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Characteristics of direct coercion use in paediatric psychiatry ward

Charakterystyka zastosowania środków przymusu bezpośredniego w oddziale psychiatrii dziecięcej

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Abstract

Introduction and objective: Direct coercion is used in psychiatry as a last resort method to control a patient who behaves in an auto- or allo-aggressive manner, in a situation when other measures have failed. The aim of the study was to analyse coercive measures applied in child psychiatry wards with regard to patient-related and institution-related factors. **Materials and methods:** A retrospective analysis of 153 direct coercive measures applied from 26 March 2023 to 18 March 2024 in an inpatient child psychiatry department with a total of 20 beds. **Results:** In the one-year period covered by this study, 368 patients were admitted to the ward; 31 of them (8.42%) were under direct coercion in a total of 153 situations. The most commonly applied form of coercion was isolation – 93 times (42.66%). Doctors applied coercive measures 104 times (67.97%), while nurses – 49 times (32.03%). Overall, the median duration of direct coercion was 65 minutes. The median duration of direct coercion at day shifts was significantly longer in comparison to night shifts. Direct coercion was used in almost 70% of cases in children diagnosed with autism spectrum disorder. **Conclusions:** The therapeutic dynamics in paediatric psychiatry is unique to its field. Despite the same legal regulations, the characteristics of coercive measures in child psychiatry differ from the data reported for adult patients.

Keywords: direct coercion, psychiatry, paediatric ward, restraint, seclusion

Streszczenie

Wprowadzenie i cel: Przymus bezpośredni w psychiatrii jest stosowany jako ostateczne, ściśle sprecyzowane w Ustawie o ochronie zdrowia psychicznego narzędzie, w celu opanowania pacjentów, którzy przez swoje zachowanie stanowią zagrożenie dla siebie lub innych. Celem pracy była analiza środków przymusu bezpośredniego stosowanych na oddziale psychiatrii dziecięcej w odniesieniu do czynników związanych z pacjentem i placówką. **Materiał i metody:** Retrospektywna analiza 153 środków przymusu bezpośredniego zastosowanych w okresie od 26 marca 2023 do 18 marca 2024 roku na stacjonarnym oddziale psychiatrii dziecięcej, przystosowanym do opieki nad 20 pacjentami. **Wyniki:** W ciągu 12 miesięcy objętych badaniem na oddział przyjęto 368 pacjentów; 31 z nich (8,42%) w 153 sytuacjach było poddawanych przymusowi bezpośredniemu. Najczęściej stosowaną formą przymusu była izolacja – skorzystano z niej 93 razy (42,66%). Lekarze zastosowali środki przymusu 104 razy (67,97%), a personel pielęgniarski – 49 (32,03%). Mediana czasu trwania wszystkich zleconych środków przymusu bezpośredniego wyniosła 65 minut. Ponadto mediana czasu trwania przymusów bezpośrednich w trakcie etatowych godzin pracy była istotnie dłuższa w porównaniu z godzinami dyżurowymi. Niemal 70% zleconych przymusów bezpośrednich dotyczyło dzieci z rozpoznaniem całościowych zaburzeń rozwoju. **Wnioski:** Dynamika relacji terapeutycznej między pacjentem a lekarzem w psychiatrii dziecięcej jest jedyna w swoim rodzaju. Pomimo tych samych regulacji prawnych charakterystyka zastosowania środków przymusu bezpośredniego w psychiatrii dziecięcej różni się od danych uzyskanych w badaniach na dorosłych pacjentach psychiatrycznych.

Słowa kluczowe: przymus bezpośredni, psychiatria, oddział pediatryczny, unieruchomienie, izolacja

INTRODUCTION

Coercive measures in medicine are described as interventions against one's will (Chieze et al., 2021). They are used in many medical fields, however, special attention has been given to them in psychiatry. Coercive measures are applied primarily in patients whose behaviour manifests various forms of aggression, including self-abuse (Radlińska et al., 2023). Articles dating back to the end of the 20th century support the idea that coercion methods, mostly seclusion and restraint, are effective measures in reducing agitation and preventing injuries. Moreover, it is almost impossible to ensure the safety of patients and medical staff in the presence of highly aggressive subjects without the use of direct coercion (DC) (Fisher, 1994). For years, coercion was believed to have a beneficial or even therapeutic effect on patients' behaviour, particularly in the paediatric population. However, in recent years, its negative impact has been emphasised: exacerbating the mental health of patients, destroying the therapeutic relationship, and even creating a vicious circle called the aggression-coercion cycle (Amos, 2004; Goren et al., 1993).

