

Key Words: Cardiotoxicity, Atypical antipsychotics

Risperidone Induced Ventricular Tachycardia

By M. Nadeem Mazhar, David S. Resch

ABSTRACT ~ This is a case report of ventricular tachycardia in a 35 years old African American male being treated with Risperidone for schizophrenia. Patient had no other cardiovascular risk factors. His physical examination and laboratory test results were essentially normal. Episodes of non-sustained ventricular tachycardia resolved after discontinuation of Risperidone. Above case report is likely to add to the limited evidence for Risperidone associated cardiotoxicity. Psychopharmacology Bulletin. 2010;43(3):82-83.

Antipsychotics are considered to be the mainstay of pharmacological treatment of patients with Schizophrenia. In general, second-generation antipsychotics have proven to be as efficacious as the first generation antipsychotics. Induced arrhythmias by second generation agents are reported rarely. The following case report concerns ventricular tachycardia induced by Risperidone.

A 35 years old African American male admitted through ED., after having a syncopal episode at the State mental health facility. Patient reported that he felt lightheaded and weak on standing with subsequent syncope. Patient denied chest pain or palpitations with the event. Vital signs after the event were not available. Patient only medication was Risperidone 3 mg bid. He was a non-smoker. He did not have risk factors for Coronary artery disease (CAD) such as Hypertension, Diabetes mellitus and Hyperlipidemia. His family history was negative for CAD and stroke.

Patient was 73 inches tall (185.42 cm). His weight is 250.8 lbs (114.00 kg) with body mass index of 33.2. Physical examination on presentation to ED was pulse 90, respiratory rate 20 and blood pressure 110/68. Carotids were 2 plus bilaterally

M. Nadeem Mazhar, MD, FRCPC, Assistant Professor, Department of Psychiatry, Queens University, Kingston, Ontario, Canada. David S. Resch, MD, Professor of Clinical Medicine, Division of Medicine Psychiatry, Southern Illinois University School of Medicine, Springfield, IL.

To whom correspondence should be addressed: M. Nadeem Mazhar, MD, FRCPC, 166 Brock Street, Kingston, Ontario, K7L 5G2, Canada. Phone: 613 544 3310; Fax: 613 544 9666; Email: mir_mazhar@yahoo.com

without bruits and there was no jugular venous distension. Chest was clear to auscultation. His S1 and S2 were normal with irregular rhythm. No significant murmur was present. Abdominal examination was benign without hepatosplenomegaly, mass or tenderness. No abdominal bruit present. No severe kyphoscoliosis noted. There was no clubbing, cyanosis or edema. The femoral and pedal pulses were 2 plus bilaterally. Neurological examination was normal.

QTc on EKG on admission was 420 ms with no old EKG's available. Electrolytes, magnesium, thyroid function tests and cardiac enzymes were within the normal limit. Lipid profile showed no significant dyslipidemia. Telemetry in the hospital showed several episodes of asymptomatic non-sustained ventricular tachycardia (NSVT). Stress echocardiogram was performed and was essentially normal. Patient was started on Metoprolol 50 mg bid but continued to have episodes of NSVT. Patient's arrhythmias resolved after discontinuation of Risperidone. After 3 days of monitoring, patient was transferred back to the State mental health facility with a plan to start patient on alternative antipsychotic medication.

Risperidone has generally been considered a safe atypical antipsychotic from cardiovascular point of view. It has a minimal effect on QT prolongation.¹ There have been cases of Risperidone overdose described in association with severe QT prolongation² but a review of the overdose profiles indicated that atypical antipsychotics are generally safe.³ The above case is likely to add to limited evidence regarding Risperidone associated cardiotoxicity.^{4,5} ❀

REFERENCES

1. Taylor DM. Antipsychotics and QT prolongation. *Acta Psychiatr Scand.* 2003;107:85-95.
2. Moore NC, Shukla P. Risperidone overdose. *Am J Psychiatry.* 1997;154:289-290.
3. Capel MM, Clobridge MG, Henry JA. Overdose profiles of new antipsychotic agents. *Int J Neuropsychopharmacol.* 2000;3:51-54.
4. Blaschke et al. Torsades de pointes during combined treatment with risperidone and citalopram. *Pharmacopsychiatry.* 2007;40(6):294-295.
5. Tei Y et al. Torsades de pointes caused by a small dose of risperidone in a terminally ill cancer patient. *Psychosomatics.* 2004;45(5):450-451.