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Drug therapy in patients subject to outpatient compulsory mental healthcare

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Abstract

Rationale, aims and objectives: The use of coercion in mental health services is controversial. Little is known about drug therapy in patients subject to ambulant compulsory mental healthcare. The purpose of this study was to describe the drug therapy and follow-up in patients subject to ambulant compulsory mental healthcare at Sorlandet Hospital, Norway and, if possible, to improve drug therapy through specific advice from a consultant pharmacist.
Method: Relevant information was obtained from the medical records of the included patients. Drug reviews were processed. Identified drug-related problems (DRPs) were presented to the interdisciplinary treatment teams and initiatives were documented.
Results: Of the 101 patients subject to ambulant compulsory mental healthcare, 77 patients met the inclusion criteria. On average each patient used 3.6 drugs overall. All patients were using at least one antipsychotic agent, 83 % used depot injections. We identified 68 DRPs in 51 patients. Of these, 54 DRPs were concurred by the psychiatrist treating the patient. The most common type of concurred DRP was "lack of monitoring". The most common initiative was "discussion in the multidisciplinary team or with the patient".
Conclusion: Even though the indication was clear, drugs were not always prescribed. Or they were prescribed in too low doses, according to the request of the patient. Among the presented DRPs a high proportion was concurred on, but few alterations were made immediately. A pharmacist can contribute to improving drug therapy, but pharmacists are not currently regular members of the interdisciplinary treatment team.

Keywords

Antipsychotics, community treatment order (CTO), compulsory treatment, consultant pharmacist, drug-related problems, monitoring of drug use, outpatient, outpatient commitment OC), person-centered healthcare, person-centered psychiatry

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Introduction

The use of coercion in psychiatric health services is controversial. A set of criteria described in the law [1] has to be met and individual resolutions have to be made by a psychiatrist or a clinical psychologist. An update of the Norwegian law regulation in 2001 gave new criteria for use of outpatient compulsory mental healthcare, in the literature often referred to as community treatment orders (CTOs) or outpatient commitments (OCs). It is a prerequisite that voluntary treatment has been attempted, or is clearly futile for the patient to utilize, before compulsory mental healthcare is established. Approximately, 100 patients are subject to outpatient compulsory mental healthcare in the region of Sorlandet Hospital (serving the southern part of Norway, 280 000 inhabitants) at the time.

Much effort has been made over the last years to discover which treatment is most suitable for patients with a burden of severe mental disorder and the work continues. Two literature reviews rated the health effects of being subject to outpatient compulsory mental healthcare for people with severe mental disorder [2,3]. There were indications that patients subject to outpatient compulsory mental healthcare are less likely to be victims of violent or non-violent crimes, but they did not attend to fewer healthcare services than patients treated voluntarily. Another literature review concludes that it is unclear whether the use of coercion implies better treatment outcome than voluntary treatment initiatives [4]. There are indications that outpatient compulsory mental healthcare may contribute to improved outcomes related to patient quality of life [5], measured as decreasing episodes of aggression.

Most of the patients subject to outpatient compulsory mental healthcare have a history of inpatient compulsory mental healthcare. When the inpatients are stabilized and ready for hospital discharge, the resolution of inpatient compulsory mental healthcare is primarily converted to voluntary health services or, alternatively, to outpatient compulsory mental healthcare. Outpatient compulsory mental healthcare is established for one year at the time and the resolution can be prolonged for a period of one year at a time as long as the conditions for coercion are present.

In addition to outpatient compulsory mental healthcare, patients can be subject to enforced medication. This is also regulated by law [1] and requires the patient to be subject to compulsory mental healthcare. In order to submit a patient to enforced medication, a specific resolution by a psychiatrist is required. Such resolutions have validity for a period of three months and can be prolonged for the same period as long as conditions for enforced medication are present.

Only sparse descriptions of the medical treatment of these patients, whether qualitative or quantitative, are found in the literature. There are some descriptions of enforced medication [6,7], reviewing the use of drugs in inpatient acute situations, rather than the treatment for patients subject to outpatient compulsory mental healthcare. Apparently, in spite of serious mental disorder and treatment against the willingness of the patients, little is known about both the drug therapy and the follow-up for this group of patients.

The purpose of this study was to describe the drug therapy and follow-up in patients subject to outpatient compulsory mental healthcare at Sorlandet Hospital and to investigate the potential for improvement of drug therapy through specific recommendations from a consultant pharmacist.

