Pulmonary embolism in neuroleptic malignant syndrome

Ana Petretić[1,2]*, Marija Tomac Stojmenović[3]

[1]University Hospital Rijeka, Rijeka, Croatia
[2]University of Rijeka, Faculty of Medicine, Rijeka, Croatia
[3]Insula County Hospital, Rab, Croatia

KEYWORDS: neuroleptic malignant syndrome, pulmonary embolism, antipsychotics.

CITATION: Cardiol Croat. 2024;19(11-12):550. | https://doi.org/10.15836/ccar2024.550

***ADDRESS FOR CORRESPONDENCE**: Ana Petretić, Klinički bolnički centar Rijeka, Tome Strižića 3, HR-51000 Rijeka, Croatia. / Phone: +385-91-5350-834 / E-mail: aantonic326@gmail.com

ORCID: Ana Petretić, https://orcid.org/0000-0002-5767-1206 • Marija Tomac Stojmenović, https://orcid.org/0000-0003-4257-0178

Introduction: Malignant neuroleptic syndrome (MNS) is life-threatening condition caused by psychotropic medications[1,2]. Pulmonary embolism is known complication of antipsychotics, but incidence of pulmonary embolism in MNS is not known. Raised levels of creatine kinase can be helpful in diagnose but are not specific for MNS and there are cases with normal levels.[3]

Case report: We present the case of a 59-year-old female with severe bipolar disorder who presented with high fever, altered mental status and acute respiratory insufficiency. Upon presentation she was hospitalized in local institution for worsening of mental status receiving typical and atypical neuroleptics. On fourteenth day of hospitalization on psychiatric ward she was transferred to our Clinic because of acute respiratory insufficiency. High fever and altered mental status preceded, together with tachycardia and tachypnea but without hemodynamic instability. In laboratory tests special attention was on creatine kinase level which was not elevated. Before transport analgosedation and orotracheal intubation was preformed and she was mechanically ventilated. Upon admission CT pulmonary angiography showed bilateral pulmonary thromboembolism. Patient developed hemodynamic instability requiring vasopressors so systemic fibrinolytic therapy was applied. Hospitalization was complicated with severe thrombocytopenia, acute kidney failure, prolonged and difficult weaning from ventilator (with need of tracheostomy), partial epileptic seizures, bacteriemia (Staphylococcus species), and tetraparesis following prolonged immobility. Slowly, on tailored medical therapy together with intensive physiotherapy patient started to recover physically but then her mental status started to deteriorate again.

Conclusion: According to patient history, drug therapy, clinical presentation and excluded other possible causes we conclude that patient had MNS. Prompt reaction and therapy is necessary to reduce mortality in such lethal condition.

RECEIVED:
September 20, 2024

ACCEPTED:
October 31, 2024

LITERATURE

1. Berman BD. Neuroleptic malignant syndrome: a review for neurohospitalists. Neurohospitalist. 2011 Jan;1(1):41-7. https://doi.org/10.1177/1941875210386491
2. Duma SR, Fung VS. Drug-induced movement disorders. Aust Prescr. 2019 Apr;42(2):56-61. https://doi.org/10.18773/austprescr.2019.014
3. Maniam T, Rahman MA. All elevated creatine kinase is not neuroleptic malignant syndrome. Med J Malaysia. 1994 Sep;49(3):252-4. **PubMed**: https://pubmed.ncbi.nlm.nih.gov/7845275/