trial of a non-invasive, investigational medical device, Deep Transcranial Magnetic Stimulation, that may help people quit smoking.

Eligible participants must:

- Be between the ages of 22 and 70 years old
- Have smoked at least 10 cigarettes a day for over a year
- Want to quit smoking

All qualified participants will receive study related exams, lab work and treatments at no cost. Enrolled participants will receive compensation for time and travel.

For more information, interested parties should call Anna at (513) 536-0721 or visit lcoh.info

**View “Grateful for HOPE” video on YouTube**

Lindner Center of HOPE’s “Grateful for HOPE 2014” is now available on YouTube and can be found at www.youtube.com/user/LindnerCtrHope

This video captures the spirit of the Lindner Center of HOPE mission.
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• Schizoaffective disorder
• Schizophreniform disorder
• Schizophrenia

Mental disorder:
Diagnosis of catatonia can occur via: 5
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Somatic Treatment of Catatonia includes: 10
• Benzodiazepine
  • Lorazepam – safe and effective first-line treatment of catatonia.
  • Lorazepam is initially prescribed at 3-4 mg a day. If well tolerated, and catatonia does not resolve in two days, the dosage may be doubled, and increased progressively to 2mg every 3 to 8 hours (8-16 mg a day) over a period of 3-5 days (Fink and Taylor, 2003)
  • Overall response rate to lorazepam approximately 50% to 80% (Raveendranathan et al, 2012)
  • Complete resolution was obtained in 21/30 patients and 16/21 patients (Payne, 1999; Bush, 1996)
• Electroconvulsive Therapy (ECT)
  • ECT should be considered when rapid resolution is necessary (e.g. malignant catatonia) or when initial lorazepam trial fails.
  • ECT is recommended if there is no response to benzodiazepines within 48-72 hours. (Wieder et al, 2008)
  • Clearer indication for early intervention with ECT is when treating malignant or excited-delirious forms of catatonia.
  • In a retrospective study, 56/63 patients have complete resolution of their catatonia with ECT (Raveendranathan et al, 2012)
  • In a retrospective study, 26/28 patients have complete resolution of their catatonia after ECT. (Rohland, et al, 1993)
• Benzodiazepine and ECT Approach (Fink and Taylor)
  • Resolution rate of catatonic symptoms by benzodiazepine and ECT in 57 patients was 100%. 11

3. Tuerlings et al, Gen Hop Psych, 2013:2:651-635

Dr. Dlugosz accepts Interim Eating Disorder Leadership Position
Heather A. Dlugosz, MD, has accepted the role of interim Medical Director of the Harold C. Schott Foundation Eating Disorders Program at Lindner Center of HOPE, as the Center works to recruit a physician to the permanent role.

Dr. Dlugosz has worked as part of the Eating Disorders program since she joined Lindner Center of HOPE in 2012, working with patients in the Cincinnati Children’s unit at Lindner Center of HOPE and in the outpatient practice.

Prior to joining Lindner Center of HOPE, Dr. Dlugosz was an inpatient/ outpatient attending child and adolescent psychiatrist and Medical Director of the Adolescent Intensive Outpatient Program at St. Mary’s Regional Medical Center in Lewiston, Maine. Dr. Dlugosz additionally gained experience working as a contract psychiatrist for Children’s Diagnostic Center in Hamilton, Ohio and the Psychiatric Emergency Department at University of Cincinnati in Cincinnati, Ohio.

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Lindner Center of HOPE
4075 Old Western Row Road
Mason, OH 45040
(888) 536-HOPE (4673)

Interested in touring Lindner Center of HOPE?
Contact Katie Hamm at (513) 536-0324.

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