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Atypical Neuroleptic Malignant Syndrome in an Elderly Patient: A Case Report

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Background

Neuroleptic malignant syndrome (NMS) is a rare but potentially life-threatening adverse drug reaction, most frequently associated with **antipsychotics**. It typically presents with altered mental status, muscle rigidity, hyperthermia and autonomic dysfunction. **In elderly patients**, however, **clinical manifestations** may be **atypical** and less evident, delaying diagnosis. Hospital pharmacists play a role in supporting timely recognition and optimising pharmacological management.

Aim and objectives

To report an **atypical case of NMS in an 87-year-old institutionalised woman with advanced dementia**, severe cognitive impairment, and high dependency. Her medical history included hypertension, type 2 diabetes mellitus, chronic atrial fibrillation, chronic kidney disease, dyslipidaemia, chronic anaemia, dysphagia, sacral pressure ulcer, and recent MRSA nasal colonisation. She was receiving **long-term risperidone** therapy for behavioural symptoms of dementia.

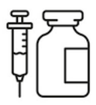
Material and methods

The patient was admitted for dyspnoea, hypoxaemia, fever and a positive PCR test for influenza A. During hospitalisation she developed **nocturnal agitation** and received a single subcutaneous dose of **haloperidol 2.5 mg**. The following day, she presented with **persistent fever** (38 °C), **unresponsiveness to verbal and motor stimuli**, **generalised rigidity and disorientation**. Laboratory tests showed no creatine kinase elevation. After excluding alternative diagnoses, **NMS was suspected** as the fever did not response to antipyretics, suggesting a central origin. **Interventions** included **risperidone withdrawal**, **intravenous hydration**, **physical cooling measures** and **benzodiazepines**. Intravenous **diazepam** was administered (initial 2.5 mg, titrated to 10 mg daily for 2 times).

Hypoxaemia and positive PCR test for influenza A

Nocturnal agitation

Haloperidol 2.5 mg SC



Persistent fever, unresponsiveness to verbal/motor stimuli, generalised rigidty and disorientation

NMS

Risperidone withdrawal, IV hydration, physical cooling measures and diazepam

Results

Following diazepam treatment, the patient progressively improved. Fever decreased gradually, rigidity lessened, and consciousness returned to baseline. Laboratory tests normalised, no infectious focus was identified, and blood cultures remained negative. After one week of stabilisation, she was discharged back to her nursing home.

Conclusion and relevance

This case illustrates the **diagnostic complexity of NMS in geriatric patients**, where atypical presentations (absence of CK elevation, nonspecific symptoms) are common, especially in the presence of cognitive impairment, and may hinder timely recognition. **A thorough medication history and a high index of suspicion are essential**. **A multidisciplinary approach** involving physicians and pharmacists facilitated accurate diagnosis and tailored treatment. In emergency settings, neuroleptic use should be carefully evaluated due to potential clinical implications. **Early recognition and adequate management are crucial to prevent complications and improve outcomes**.

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