

Introduction It is not known whether sex and age are risk factors for neuroleptic malignant syndrome (NMS).

Objectives To examine sex and age distributions in NMS patients based on a systematic review of the literature.

Aims Estimate the sex-specific relative risk of an NMS diagnosis.

Methods EMBASE and PubMed databases were searched in November 2014 using broad, unrestricted criteria to identify any published observation of NMS. Any physically (online or hard copy) accessible and interpretable (using language translation software) report published from January 1, 1998 through November 1, 2014 was considered for inclusion. Secondary sources (e.g., reviews) were included when primary sources could not be accessed. All cases for which the patient's sex or the sample's sex distribution was provided were included, except for redundant reports and cases in which NMS was not the most likely clinical diagnosis. Sex ratio and age distributions were examined using standard graphical techniques and measures of association.

Results Twenty-eight independent NMS sex ratio estimates were included. Most sex ratio estimates (75%) indicated male preponderance, with a median of 1.47 (95% CI: 1.20–1.80). NMS incidence peaked at age 20–25 years and declined steadily thereafter; males consistently outnumbered females at all age intervals. Major study limitations are the heterogeneity of case ascertainment procedures and the potential for publication bias.

Conclusions NMS patients are 50% more likely to be males, and NMS is most likely to occur in young adulthood. Men, and all young adults, appear to be at increased risk for NMS.

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A Comparison of DSM-IV and international expert consensus diagnostic criteria for N.M.S

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Introduction Neuroleptic malignant syndrome (NMS) requires prompt recognition for effective management, but there are no established diagnostic criteria.

Objectives To validate the recently published international expert consensus (IEC) diagnostic criteria for NMS, which assign priority points based on the relative importance of each criterion for diagnosing NMS.

Aims Determine optimal diagnostic cutoff for priority point score.

Methods Data were extracted from 221 archived telephone contact reports of clinician-initiated calls to a national telephone consultation service from 1997–2009; each case was given a total priority point score based on the IEC criteria. DSM-IV-TR research criteria, in original form and modified to accept less than 'severe' rigidity, served as the primary diagnostic reference standard. Consultants' diagnoses served as an additional reference standard. The optimal priority point cutoff score was determined using receiver operating characteristic (ROC) curve analysis.

Results Area under the ROC curve ranged from 0.715 (95% CI = 0.645–0.785, $P < 0.001$) for consultant diagnoses to 0.857 (95% CI = 0.808–0.907, $P < 0.001$) for modified DSM-IV-TR criteria. The latter was associated with 69.6% sensitivity and 90.7% specificity.

Conclusions Agreement was best between IEC criteria with a cutoff score of 74 and modified DSM-IV-TR criteria (sensitivity 69.6%,

specificity 90.7%); this cutoff score demonstrated the highest agreement in all comparisons. Consultant diagnoses showed much better agreement with modified, compared to original, DSM-IV-TR criteria, suggesting that the DSM-IV-TR criterion of "severe" rigidity may be more restrictive than what most knowledgeable clinicians use in practice.

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EV1078

Advantages of second-generation long-acting injectable anti-psychotics: Focus on hospital admission rates in southeast Tuscany

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Introduction Several studies suggested that second-generation long-acting injectable anti-psychotics (SGA-LAIs) might be effective on preventing relapse and admission/readmission rates among patients affected by schizophrenic and bipolar disorders. Moreover, studies highlighted that SGA-LAIs may reduce costs and healthcare resource utilization (HRU) among community psychiatric settings.

Objectives The objective of the present study was to evaluate whether the increased use of SGA-LAIs among community psychiatric services in southern Tuscany was related to:

– reduced costs and HRU;

– reduced hospital admission/readmission.

Methods Data consisted of both regional registry and data prospectively collected at admission and/or follow up assessments. Patients included were: patients affected by schizophrenia/schizoaffective or bipolar disorders, treated with SGA-LAIs.

Results The increased use of SGA-LAIs was related to a significant reduction of admission and/or readmission rates, as long as a significant reduction in costs and HRU among the community services included in the study.

Conclusions The present findings suggest that SGA-LAIs might have a positive cost/effectiveness profile and could reduce hospitalizations, costs and HRU among a community sample. This could be related to a better tolerability of SGA-LAIs compared to FGA-LAIs, and less adverse effects. More studies on community samples should focus on the cost/effectiveness profile of SGA-LAIs.

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EV1079

Clozapine efficiency in tardive syndromes induced by anti-psychotic treatment

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Introduction Tardive syndromes (TS) resulting from prolonged exposure to dopamine receptor blocking agents are frequent. Clozapine is considered to have a low risk of causing new onset TS and accounts therefore as an interesting option in patients with invalidating TS.

