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SHORT COMMUNICATION

Fregoli delusion in association with vascular dementia and hemodialysis: A case report

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Abstract Neuropsychiatric syndromes, including anxiety, depression and cognitive impairment are common in patients undergoing hemodialysis, but psychotic disorders are rare. We describe here the case of a patient with chronic kidney disease receiving hemodialysis for 7 years, who developed a Fregoli delusion with symptomatic exacerbation during the hemodialysis sessions, without improvement with several antipsychotic drugs. To our knowledge, no cases of Fregoli delusion associated with hemodialysis have been reported to date. Our case illustrates the need to be mindful of neuropsychiatric disorders in patients undergoing hemodialysis.

Scientific letter

Delusional misidentification syndromes (DMSs) may occur particularly within the context of paranoid schizophrenia, affective disorders and organic illnesses such as hypothyroidism, right hemispheric stroke, multiple sclerosis and dementia, namely Alzheimer's disease. Among others, they include Fregoli syndrome, in which a person presents with a delusional belief that one or more familiar persons, usually persecutors following the patient, repeatedly change their appearances (the same person assumes numerous different disguises).[1]

Although neuropsychiatric syndromes in patients undergoing hemodialysis are common, psychotic disorders are rare, with only a few cases of delusional parasitosis associated with renal disease reported in the literature.[2] To our knowledge, no cases of Fregoli syndrome in patients with end-stage renal disease (ESRD) on hemodialysis have been reported. We describe the case of a patient with chronic kidney disease receiving hemodialysis for 7 years, who developed a Fregoli delusion with symptomatic exacerbation during the hemodialysis sessions, without improvement with several antipsychotic drugs.

A 77-year-old right-handed woman, with 4 years of formal education, has worked as a cook in a kindergarten.

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She is a widow, has 2 sons, and currently lives with her daughter.

She was referred to the outpatient psychiatry clinic due to 2-month history of hostile behavior during some hemodialysis sessions. The patient believed that different people present in the hemodialysis clinic were her son's neighbor, with whom she was acquainted with, but maintained no frequent contact with. Additionally, she said that this man was chasing her and only appeared during dialysis sessions, taunting her. She thought that the hemodialysis clinic staff were aware of the situation, but did nothing to help her. In this context, a month after symptoms onset, the patient changed to a new hemodialysis center, maintaining her complaints. Her family reported that on dialysis days, the patient was often agitated, distressed and spoke only of this man.

She had no previous history of any psychiatric disorder, including mood or psychotic disorders. Her family psychiatric history was also unremarkable. Past medical history included hypertension, chronic kidney disease stage 5 (undergoing hemodialysis for 7 years, 3 times weekly) and myocardial infarction 5 years ago. No hemodialysis complications were reported, except occasional intradialytic hypotension and tremor.

The first psychiatric assessment showed euthymic mood, Fregoli delusion, auditory hallucinations, high anxiety and poor insight. In follow-up, psychiatric worsening occurred and the patient also showed a severe persecutory delusion with aggressive behavior.

She was referred to the neurology outpatient clinic with the suspicion of dementia. She underwent neuropsychological assessment twice within 3 years, brain MRI and SPECT, which were more suggestive of vascular dementia. The neuropsychological assessment was characterized by a stable subcortical deficit profile, whereas the brain MRI showed global atrophy and small cortical sequelar infarctions in the corpus callosum and in the left cerebellar hemisphere and the SPECT showed a bilateral temporo-parietal hypoperfusion pattern.

Over the last 4 years she was treated, first with quetiapine up to 600 mg/day, afterwards with aripiprazole up to 15 mg/day and finally with zotepine up to 100 mg/day, without remission of the Fregoli delusion or auditory hallucinations, although the patient has become calmer, more sociable and less aggressive during the hemodialysis sessions.

This clinical case presents with interesting peculiarities such as the co-occurrence ESRD on hemodialysis treatment, vascular dementia and Fregoli delusion. Recent studies suggest that patients with ESRD have higher rates of cognitive impairment and dementia than the general population, but less is known about their psychopathological status.[3] Besides several traditional risk factors for cognitive impairment and dementia, ESRD patients also have the additional burden of factors primarily and secondarily associated with renal failure and its treatment.[4]

In relation to DMSs, neurobiological findings strongly support a structural basis. Studies have pointed to the presence of identifiable brain lesions, especially in the right frontoparietal and adjacent regions, in a considerable proportion of patients. A disconnection is observed between the frontal lobes and the right temporolimbic regions (hippocampus), which are necessary for reconciling information about self-identification of the person and his associated emotions.[1,5] Therefore these patients show abnormalities in facial recognition abilities. Others have shown that underactivity in the perirhinal cortex seems to be responsible for loss of familiarity in Capgras syndrome, whereas overactivity seems to account for hyperfamiliarity, seen in the Fregoli, intermetamorphosis, and subjective doubles syndromes.[1]

We can argue, due to its overlapping presentation, that delusional symptoms in our patient are associated with the underlying dementia process. The reason why the Fregoli delusion symptoms apparently worsened during hemodialysis treatment is unknown, but fluctuations, at least in cognitive performance, are a known phenomena and appear to be associated with particular clinical variables even in patients with milder cognitive deficits.[6,7]

We can also argue that the somewhat chronic presentation of the symptoms, as well as the absence of antipsychotic response may be associated with factors such as intradialytic complications and her neurobiological vulnerability (global brain atrophy and sequelar ischemic lesions).

Several treatment approaches for DMSs have been described.[1] There is very little published evidence regarding the effectiveness of atypical neuroleptics or antidepressants in the treatment of DMSs. This suggests that the treatments available today are not fully effective for such patients.[8]

However, in this case, the co-occurrence of Fregoli delusion and ESRD on hemodialysis treatment should be taken into account in relation to psychiatric drugs use. In fact, patients receiving dialysis treatment require special attention with regard to dosing regimens and the potential need for supplemental dosing following dialysis. Most psychotropic medications are fat soluble, easily pass the blood–brain barrier, are not dialyzable, are metabolized primarily by the liver, and are excreted mainly in bile. In dialyzed patients, psychotropics drugs that depend on normal renal function for disposal require dosing alteration, and in many cases should be avoided.[9] In our clinical case, psychiatric drugs and their dosages were selected together with the patient's nephrologist.

To our knowledge, no cases of Fregoli delusion associated with hemodialysis have been reported to date. Our case illustrates the need to be mindful of neuropsychiatric disorders in patients undergoing hemodialysis.

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Conflict of interest

The authors do not have any conflict of interests.

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