Material and methods

Literature search

Searches were made in PsychInfo and Medline databases. The terms “outpatient”, “outpatient commitment”, “compulsory care”, “drug treatment”, “prescription drugs” were applied for in different combinations, in order to find descriptions of which treatment and follow-up patients subject to outpatient compulsory mental healthcare are given.

Study population

The criteria for inclusion were as follows: Patients subject to outpatient compulsory mental healthcare at the inclusion date, age over 18 years and regular use of two or more drugs prescribed by, or in co-operation with, psychiatrists in treatment teams of these patients.

Patients and treatment teams

Patients subject to outpatient compulsory mental healthcare at Sorlandet Hospital were recruited for the study. These patients attend different interdisciplinary treatment teams according to their place of living and their specific need of psychiatric healthcare services, therefore several psychiatrists in interdisciplinary treatment teams were consulted for evaluation.

Medical reviews

Information from the medical records of the patients was obtained by the consultant pharmacist according to a national guideline for medical reviews [8], where relevant factors to consider are listed. If drug history was incomplete in the medical record, information was supplemented by the interdisciplinary treatment teams directly. From this information patients with regular use of two or more drugs were included.

The consultant pharmacist processed individual medical reviews for each patient included in the study. Comments from the consultant pharmacist on drug prescription found by assessment of medical reviews were classified according to the Norwegian consensus on classification of drug related problems (DRPs) from 2007 [9] and forwarded to the psychiatrist for evaluation.

The basis for identification and classification of DRPs was national and international treatment guidelines for relevant diagnoses, WHO’s specification of daily doses (DDD) and the clinical experience of the consultant pharmacist. According to WHO, DDD is defined as the assumed average maintenance dose per day for a medicine used on its main indication in adults [10].

Drug therapy and follow-up for each patient included the identified DRPs and were evaluated by the consultant pharmacist in collaboration with the psychiatrist in the interdisciplinary treatment team. The outcome of the evaluation, both type of DRP and suggested actions for improvement, was recorded and incorporated in the categorization performed by the consultant pharmacist prior to the evaluation.

Results

Description of the patients

At the inclusion date (September 1, 2013), 101 patients were subject to outpatient compulsory mental healthcare at Sorlandet Hospital. All patients were aged over 18 years and 77 patients were indentified as using two or more prescribed drugs at the inclusion date. These patients were included in the study. Among the 77 patients, there was a slight predominance of men (56%). The median age was 47 years (range: 22-71).

Diagnoses

Of the included patients, 50 were diagnosed with F20 schizophrenia according to the ICD-10 diagnosis system [11]. Next, diagnoses of F25 schizoaffective disorders and F22 delusional disorders were the most frequently diagnoses in the study population, representing 9 and 8 patients, respectively.

Multiple diagnoses were frequently seen in the population. Of the F20 diagnosed patients, 16 patients had an additional diagnosis of F19 disorders due to psychoactive substance use. Three patients had a diagnosis of F70 minor mental retardation in addition to F20.

Table 1 Classification of the antipsychotic agents used by the included patients

Group	Short name	Substance name	Brand name	DDD Defined daily dose	ATC-group
First generation high dose antipsychotics	High dose	Amisulpride	Solian	400 mg	N05A L05
		Chlorprothixene	Truxal	300 mg	N05A F03
		Levomepromazine	Nozininan	300 mg	N05A A02
First generation high dose antipsychotics	Low dose	Perphenazine	Trilafon tablets	30 mg	N05A B03
		Perphenazine	Trilafon depot injection	7 mg	N05A B03
		Zudopenthixol	Cisordinol tablets	30 mg	N05A F05
		Zudopenthixol	Cisordinol depot injection	15 mg	N05A F05
		Flupentixol	Fluanxol tablets	6 mg	N05A F01
		Flupentixol	Fluanxol depot injection	4 mg	N05A F01
		Fluphenazine	Siqualone (not registered)	1 mg	N05A B02
		Haloperidol	Haldol tables	8 mg	N05A D01
		Haloperidol	Haldol depot injection	3.3 mg	N05A D01
		Pimozide	Orap	4 mg	N05A G02
		Fluspirilene	Imap depot injection	0.7 mg	N05A G01
Second generation antipsychotics	Atypical	Aripiprazole	Abilify	15 mg	N05A X12
		Clozapine	Leponex	300 mg	N05A H02
		Quetiapine	Seroquel	400 mg	N05A H04
		Olanzapine	Zyprexa	10 mg	N05A H03
		Paliperidone	Xeplion	2.5 mg	N05A X13
		Risperidone	Risperadal tablets	5 mg	N05A X08
		Risperidone	Risperidal depot injection	2.7 mg	N05A X08

Where formulation is specified there is a difference in DDD between the various drug formulations.
Where formulation is not specified, there is either no difference in DDD between the formulations, or there is only one formulation from this substance.

