

## The Role of Medical Condition in Perplexity Inside Psychotic Mixed States in Bipolar Disorder

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### Introduction

In literature Leonard introduce, after Wernike (1900) and Kleist (1928), the concept of cycloid psychoses, and he gives again a weight to the mixed forms in affective disorders. We know that mixed states are the rule the the exception of the clinical manifestation of bipolar disorder. Sometimes MS are accompanied with anxiety, perplexity, indecisiveness, perceptual disturbances, depersonalization and the presence of mixed features has been associated with a worse clinical course and high rates of comorbidities including anxiety, personality, alcohol and substance use disorders and head trauma or other neurological problems. A lot of different medical conditions cause psychiatric problems, like hyperammonemia, hyponatremia, thyroid dysfunction, urinary infections and still others. The aim of our study is to evaluate the role of a medical condition in perplexity inside psychotic mixed states in bipolar disorder.

### Method

A 45-years-old woman, a 52-years old man and a 42-years-old woman were referred to our psychiatric ward for new-onset of perplexity. Over the previous weeks, all of them reported a slow appearance of decrease mood, anxiety, voices that discussing, command and/or order as well as derogatory of all the activities, difficult to sleep with frequently awakening in the night. In the days before the admission the clinical condition is worsening with the appearance of rapid thoughts, cognitive impairment with indecisiveness, depersonalization, psychomotor activation as well as perplexity. The onset of psychotic's symptoms were insidious, while the onset of perplexity was rapid inside these clinical case. In particular there was heightened salience from surroundings, with an absorption by the external world, with a self tendency to dissociate simultaneously as well as to develop autopsychic depersonalization and derealization symptoms.<sup>1</sup> All of them are knowed for a history of bipolar disorder type I and they are treated with a specific psychopharmacological treatment (valproate 1500 mg/day and amisulpride 400 mg/day; lithium 900 mg/day and olanzapine 15 mg/day; valproate 1000 mg/day and quetiapine 600 mg/day). All of them have a positive family history for mental disorder, and have a negative past history of substance dependence as well as for somatic disorder.

On examination at the admission these three patients were assessed with the SCID-P for axis I diagnosis and psychiatric comorbidity, Hamilton Rating Scale for Depression (HRSD) to quantify depressive symptoms, Mania Rating Scale (YMRS) to

quantify manic symptoms, Clinical Global Impression (CGI) to determine illness severity, as well as Brief Psychiatric Rating Scale (BPRS) to define the general psychopathology. At the admittance all patient received a complete internistical examination, blood test exams and urinalysis, as well as a first level brain imaging (CT and/or MRI). We put the attention over the somatic concern because we want to exclude all the possible somatic and physical problems that could underlie the symptomatology highlighted at the first observation at the admission. The rating scales confirm the clinical presentation of mixed states with psychotic symptoms.

In particular we didn't find any significant indication of brain disorder with first level brain imaging and we found a presence of hyperammonemia, thyroid dysfunction (reduction of TSH) and presence of infection at the urinalysis in all our case. A lot of different medical conditions cause, are a concause or are concurrent with psychiatric disorders, like obesity, low HDL concentrations, elevated triglyceride concentrations, chronically elevated blood pressure, clinical diagnosis of hypothyroidism, migraines, rheumatoid arthritis, adult onset diabetes, inflammatory bowel diseases, inflammatory skin conditions, and lifestyle factors including smoking cigarettes and chronic stress<sup>2,3</sup> and in particular in our observation the presence of hyperammonemia, urine infection and thyroid dysfunction is directly connected with the presence of the perplexity.

### Discussion and conclusion

In particular Leboyer and coll.,<sup>4</sup> define the link between comorbid medical illnesses and bipolar disorder as an early manifestation of a multi-systemic disorder and, inflammation is associated with a chronic course of illness, lack of response to mood stabilizing treatment, cognitive impairment and poor functional outcomes.<sup>3,5,6</sup> So is well knowed the concept of cycloid psychoses that Leonard introduce, after Wernike (1900) and Kleist (1928),<sup>7</sup> and the weight that he gives to the mixed forms in affective disorders. We know that mixed states (MS) are the rule than the exception of the clinical manifestation of bipolar disorder. Sometimes MS are accompanied with anxiety, perplexity, indecisiveness, perceptual disturbances, depersonalization<sup>8,9</sup> and the presence of mixed features has been associated with a worse clinical course and high rates of comorbidities including anxiety, personality, alcohol and substance use disorders and head trauma or other neurological problems.<sup>10</sup> In our report we found an intersection between three different interlinked concauses with the expression of perplexity, and we observe the resolution of perplexity with the

normalization of the blood test and urinalysis. To our knowledge in literature there aren't studies that confirm the relationship between comorbid medical condition (thyroid and hepatic function, as well as urinary infection) with the presence of perplexity in psychotic mixed states in bipolar disorder, and the resolution of perplexity with the normalization of blood and urinary exams. Further research is warranted to replicate our clinical observations and, in general terms, quantitative studies in large samples followed up over time are needed to confirm our results.

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