Objectives Our study aims to describe clozapine indications in patients experiencing TS.

Methods Presentation of the clinical cases of five patients, who experienced different kinds of TS secondary to 1st and 2nd generation anti-psychotic treatment.

Results We present the cases of AB aged 41, MJ aged 40, HM aged 31 and AS aged 30, diagnosed with schizophrenia; and FB aged 24, diagnosed with schizoaffective disorder. Adverse side effects to conventional anti-psychotics such as limb and trunk tremors were described for AB, choreic limb movements, axial and segmental dystonia for MJ, AS, FB and oculogyration for FB. All patients were switched to atypical anti-psychotics without improvement of the TS. The switch to clozapine, associated with abotulinum injection for MJ, led to regression of the TS and improvement of clinical signs. In fact, according to several studies, clozapine seems to be an interesting option when invalidating TS occurs. The low prevalence of TS under clozapine can be explained by its low affinity for striatal-D2 receptors, its anti-serotonin and anti-cholinergic effects.

Conclusions Clozapine should be considered in symptomatic patients who develop TS while receiving other anti-psychotics. Further research on mechanism of TS and clozapine effect on TS is needed.

Disclosure of interest The authors have not supplied their declaration of competing interest.

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EV1080

Isolated rhabdomyolysis caused by olanzapine: About a clinical case



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Introduction Atypical anti-psychotics are increasingly prescribed, given their tolerance. Among these anti-psychotic olanzapine, known for its adverse metabolic effects. By against an adverse event type rhabdomyolysis with olanzapine appears uncommon (<1%) and few clinical cases have been reported in the literature.

Aim The aim of our study is to illustrate with a clinical case the occurrence of an isolated rhabdomyolysis with olanzapine.

Materiel and method Starting from the study of the case of a patient with rhabdomyolysis with olanzapine we studied the literature data. Clinical vignette: it is about a patient aged 25 followed for bipolar disorder type I. He responded to the association olanzapine and valproic acid then to valproic acid only. His last hospitalization for manic relapse dating to September 9, 2015 occurred in a context of treatment discontinuation. Upon admission the patient underwent an oral treatment based olanzapine and valproic acid. A dosage of creatine phosphokinase (CPK) done systematically, on September 11 showed high levels of (CPK) to 973 (U/L) without clinical signs of neuroleptic malignant syndrome. The electrocardiogram and biological tests results were normal. Other etiologies can lead to elevated (CPK) were eliminated. The persistent elevation of CPK motivated the arrest of olanzapine. The evolution was marked by a return to normal CPK rates after 15 days. The olanzapine was replaced by haloperidol and vaproic acid maintained. The pharmacovigilance investigation conclude to the accountability of olanzapine in this rhabdomyolysis.

Conclusion Second generation, anti-psychotics are known for their better tolerance compared to conventional antipsychotics. However, they are not devoid of side effects.

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EV1081

Rechallenge clozapine after agranulocytosis in refractory schizophrenia. A case report



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Introduction Clozapine, is widely prescribed for treatment of refractory schizophrenia, but its use may be limited by potentially serious adverse effects. The most feared complication remains agranulocytosis [absolute neutrophil count (ANC) < 500/mm³], which occurs in 1% of patients. Guidelines recommend immediate cessation until the granulocyte count normalizes, but little is known about the subsequent treatment and the possibility of restoring clozapine.

Objectives To know procedures that allow clozapine rechallenge after induced agranulocytosis in refractory schizophrenia.

Methods We present a clinical case of agranulocytosis and evolution after simple reinstitution of clozapine.

Results A 38-year-old woman diagnosed refractory schizophrenia. After 10 years with clozapine (300 mg/day), we find neutropenia (ANC 1420/mm³) in a monthly control blood count with progression to agranulocytosis (ANC 460/mm³) in the following month. We suspend clozapine and started olanzapine (20 mg/day) with restoration of haematological values in a period of one month. The patient had psychotic decompensation at two months after the change with lack of response to different psychopharmacological strategies for five months. According to the hematology department we decided to re-introduce clozapine (200 mg/day) in combination with olanzapine with complete clinical remission. Between the 3rd and 9th week after rechallenge we observe a progressive decline in ANC, while remaining within the range of normal. From the 9th week and in the last 6 months neutrophil counts remained stable.

Conclusions Although, more research is needed to establish the safety to rechallenge of clozapine after agranulocytosis, it must be an alternative to consider when other treatment strategies fail.

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EV1082

Combination of aripiprazole and olanzapine in first episode psychosis patient with metabolic syndrome: A case report



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There are numerous factors that predispose patients with schizophrenia to develop metabolic syndrome and become