Trichotillomania in a dementia case

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Abstract – We report an 87-year-old male case of hair pulling associated with a white-matter vascular dementia (Binswanger’s disease). Trichotillomania in our case did not resolve using mirtazapine or anticholinesterasic medication. Trichotillomania seems to be related to a form of perseveration associated with dementia. The findings in this case suggest the abnormality involving white matter in the pathogenesis of trichotillomania, may constitute a defect in connectivity in the right frontal-subcortical circuit.

Key words: Trichotillomania, impulse-control disorder, dementia, Binswanger’s disease, perseveration.

Case report

An 87-year-old right-handed Afro-Brazilian male with four years of schooling, was first referred to the dementia outpatient division of the Hospital das Clínicas of the Federal University of Goiás in December 2006. He presented with progressive cognitive deterioration, mainly memory impairment and executive dysfunction (difficulties in planning, sequencing, abstraction and goal-directed behavior), as well as a history of personality changes and depressive traits that began in 2002. At this time, he had a CDR of 1 and no trichotillomania.

At home, his sister (and main caregiver) reported progressive loss of autonomy, neglect of hygiene, abandonment of personal interests, intense apathy (he lay in bed all day long, locked in his room).

The patient was diagnosed with Binswanger’s disease, a type of vascular dementia and depression, probably of vascular origin. Rivastigmine (progressively increased to 12 mg daily) and mirtazapine (45 mg daily) were prescribed, with moderate benefit in memory and resolution of depressive symptoms, respectively.

On November 2008, now with CDR 2, he began a repetitive behavior characterized by hair pulling of his beard, leading to noticeable hair loss and functional impairment. Its neurobiological basis is not fully understood. Whole-brain trichotillomania neuroimaging studies are lacking.

We report a case of hair pulling associated with a white-matter vascular dementia: Binswanger’s disease.
all day, every day, persisting despite family counseling. The patient gave no explanation for this act, and denied any feeling of tension prior to the act or deriving any pleasure from the act. Additionally, he reported no pain, and had no insight regarding its compulsive nature or potential harmful consequences to his skin. There was no evidence of any delusional beliefs related to his hair-pulling behaviors. No other psychotic symptoms were elicited. There was no apparent precipitating event prior to these behaviors, no history of impulsive behaviors or other obsessive-compulsive behaviors were elicited. No history of OCD was disclosed.

Trichotillomania persists until the present day.

At last visit, he was self- and allo-psychically disoriented, presenting apathy, severe amnesia and continued trichotillomania, even when requested to stop.

Important antecedents included diabetes and high blood pressure, both well controlled. The only relevant familial antecedent was an uncle who had “Alzheimer’s disease” when he was 89 years old, according to information from his sister. There were no relevant familial psychiatric antecedents.

He presented almost complete blindness (only 30% of visual acuity in his right eye). On neurological examination, he presented with fluent speech, brisk reflexes and Babinski’s sign on the left side, exalted primitive reflexes, bilateral paratonia, with a hesitant gait (because of his blindness) but with no Romberg sign or deficits in cranial nerves, coordination, motor, and sensory systems. His psychopathological examination revealed significant apathy, reduced verbal output, lack of insight of his compulsive behavior, no depressive mood or anxiety and with preservation of social rules and adequacy. His MMSE score was 10 points (certainly impacted by his blindness) and he scored 2 on the CDR and 25 on activities of daily living (Pfeffer et al.[12]). The patient’s neuropsychological exam showed marked memory deficits (but with regular performance on recognition), severe executive dysfunction (perseveration and reduced mental control, abstraction, conceptualization, planning, initiation, cognitive flexibility, conceptualization and set shifting), moderate attention deficits, and mild ideomotor apraxia. The visuoconstructual and visuospatial tests were hindered by his blindness. He recognized objects placed in his hands. No language deficits were notable, except for reduced verbal fluency.

Brain CT showed leukoaraiosis evidenced by periventricular hypodensity, accompanied by ventricular enlargement, suggestive of a subcortical pathology (Figure 1). Metabolic workup for treatable causes of dementia revealed no abnormalities that could contribute to his cognitive deficits or mood symptoms.

**Discussion**

Trichotillomania is a poorly understood complex disorder of multifaceted pathology which often requires an interdisciplinary approach for management. This psychopathological phenomenon seems to be rare in dementia patients. Trichotillomania was previously reported in the literature only by Mittal et al.[5] who presented a case of trichotillomania associated with frontal dementia. In both present and previously reported cases, the symptom appeared with dementia progression. While having some similarities with obsessive-compulsive disorder, compelling differences between these have also been noted,[3,4] and our patient had no other obsessive-compulsive symptoms.

According to DSM-IV,[6] diagnostic criteria of trichotillomania include: [a] recurrent pulling out of one’s hair resulting in noticeable hair loss; [b] an increasing sense of tension immediately before pulling out hair or when attempting to resist the behavior; [c] pleasure, gratification, or relief when pulling out hair; [d] the disturbance is not better accounted for by another mental disorder and is not due to a general medical condition (e.g., a dermatological condition); [e] the disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning. Our patient fulfilled all these criteria, except for relief of tension when pulling out his hair, which proves hard to verify because of the difficulty in

**Figure 1.** CT showing leukoaraiosis (periventricular hypodensity) suggestive of Binswanger’s disease.
The trichotillomania in our case cannot be attributed to depressive self harm, since the patient had previously been treated for depression when this symptom appeared and was euthymic at onset. Our results also suggest that trichotillomania in dementia sufferers does not resolve when treated with mirtazapine or anticholinesterasic medication, since these drugs did not prevent the onset of trichotillomania in our patient.

The results of this case suggest that the abnormality involving white matter in the pathogenesis of trichotillomania may constitute a defect in connectivity in the frontal-subcortical circuit.

References