Indian Journal of Medical Case Reports ISSN: 2319–3832(Online)
An Open Access, Online International Journal Available at http://www.cibtech.org/jcr.htm
2014 Vol. 3 (3) July-September, pp. 1-2/Haris and Kumar

Case Report

NEUROLEPTIC MALIGNANT SYNDROME

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ABSTRACT
Neuroleptic Malignant Syndrome is one of the most important causes of the patients on anti-psychotics, present with hyperthermia, rigidity and autonomic dysregulation. It is always prudent to evaluate the patients for NMS, who present with unexplained hyperthermia.

Keywords: *Anti-psychotics, Hyperthermia, Rigidity, Autonomic Dysregulation*

CASES
A 60 year old man with Bipolar disorder was treated with combination of Fluoxietine 25 mg and Olanzapine 3 mg for 2 years. On his last psychiatric visit, with complaints of excessive episodes of anxiety, Olanzapine dose was increased to 6 mg. After 8 days he presented with high fever of temperature 102.4 F and myalgia, thought of viral etiology and treated with paracetamol. Very next day he was hospitalized with fever of 103 F, fluctuations in Blood Pressure and pulse rate, diaphoresis and rigidity in both upper and lower limbs. Complete blood count, renal function test, CPK, CSF analysis, MRI brain and chest radiography was done. All were unremarkable except elevated white cell count of 15000 cells/mcl, CPK of 2500 U/L (N < 174 U/L) and mild elevation of AST & ALT. Clinical diagnosis of Neuroleptic Malignant syndrome was made. Olanzapine was immediately stopped and supportive treatment was initiated. Fever resolved in 10 hours, rigidity in 24 hours and other manifestations in 8 days.

DISCUSSION
NMS refers to the combination of hyperthermia, hypertonia and autonomic dysregulation occurs as a serious complication of the usage of anti-psychotics. In 1960 French Clinicians first described the term who had been working on a study involving haloperidol.

The drugs causing NMS are Haloperidol, chlorpromazine, atypicalanti-psychotic drugs such as Olanzapine, risperidone, ziprasidone, quetiapine. Clozapine with less extra pyramidal effects. Dopaminergic drugs like levodopa, if the dose is reduced abruptly, Metoclopramide, amoxapines, lithium. The mechanism believed to be Dopamine D2 receptor antagonism. D2 receptor blockade in Hypothalamus results in hyperthermia. Hypothalamus, Nigrostriatal pathway and Spinal cord result inextra pyramidal symptoms. Peripheral increased calcium leads to increased contractility. Labile BP, tachycardia, diaphoresis are due to autonomic dysregulation. The incidence is slightly higher in males

The clinical features are Hyperthermia, hypertonia, diaphoresis, Fluctuations in BP, tachycardia, dyspnea and gait abnormality. Laboratory findings include leukocytosis, increased CPK, LDH, AST, ALT, myoglobinemia, myoglobinuria, hyperuricemia, hypocalcemia and Hypophosphatemia. The treatment of NMS includes discontinuing the offending drug, fluid resuscitation to prevent renal failure due to rhabdomyolysis, anti-pyretic and cooling blankets for hyperthermia. Some patients would need ventilator and circulatory support. Electro convulsive therapy, muscle relaxants like dantrolene sodium, Bromocriptine are useful for rigidity. Differential diagnosis include Lethal catatonia, serotonin syndrome, Malignant hyperthermia and Heat stroke

Conclusion
Neuroleptic Malignant Syndrome is rare and can be fatal. It should be thought of in patients presenting with unexplained pyrexia, rigidity and autonomous dysfunction. The early diagnosis and treatment are crucial to reduce mortality.

REFERENCES

Strawn JR, Keck PE and Caroff SN (June 2007). Neuroleptic malignant syndrome. *American Journal of Psychiatry*.