5PSQ-166

SEROTONIN SYNDROME IN AN ELDERLY PATIENT: A CASE REPORT

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BACKGROUND AND IMPORTANCE

Serotonin syndrome (SS) is a rare but potentially life-threatening condition caused by **excessive serotonergic activity**, **usually triggered by drug interactions**; in renal insufficiency, drugs and metabolite accumulation may exacerbate it. **Diagnosis in older patients** is especially **challenging**, as **atypical presentations** and **cognitive impairment** can obscure recognition. **Hospital pharmacists** play a **decisive role** by i**dentifying drug-related risks**, supporting early diagnosis, **and guiding therapy**.

AIM AND OBJECTIVES

To present the case of a **78-year-old man with stage 5 chronic kidney disease on haemodialysis and multimorbidity** (diabetes mellitus with microangiopathy and recurrent foot infections, epilepsy on levetiracetam, ischaemic heart disease, prior gastrointestinal bleeding and chronic anaemia) and polypharmacy, admitted following a recent course of antibiotics. The patient had experienced previous episodes of transient neurological symptoms with negative stroke workup and levetiracetam adjustment.

MATERIALS AND METHODS

On admission, he presented with **slurred speech** and **aphasia**, without fever or trauma. Initial cranial CT excluded acute stroke, and levetiracetam dose was decreased (500 mg/48h) as it can cause lethargy. Within 24h, **he deteriorated to stupor** (Glasgow Coma Scale 4), **responding only to painful stimuli**, with **generalised rigidity**. Repeat CT again excluded acute pathology. Differential diagnosis included seizure, metabolic encephalopathy, drug-induced toxicity, and infection. Laboratory tests revealed hyperkalaemia (8.6 mmol/L), elevated lactate (73 mg/dL), leukocytosis (13.24 $\times 10^9$/L), and normal creatin kinase (54 U/L). **Medication review revealed concurrent treatment with linezolid, sertraline and fentanyl**. Naloxone was ineffective, prompting discontinuation of linezolid, sertraline, and fentanyl; **raising suspicion of SS**.

Slurred speech and aphasia → Deteriorated to stupor and generaised rigidity → Medication reviewed → •Linezolid •Sertraline •Fentanyl → Suspicion of Serotonin Syndrome

RESULTS

Following discontinuation of serotonergic agents, the **patient** progressively **improved**, regaining consciousness, verbal responsiveness, and mobility within 48h. Other diagnoses were excluded, and SS was diagnosed clinically as an exclusion, supported by recovery after drug withdrawal.

CONCLUSIONS

This case illustrates **the complexity of diagnosing SS in elderly patients**, where nonspecific symptoms, multimorbidity, and cognitive impairment hinder early recognition. **Polypharmacy** and **altered pharmacokinetics increase vulnerability to drug interactions**. **Medication reviewed by hospital pharmacists is decisive for establishing the diagnosis and achieving recovery**. **Early recognition** and **prompt withdrawal of causative drugs** are essential to **prevent complications** and **reduce morbidity and mortality**. Increased awareness among clinicians and hospital pharmacists is crucial to improve safety and prevent SS in this vulnerable population.