I20 Frontotemporal Dementia and Sex Offending: Neurological Neuropsychiatric and Legal Issues

Mohan Nair, MD, Seal Beach, CA 90740; Manish Fozdar, MD*, Triangle Forensic Neuropsychiatry, PLLC, Raleigh, NC 27609; Wesley Maram, PhD*, Orange, CA 92868; Dean De Crisce, MD*, Coast to Coast Forensic Associates, Union,, NJ 07083; Jaime Coulter, JD*, Law Offices of Lloyd & Coulter, Orange, CA 92868; Andrew LLoyd, JD*, Law Offices of Lloyd & Coulter, Orange, CA 92868*

Learning Overview: The goal of this presentation is for mental health professionals and those involved in the criminal justice system to recognize how the neurological disorder Frontotemporal Dementia (FTD) can be a factor in new onset sexual offending in middle-aged and older subjects

Impact on the Forensic Science Community: This presentation will impact the forensic science community by providing attendees with a basic understanding of FTD. Attendees will have greater sensitivity to the presence of this condition in first-time middle-aged, and older offenders, will learn how to use expert witnesses more effectively in such cases, and will have a basic understanding of diagnostic methods.

FTD is an increasingly recognized brain disorder that begins to manifest in the mid-40s. Second only to Alzheimer's disease in prevalence, FTD accounts for 20% of early onset dementia cases. The signs and symptoms of FTD often go unrecognized as a brain disorder and may be mistaken for psychiatric symptoms.

Neurodegenerative diseases can affect executive function (i.e., higher-level decision making, social emotional processing, and self-awareness resulting at times in inappropriate sexual and violent behaviors). This can lead to antisocial and criminal behaviors that first appear in middle-aged individuals or in later life.

This presentation aims to educate attendees how the behavioral variant of FTD (bvFTD) is of compelling medical/public health and jurisprudence relevance. FTD is often missed by psychiatrists and neurologists. The predominant symptoms being social, emotional, and behavioral makes it less likely to be recognized as a neurological disorder; given the lack of overt cognitive problems, unlike other forms of dementia such as Alzheimer's, psychiatrists may often misdiagnose it for bipolar disorder or some form of impulsive control disorder.

Six clinical features identify bvFTD: (1) disinhibition; (2) apathy/inertia; (3) loss of empathy; (4) perseverative and compulsive behaviors; (5) hyperorality, especially of sweets; and (6) dysexecutive neuropsychological profile. At least three features must be present to diagnose possible FTD.

BvFTD does not have to show overt cognitive impairment (i.e., intellect, reasoning, memory). What that means is that individuals with early bvFTD may continue to work, but only become behaviorally and emotionally unstable.

A 2015 University of California San Francisco retrospective medical record review study found that within the subgroup of FTD, more than a third of people had acted out with criminal behaviors.[1] A 2002 study of Swedish court-ordered forensic psychiatric evaluations noted that sexual offenses were most typical of older offenders with dementia. Hypersexual behavior may be present it as many as 20% of those with bvFTD.

Hypersexuality and inappropriate sexual behavior may be the first symptom of the disorder within a subgroup bvFTD. This hypersexuality is not believed to occur purely from poor impulse control or frontal disinhibition but from alterations in the sexual drive from lesions in the right temporal and limbic areas. These sexual behaviors can include new onset involvement in pornography, including child pornography, voyeurism, chatlines, prostitutes, and hands-on sexual behavior and public masturbation. Temper tantrums, binge eating, and lack of empathy to people and animals may be concurrently present.

Given the age of onset (i.e., in mid-40s), FTD may manifest in the prime of professional and family life. Sexual misbehaviors that emanate from FTD can have devastating consequences on individuals and families. This is complicated by the fact that individuals with FTD may appear cognitively intact *and even acknowledge* that their behavior is inappropriate but appear to lack remorse and control over their actions.

Establishing bvFTD as a cause or a factor in criminal actions may be exculpatory or mitigating. Instead of being identified and punished as sex offenders, subjects with neurodegenerative diseases, such bvFTD, could be treated differently by the legal system. For example, providing appropriate neurologic evaluation and channeling subjects to palliative and medical institutions.

Dysfunction of the orbitofrontal and ventromedial cortex may be identified by neuropsychological testing. Routine neuropsychological batteries are not adequate. Tests such the Iowa Gambling Task and tests used from autism/moral reasoning/theory of mind tests such as Faux Pas Recognition Test may be more helpful.

Neuroimaging can be helpful in evaluating new onset criminal behavior in adults and should always be considered. Positron Emission Tomography (PET) scans in the early stages and by Magnetic Resonance Imaging (MRI) scans in later stages can help identify FTD and separate it from psychiatric disorders such as bipolar disorder. PET can help with the diagnoses of bvFTD and has recently been authorized for use by Medicare.

Among the subjects covered in this presentation are: educating attendees on the neurological and neuropsychiatric aspects of bvFTD; the evaluative process and management of such cases; the relevance of specialized psychological and physiological testing (penile plethysmography and polygraph) in such cases; discussion of the role of expert witness use and testimony in such cases; and a prosecutor's perspective on dealing with sexual criminal defendants with brain disorders.

Reference(s):

1. Madeleine Liljegren, Georges Naasan, Julia Temlett, et al. Criminal Behavior in Frontotemporal Dementia and Alzheimer Disease *JAMA Neurol.* 2015;72(3):295-300. doi:10.1001/jamaneurol.2014.3781.

Frontotemporal Dementia, Behavioral Variant, Sexual Offending

*Presenting Author