

MEETING ABSTRACT

Open Access

# Is amisulpride associated less with neuroleptic malignant syndrome? Review and hypothesis

Vaios Peritogiannis<sup>1\*</sup>, Georgios Kalampokis<sup>2</sup>, Charalampos Lixouriotis<sup>3</sup>

From 1<sup>st</sup> International Congress on Neurobiology and Clinical Psychopharmacology and European Psychiatric Association Conference on Treatment Guidance Thessaloniki, Greece. 19-22 November 2009

## Background

Atypical antipsychotics have been reported to induce neuroleptic malignant syndrome (NMS). The precise pathophysiologic mechanism is unknown but dopamine blockage is pivotal. The serotonergic action of atypical antipsychotics may also be implicated because serotonin may inhibit dopamine release and worsen hypodopaminergic states. Amisulpride, which is a selective D2/D3 receptor antagonist and has no affinity for serotonin receptors may be less associated with the development of NMS.

## Materials and methods

A Medline search was conducted for articles published till July 2009 relative to the induction of NMS by atypical antipsychotics in non-geriatric patients with schizophrenia or schizoaffective disorder. We used the keywords neuroleptic malignant syndrome and the names of all first-line atypical antipsychotics, with the exception of paliperidone, which has been recently marketed.

## Results

The number of the reported cases of atypical antipsychotic-induced NMS in the defined population was 24 for risperidone, 18 for olanzapine, 7 for quetiapine, 9 for aripiprazole, and 5 for ziprasidone. Only two cases of amisulpride-induced NMS were revealed. In one case the patient was vulnerable to the induction of NMS which had been caused by three different atypical antipsychotics.

## Conclusions

In the absence of large prospective studies regarding the induction of NMS by atypical antipsychotics, which are

difficult to perform due to the rarity of the syndrome, definite conclusions cannot be reached. Amisulpride may be less than the other atypical antipsychotics associated with NMS, and this may be accounted for by its lack of serotonergic action. Amisulpride may be a useful option for re-started antipsychotic medication in patients recovering from NMS.

## Author details

<sup>1</sup>Private practice, Ioannina, Greece. <sup>2</sup>Department of Psychiatry, University Hospital of Ioannina, Ioannina, Greece. <sup>3</sup>General Hospital of Livadia, Livadia, Greece.

Published: 22 April 2010

doi:10.1186/1744-859X-9-S1-S158

**Cite this article as:** Peritogiannis *et al.*: Is amisulpride associated less with neuroleptic malignant syndrome? Review and hypothesis. *Annals of General Psychiatry* 2010 **9**(Suppl 1):S158.

Submit your next manuscript to BioMed Central and take full advantage of:

- Convenient online submission
- Thorough peer review
- No space constraints or color figure charges
- Immediate publication on acceptance
- Inclusion in PubMed, CAS, Scopus and Google Scholar
- Research which is freely available for redistribution

Submit your manuscript at  
[www.biomedcentral.com/submit](http://www.biomedcentral.com/submit)



<sup>1</sup>Private practice, Ioannina, Greece