Polish law regulates the principles of applying DC to mentally ill patients in the Act on the Protection of Mental Health (1994). A patient must meet at least one criterion laid down in Article 18 of said Act for direct coercion to be applied:

1. commit an assault against another person's life or health, themselves or against general security;
2. violently destroy or damage objects in their environment;
3. seriously disrupt or prevent the functioning of a medical facility or a social welfare unit.

Four measures of coercion have been identified: holding a patient down, forced use of pharmacotherapy, restraint, and isolation. Only three specific medical groups can apply them: medical doctors, nurses, and people leading medical emergency action (Ustawa z dnia 19 sierpnia 1994 r. o ochronie zdrowia psychicznego. Dz.U. 1994 nr 111 poz. 535). The circumstances listed above have not been clearly defined and leave a lot of room for subjective interpretation by the ordering person. The type, frequency, and duration of coercion may depend on patient-related factors, e.g. type of psychiatric diagnosis, number of previous hospitalisations, admission type, as well as ward-related factors, e.g. overpopulation, personnel shortages.

In this article, we aimed to characterise the use of direct coercive measures in the Department of Child Psychiatry of the Medical University of Warsaw.

MATERIALS AND METHODS

Database

We have analysed 153 records of DC applied in the previously mentioned ward from 26 March 2023 to 18 March 2024. All records were prepared in accordance with Article 18 of

the Act on the Protection of Mental Health. Coercive measures ordered during the given period of time were inspected by the national judicial institution, without pointing out any type of misapplication. Patients' data was extracted from the hospital's integrated information system – CGM Clininet.

Department characteristics

Patients are admitted to the Department mainly on an emergency basis, up to the age of 14. The ward is adapted to care for 20 patients. It is an inpatient department where admitted patients stay 24 hours a day, excluding passes that may be granted to them for the weekend. Every working day, patients go to hospital school and are examined by the attending physician. They have individual psychotherapy sessions, group therapy, and occupational therapy. In the evenings and on the weekends (if they are not on pass), patients organise their time on their own, except for workshops and plays organised by the NGOs active in the hospital. They remain under the constant supervision of nursing staff, who have closed circuit television (CCTV) at their disposal.

Statistical analysis

While describing quantitative variables with non-normal distribution, the median and interquartile range was used. The normality of variables was verified using the Shapiro–Wilk test for normality. For categorical variables, the number of observations for each category (*n*) with the corresponding percentage (%) was given. The Mann–Whitney *U* test was used for the duration of DC at day- and night-shift comparison. *p* < 0.05 was considered statistically significant. To conduct the analysis and prepare the graphical representation of the data, the Python programming language, version 3.12, was used along with the following libraries: pandas 2.2.2, numpy 1.26.4, matplotlib 3.8.4, and scipy 1.13.0.

RESULTS

In the 12-month period covered by our research, 368 patients were treated in the Child Psychiatry Ward. Thirty-one (8.42%) of them were under DC in a total of 153 situations. Over 80% of patients under DC were admitted to the hospital on an emergency basis. The most common coercive measure was isolation – 93 (42.66%), followed by restraint – 72 (33.03%), holding a patient down – 32 (14.68%), and forced use of pharmacotherapy – 21 (9.63%). These measures were often applied in combination.

The median duration of DC was 65 minutes, range 5–1,020, while the IQR was 93. Doctors applied more coercive measures than nurses – 104 (67.97%) and 49 (32.03%), respectively. There were no differences in the number of DC interventions applied at day and night shifts (75, 49.02%; 78, 50.98%). However, the median duration of DC at day shifts was longer in comparison to night shifts, 78 and 57 minutes, respectively, *p* = 0.023.