Duration of compulsory mental healthcare

All patients were included in the study at the same date. Outpatient compulsory mental healthcare is established continuously. Thus, the included patients have been subject to outpatient compulsory mental healthcare for different time periods. Therefore, they were grouped into intervals of one year. Median time was the interval 2-3 years. Six patients had been subject to outpatient compulsory mental healthcare for more than eight years.

Enforced medication

In the present population, 39% were also subject to enforced medication at the inclusion date. A larger proportion of males (42% of the male study population) than females (35% of the female study population) were subject to such additional compulsory treatment.

Description of drug therapy

Number of drugs and types of antipsychotics

The mean number of drugs per patient overall in this study was 3.6 drugs (range 2-11). The number of antipsychotic agents per patient averaged 1.6 (range 1-3). Older patients had a tendency to use more drugs overall, but fewer antipsychotic agents. All patients received one or more antipsychotic agent, 83% of the patients used long-acting injectable drugs (LAI), whereas the remaining used oral formulations.

Antipsychotic agents were classified into 3 groups: first generation high dose antipsychotics, first generation low dose antipsychotics and second generation antipsychotic agents. The substances used in this study are classified according to the Norwegian drug and therapeutic formulary for health personnel [12], summarized in Table 1. The antipsychotic agents from the first generation low dose group were the most frequently used. There were 55 patients receiving one antipsychotic agent, 18 patients using 2 antipsychotic agents and 4 patients using 3 antipsychotic agents simultaneously. When more than one

antipsychotic agent was in use, drugs from 2 different groups (Table 1) were combined.

Dosage

The doses that were prescribed for each patient were converted to defined daily doses (DDD) for comparison. DDD for each substance is presented in Table 1. The patients received mean 1.4 DDD antipsychotic agents per day (range: 0.1 - 4.7). Differences in dosage were not found between the different diagnosis groups.

Patients receiving drug formula LAIs received on average 0.3 DDD higher doses than the patients receiving oral medication. Patients receiving antipsychotic agents voluntarily also received higher doses, on average 0.6 DDD, than patients subject to enforced medication (see Table 2), but the variation was wide in both groups.

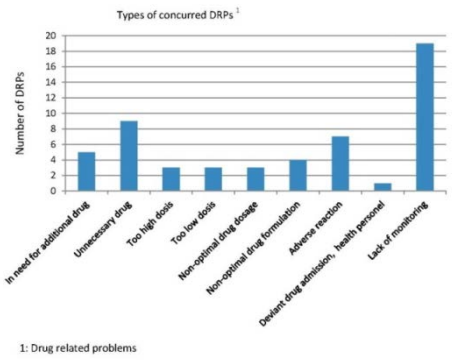
Table 2 Dosages of the antipsychotic agents

		n=	Number of DDD antipsychotic agents received, on average	SD=
A	LAI antipsychotic agent			
	Yes	64	1.5	1.1
	No	13	1.2	1.2
B	Enforced medication			
	Yes	30	1.1	0.8
	No	47	1.7	1.2

Drug-related problems

Following review of the medical records, the consultant pharmacist identified 68 drug related problems (DRPs) in 51 of the 77 patients. Of these, the psychiatrist concurred with 54 DRPs (79%) when evaluated. According to the consensus from 2007 [9], the most frequent category among the concurred DRPs were those classified as "lack of monitoring". The distribution of the DRPs across categories is shown in Figure 2.

