Antipsychotic polypharmacy –Evolution of prescribing patterns between admission and discharge of 5 Belgian hospitals

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Motivation and aim

Antipsychotic polypharmacy (APP) is common worldwide in the treatment of schizophrenia, despite the lack of high quality evidence supporting its efficacy and safety over monotherapy. We aimed at describing prescribing patterns during psychiatric hospitalizations in Belgium and comparing it to the European practice.

Methods

We collected retrospective data from 5 hospitals in 2020-2021.
The inclusion criteria were :

- adult inpatients (18-64 years old)
- hospitalized in an acute psychiatric unit
- presenting with a diagnosis of schizophrenia or schizoaffective disorder
- taking at least 1 antipsychotic at admission

Outcomes

We compared between admission and discharge of hospital :

- The proportion of patients on APP
- Type and route of antipsychotics
- Exposition to antipsychotics (i.e. prescribed daily dose (PDD)/defined daily dose (DDD) ratio)
- Patients on excessive dosing (i.e. PDD/DDD>1,5)
- Cotreatment

Key message and conclusion

Antipsychotic polypharmacy is still highly prescribed in Belgium, in proportion that exceeds the European mean, and increased after a psychiatric hospitalization. Further researches are needed to reduce the gap between clinical practice and research.

Results

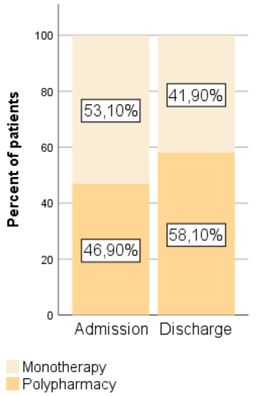

Figure 1. Extent of antipsychotic polypharmacy prescribing at hospital admission and discharge

Of the 420 patients analyzed, the proportion of patients on antipsychotic polypharmacy significantly increased from hospital admission to discharge (McNemar test, p<0,001; Fig.1). These figures largely exceed the European mean (23,3%)[1] as well as the Belgian situation 20 years ago (42,2%)[2].
The mean number of antipsychotics per patient significantly increased as well (Wilcoxon test, p<0,001). 90 patients (21,43%) had an augmentation in their daily number of antipsychotics, 35 patients (8,33%) had a reduction and 295 patients (70,24%) had no changing.

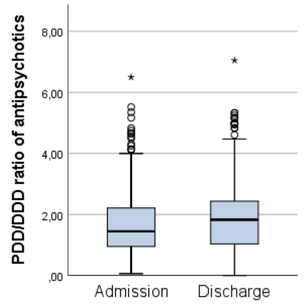

Figure 2. Prescribed daily dose (PDD) on defined daily dose (DDD) ratio of antipsychotics at hospital admission and discharge

Exposition to antipsychotics increased significantly from 1,70 at admission to 1,96 at discharge (Wilcoxon, p<0,001; Fig.2).
Number of patients on excessive antipsychotic dosage (i.e. PDD/DDD ratio> 1,5) increase from 49,2% at admission to 57,0% at discharge (McNemar test, p=0,002).

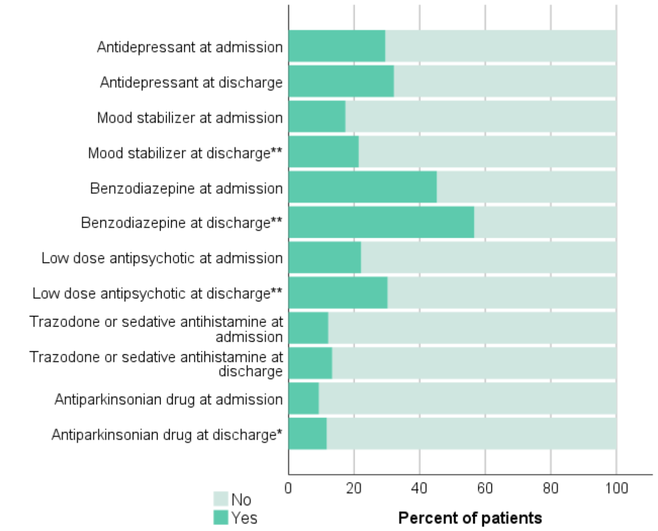

Figure 4. Proportion of patients cotreated with psychotropic and antiparkinsonian drugs at hospital admission and discharge. **p<0,001; *p=0,021

Finally, more patients were on mood stabilizers (17,4% and 21,4%; McNemar, p<0,001), benzodiazepines (45,2% and 56,7%; p<0,001), low dose antipsychotics for indication other than psychosis (22,1% and 30,2%; p<0,001) or antiparkinsonian drugs (9,3% and 11,7%; p=0,021), at discharge compared to hospital admission. There was no significant increase in the number of patients on antidepressant (29,5% and 32,1%, p=0,082), nor on trazodone or sedative antihistamines (12,4% and 13,3%, p=0,458).

Compared to admission, more patients had a combination of a long-acting injectable with an oral antipsychotic at discharge (18,6% and 27,4%; χ^2, p<0,001; Fig.3a), and more were treated with a combination of a first-generation and an atypical antipsychotic (28,3% and 36,2%; χ^2 p<0,001; Fig.3b).

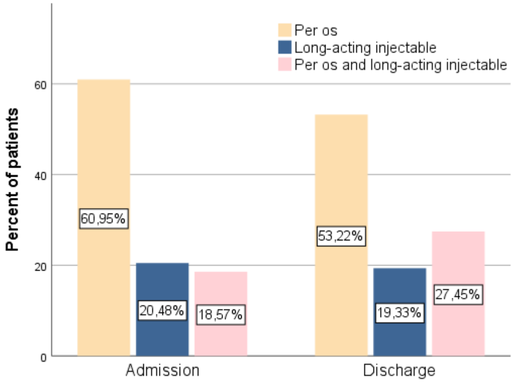

Figure 3a. Antipsychotics route of administration at hospital admission and discharge

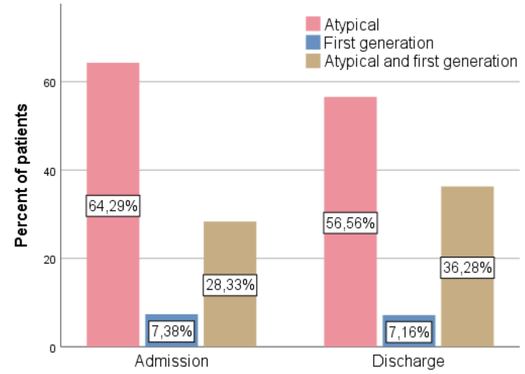

Figure 3b. Type of antipsychotics prescribed at hospital admission and discharge

References

1. Gallego et al. (2012) Prevalence and correlates of antipsychotic polypharmacy: a systematic review and meta-regression of global and regional trends from 1970s to 2009. Schizophrenia research. 138(1): 18-28
2. De Hert M et al (2006) Pharmacological treatment of hospitalised schizophrenic patients in Belgium. International Journal of Psychiatry in Clinical Practice. 10(4) 285-290

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