Patients admitted to the ward (n)	368
Patients under DC, n (%):	31 (8.42)
• Patients with autism spectrum disorder diagnosis, n (%)	19 (61.29)
Patients admitted on emergency basis, n (%)	25 (80.65)
DC (n)	153
DC characteristics:	
• Patient's age, median (Q1–Q3)	12 (10–13)
• Number of staff involved, median (Q1–Q3)	3 (2–5)
• Duration, minutes, median (Q1–Q3)	65 (40–133)
• Hospitalisation day, median (Q1–Q3)	13 (5–25)
Combined types of DC (n):	218:
• Holding the patient down, n (%)	32 (14.68)
• Forced use of pharmacotherapy, n (%)	21 (9.63)
• Restraint, n (%)	72 (33.03)
• Isolation, n (%)	93 (42.66)
Applied by doctor, n (%)	104 (67.97)
Applied by nurse, n (%)	49 (32.03)
Applied at day shift, n (%)	75 (49.02)
Duration of DC at day shift, minutes, median (Q1–Q3)	78 (45–157.5)
Applied at night shift, n (%)	78 (50.98)
Duration of DC at night shift, minutes, median (Q1–Q3)	57 (30–112.5)
DC – direct coercion.	

Tab. 1. Baseline characteristics of direct coercion in child psychiatry department

F84 – autism spectrum disorder:	107	69.93%
• F84.0 – childhood autism	42	27.45%
• F84.1 – atypical autism	39	25.49%
• F84.5 – Asperger syndrome	26	16.99%
Others: F91.3; F90.0; F23.8; F43.2; F71.0; F91.1; F91.2; F32.1; F41.2; F70.1; F72.1	46	30.07%
F91.3 – oppositional defiant disorder; F90.0 – disturbance of activity and attention; F23.8 – other acute and transient psychotic disorders; F43.2 – adjustment disorders; F71.0 – moderate mental retardation with the statement of no, or minimal, impairment of behaviour; F91.1 – unsocialised conduct disorder; F91.2 – socialised conduct disorder; F32.1 – moderate depressive episode; F41.2 – mixed anxiety and depressive disorder; F70.1 – mild mental retardation with significant impairment of behaviour requiring attention or treatment; F72.1 – severe mental retardation with significant impairment of behaviour requiring attention or treatment.		

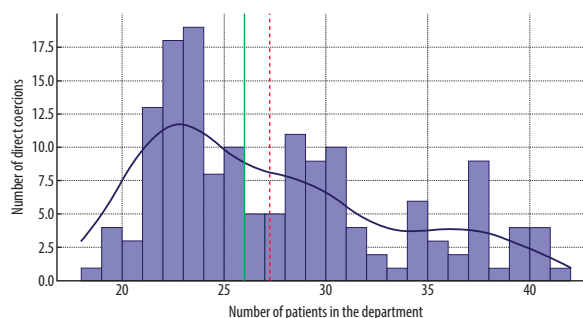
Tab. 2. Frequency of use of direct coercion in relation to patient primary diagnosis

The baseline characteristics of DC are presented in Tab. 1. DC was used in 69.93% of cases against children diagnosed with autism spectrum disorder (ASD) (F84): 27.45% – childhood autism; 25.49% – atypical autism; 16.99% – Asperger syndrome. The frequency of use of DC in relation to patient diagnoses is presented in Tab. 2.

DISCUSSION

Overpopulation

In the region where our facility is located, there are over 900,000 children under 14 years of age (Cieciora and



Green solid line – median value; red dotted line – mean value.