Figure 2 Types of concurred drug-related problems (DRP)



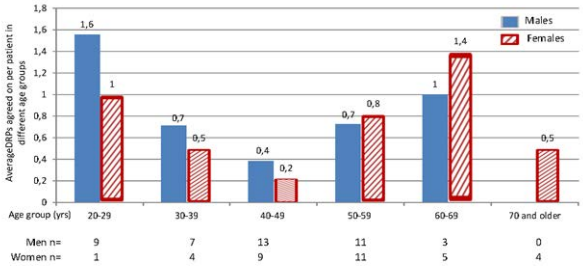
Actions suggested to solve DRPs

The 54 DRPs that were concurred by the psychiatrist included suggested actions for improvement of drug treatment as follows: Forwarded to the interdisciplinary treatment team for decision (28 DRPs); drug therapy was immediately adjusted (7 DRPs); the decision was left to the general practitioner (4 DRPs) and follow-up of one DRP was not possible due to inaccessible laboratory services. For 14 DRPs the patient refused action despite recommendation from the psychiatrist and thus no action was taken.

DRPs related to patients' ages

DRPs concurred by the psychiatrist were distributed among all age groups. Psychiatrists agreed on most DRPs among the youngest males and oldest females. A smaller proportion of DRPs were agreed on in the middle age group (40-49 years old). Distribution of DRPs concurred by the psychiatrist in the different age groups is shown in Figure 3.

Figure 3 Concurred drug-related problems (DRP) according to age group



Discussion

To suggest improvements of individual drug therapy for patients with severe mental disorder, following medical review based on medical records and supplemental information, has numerous pitfalls. Antipsychotic drugs are a heterogeneous group of substances and administration of these drugs is a topic of multilevel research and debate. In this study, after describing the drug therapy and follow-up in patients subject to outpatient compulsory mental healthcare, the aim was to investigate the potential for improvement of drug therapy. This was done from a pragmatic point of view, based on the generally accepted sources referred to in the Material and Methods section.

The patients included in this study, who were all using 2 or more drugs on a regular basis, used on average 3.6 drugs overall. This is less than expected, according to the experience of the consultant pharmacist from drug use in inpatient treatment. Also the doses are low according to former studies from psychiatric special health services in Norway [13]. Factors identified in this study indicate that

in spite of compulsory care and thus the severe mental disorder of the patients, the drug therapy included fewer drugs and lower doses (DDD given to each patient) than what was regarded as optimal by the psychiatrists. The general explanation for this was that prescription was to a large degree adjusted in accordance with the request of the patient.

When the low number of drugs used in this population was revealed, it raised the question as to whether the patients who did not use prescribed drugs, or used one prescribed drug only at the inclusion date, should have been included in the study also. The number of drugs used by the included patients is low, so there is a potential that the patients using one drug or none at all have an uncovered need of additional drug treatment.

This study indicates that patients using the drugs voluntarily use higher doses of antipsychotic medication than patients subject to enforced medication. Therefore, even by rigorous initiatives as enforced medication, this group of patients may be subject to suboptimal drug treatment. Also, the patients using LAIs receive higher doses than the patients using oral formulations. This is in contrast to the prevailing view that by prescribing LAIs, lower doses of the antipsychotic agents are used due to less variation in serum concentration and consequently the long-term side effects would be less frequent. Level of function or severity of disorder was not recorded, so there may be explanations for the differences in those factors.

Of the DRPs identified by the consultant pharmacist by processing medication reviews, the psychiatrist agreed in 79% of the cases. This suggests that the consultant pharmacist can contribute to improve drug therapy in this group of patients. The frequency of consensus on DRPs was highest in the lower and upper age groups. This indicates that the contribution of a pharmacist could be valuable for these age groups.

Even though the psychiatrist concurred in a high proportion of the DRPs, the most common action to improve medical treatment was assessment by the interdisciplinary treatment team, that is, not an immediate action. This shows the complexity of the treatment schemes established for these patients and thus the actions required to make significant adjustments in the treatment. Moreover, some suggested actions based on DRPs that were supported by the psychiatrist were not implemented in concurrence with the refusal by the patient (14 cases in the present study). This reflects that, although a suggested action is well founded from a pharmacotherapeutic point of view, it will not necessarily be implemented against the explicit wish of the patient.

Conclusion

The patients in this study were prescribed fewer drugs overall than expected. With respect to antipsychotic medication, most of the patients were treated with long acting injectable drugs and the dosing in these patients was higher than for those receiving *per oral* antipsychotics. In general, this study indicates that the intensity of drug therapy in patients subject to outpatient compulsory mental healthcare is low. In spite of compulsory treatment and in some cases enforced medication, the attitude of the patient in each case has a significant impact on the final decision of the psychiatrist regarding drug therapy and dosing.

Acknowledgements and Conflicts of Interest

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