



## Renal Dysfunction Induced Psychosis: A Case Report

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### Abstract

*Renal Failure or Renal Insufficiency is a medical condition in which the kidneys fail to adequately filter waste products from the blood and results in decrease or absence of urine production, raised serum creatinine and blood urea. Psychosis refers to an abnormal condition of the mind, described as involving a "loss of contact with reality". We present a case of a 56-year old female, a known case of Chronic Kidney Disease, who presented with irrelevant talk, irritability, and altered behavior since 1 day, disturbed sleep and decreased appetite since 15 days.*

### Case Report

56-year old female presented with sudden onset of irrelevant talk, irritability and altered behavior since 1 day, disturbed sleep and decreased appetite since 15 days. There was history of progressive reduction in urine output over the past 1 month. Day 1 mental status examination revealed a conscious patient in clear sensorium, with hallucinatory behavior, delusions of persecution & reference and thought abnormalities including tangentiality & loosening of association. Patient was a known case of Chronic Kidney Disease with Type 2 Diabetes Mellitus and Hypertension on medication, with no previous history of psychiatric illness.

Routine investigations revealed a blood urea of 86.9 mg/dl, serum creatinine of 3.94 mg/dl (increased from the previous value of 2.09 mg/dl, 15 days back). Other routine investigations were within normal limit.

Patient was started on Risperidone & Clonazepam for management of psychotic symptoms and

conservative treatment for Diabetes, Hypertension & Kidney disease. Over the course of next week, there was only mild alleviation in the patient's psychotic symptoms. However, in 15-20 days as the renal function improved, as evidenced by increase in urine output and fall in serum creatinine to 2.01 mg/dl, there was a dramatic improvement in the psychotic symptoms with complete resolution in a month.

### Discussion

- Uremic Encephalopathy is known to cause neuropsychiatric symptoms including loss of memory, impaired concentration, depression, delusions, lethargy, irritability, fatigue, insomnia, psychosis, stupor and catatonia.<sup>(1)</sup>
- The neuropsychiatric disorders associated with renal disease may present in various forms according to the natural history of disease, and remain underdiagnosed and untreated.<sup>(2)</sup>

- Various mechanisms may play a role in neuropsychiatric manifestations in acute kidney injury – these are:
  - 1) Uremic Encephalopathy leading to cerebral oedema,
  - 2) Altered neurotransmitters,
  - 3) Increased blood-brain barrier permeability, due to accumulation of inflammatory cytokines.<sup>(3)</sup>

### Conclusion

This case report highlights association between renal dysfunction and psychosis. More importantly, it shows that the psychotic and behavioural problems may not resolve completely with antipsychotics and do so only after recovery of normal renal function.

### References

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