Fig. 1. Number of patients in the ward in relation to ordered direct coercion measures

Kotowoda, 2023), and only two hospitals providing emergency psychiatric services for this age group. Such significantly limited access to psychiatric care means that the ward is frequently overcrowded. Often, up to 40 patients stay in the ward, even though it is designed to accommodate only 20. It is much more difficult for the staff to ensure the safety of every person present in the ward in this situation. Moreover, this leads to nursing staff exhaustion and lowers the tolerance threshold for verbal or physical aggression they experience from patients (Markiewicz, 2012), which could significantly affect the rate of use of DC. However, the highest rate of DC (Fig. 1) was ordered in the clinic when the number of patients in the ward was between 21 and 23, which is close to the number of children the department was adapted to.

Child psychiatry is different from adult psychiatry

Study performed on the adult population of psychiatric patients found that the most frequent form of coercion was restraint (Pawlowski and Baranowski, 2017). Moreover, a study from Norway (Knutzen et al., 2013) reported that the distribution of coercive measures in 371 adult psychiatric patients was as follows: restraint – 47.2%; combined restraint and pharmacological intervention – 35.3%; and pharmacological intervention only – 17.5%. These results differ from our findings on the paediatric population, in which the most frequent form of coercion was isolation, while forced use of pharmacotherapy was the least common type (Tab. 1). Already in the 1960s, Dr Rodman compared the functioning of a children's psychiatric hospital to a small model of a community in which patients-children learn how to function in a society from adult personnel (Rodman, 1964). The hospital is often the only safe place for them, free from child maltreatment and peer-related abuse they experience on a daily basis (Lampe et al., 2022; Stoltenborgh et al., 2015). They attend school regularly and often spend time with peers who have similar problems, which makes it easier for them to establish relationships, sleep according to the principles of sleep hygiene, and ask for a supportive conversation with an adult

caregiver (nursing team, doctors, psychologists) at any time. Children often treat the ward as a safe place, something that they do not experience in their home system. Adolescent minds are characterised by incredible plasticity, which allows them to quickly learn and adapt to the requirements in a new environment, such as a hospital (Lourenco and Casey, 2013). In addition, children often establish a special bond with their attending physicians and psychologists (Wampold and Flückiger, 2023), treating them as their “hospital parents” who set requirements and boundaries for them.

Thanks to these factors, seclusion, which we consider to be the least invasive form of DC, is often sufficient to control children’s aggression and allow them to calm down.

Aggression in autism spectrum disorder

Aggression in children with ASD is a significant clinical concern that impacts their functioning and the quality of life. Aggressive behaviours are markedly prevalent among children with ASD, affecting about 53% to 68% of them, with the highest manifestation at a young age (Kanne and Mazurek, 2011; Mazurek et al., 2013). Their aggression is significantly associated with several clinical features, including impaired social and communication skills, sensory and sleep problems, and gastrointestinal disturbances (Mazurek et al., 2013). Out of 31 patients who experienced DC, 19 (61.29%) had been diagnosed with ASD. Moreover, out of 153 coercive measures, in 103 (69.93%) cases the patient’s primary diagnosis was ASD. This information is in great contrast to the data from the adult population, where people with the diagnoses of F20–F29 were most often subjected to DC (54%) (Pawlowski and Baranowski, 2017). The reason behind the high prevalence of ASD patients under DC can be attributed to the significant change in their daily routine introduced by hospitalisation, as well as difficulties in communication in a completely new environment, which leads to mental and physical tension combined with emotional overload, thus resulting in an increased risk of aggression (Bronsard et al., 2010).

CONCLUSIONS

To our knowledge, this is the first study that reports on the use of DC in a child psychiatry ward. In our work, we pay particular attention to the difficulties in paediatric psychiatry, highlighting important differences in the dynamics of the therapeutic relationship, methods of controlling aggressive patients and the diagnoses in comparison to adult psychiatry problems. Further research is necessary to establish the potential risks and mitigating factors.

Conflict of interest

The authors do not report any financial or personal connections with other persons or organisations which might negatively affect the content of this publication and/or claim authorship rights to this publication.

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Author contributions

Original concept of study: MKPV, PNT. Collection, recording and/or compilation of data: MKPV. Analysis and interpretation of data: MKPV, PNT. Writing of manuscript: MKPV, PNT. Critical review of manuscript: MKPV, PNT. Final approval of manuscript: MKPV, PNT.

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