

Use of restraint in a psychiatric hospital

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Abstract

Managing patients who are aggressive and violent is a challenging task for staff of psychiatric hospitals. Physical or chemical restraint is resorted to when verbal counseling does not help in de-escalation. It is often believed that restraint is very often overused in psychiatric hospitals. In the Indian clinical settings there is no data available to know the frequency, duration and method of restraint practices.

Method: The study was done prospectively over a two month period in a tertiary psychiatric hospital. There were 394 admissions during the study period and pattern of restraint was studied.

Aims and Objectives: To study the restraint practices in a psychiatric hospital, to study the frequency of restraint, to study the diagnostic categories of patients requiring the restraint, to study the duration of restraint, and to study the method of restraint.

Conclusions: Restraint is required in some of the patients and it cannot be avoided totally. Chemical restraint was the most common type of restraint used to control agitation and violence. Only 1/3 rd of patients admitted during the study period of two months required restraint. Only 13% of the restraint events were mechanical restraint. The duration of mechanical restraint was less than 2hrs in 75% of the time and it did not exceed 4.5hrs at any time.

Introduction

Managing patients who are aggressive and violent is a challenging task for the clinician. It is often seen both in psychiatric intensive care units as also Emergency psychiatry departments, the use of restraints becomes necessary. Whether it is seclusion or mechanical restraints or chemical restraints largely depends on the policy of the institution and the local mental Health laws. Though viewed as violation of basic human rights of mentally ill persons, restraint and seclusion has been seen as necessary evils in psychiatric treatment Settings. The Mental health act 1987 gives a broad perspective on use of restraints and the current mental health care bill, 2013 has drafted some guidelines on this issue. Although interventions such as seclusion and restraints are not supported by evidence based studies and even fatal side effects have repeatedly been described, authors of recent publications from several countries agree that it would not be possible to completely abolish such measures at the present time.⁽¹⁾

A survey of psychiatrists in India on the question of using restraints revealed that 80% of them use physical restraints sometime or other and 70 % of them takes informed consent from the relatives of the patient.⁽²⁾ It is also a known fact that restraint and seclusion remain wide spread in Psychiatric practice in India.⁽³⁾

Both physical interventions and drugs for the purpose of restraint have short term and long term detrimental implications for the patient and the doctor-patient relationship. However there are clinical situations for which verbal and behavioral techniques are not effective and restraint becomes necessary to prevent harm to patient and /or staff.⁽⁴⁾

Purpose

In spite of the knowledge that restraints are in use there is no data available on the exact frequency of use, the clinical characteristics of patients in whom it is used as also the type of restraints used in the Indian settings. Often Mental Health professionals are put on the defensive for using restraints while the ground realities are different. Understanding the clinical situation, the method of restraint and the duration for which restraints are applied for a patient will help to change the public perception about violation of human rights in psychiatric Settings.

This study was done in a tertiary care private psychiatric hospital from 15/09/ 2015 to 15/11/ 2015. The institute ethics committee approval was obtained to conduct the study. All the patients admitted during the above period of two months to the psychiatric hospital were prospectively studied. The admissions in to the hospital were as per the Mental Health Act 1987. The decision to use the restraints was taken by the treating team and not by the study team.

Aim and Objectives

1. To study the restraint practices in a psychiatric hospital.
2. To study the frequency of restraint
3. To study the duration of restraint
4. To study the diagnostic categories of patients requiring the restraint
5. To study the method of restraint

Materials and Methods

All patients admitted in tertiary psychiatric hospital during a period of two months (15th September 2015 to 15th November 2015) were included in this study. The details of the subject's age, gender, psychiatric

diagnosis as per ICD 10 were taken. All the 394 subjects admitted during the study period were included in the study. The restraint data like frequency of restraint use, type of restraint used and duration of restraint use was collected prospectively. Restraint events were further classified into mechanical and chemical. Four point light restraint was the mechanical restraint practiced in the setting. The parental psychotropic medications were used as chemical restraint to manage the patient's violent behavior.

Results

Table 1: Admission data

Total Number of patients admitted	394	
Gender	Male	Female
	262	132

Table 2: Chemical and mechanical restraint frequency and general characteristics

	Chemical restraint	Mechanical restraint
Total number of patients restrained	97	28
% of patients restrained	24.61%	7.10%
Number of events	244	37
Mean age	37.54(SD ± 11.63)	39.67(SD±9.99)
Male	60.8%	53.6%
Female	39.2%	46.4%

Table 3: Diagnostic categories

Diagnostic categories	Chemical restraints	Mechanical restraints
Mental and behavioral disorders due to psychoactive substance use	14.43%	43%
Schizophrenia, schizoaffective and delusional disorder	51.54%	33%
Mood disorders	30.92%	24%
Others	3.09%	nil

Table 4: Age wise distribution of mechanical restraint

Age group	% distribution of mechanical restraint
<20	3.57%
21-30	28.57%
31-40	25%
41-50	28.57%
51-60	7.14%
>60	7.14%

Table 5: Duration of mechanical restraint use

Duration (in minutes)	Frequency
<30min	24.32%
31-60	10.81%
61-120	43.24%
121-180	8.10%
>180	13.51%

Table 6: Pattern of chemical restraint use

Chemical restraint used	%
Lorazepam	56%
Haloperidol and Promethazine	25%
Olanzapine	19%

Table 7: Chemical restraint in various Diagnostic categories

Diagnostic categories	Lorazepam	Haloperidol and promethazine	Olanzapine
Substance use disorders	42%	6%	1%
Schizophrenia and related disorders	31%	66%	47%
Mood disorders	21%	26%	49%
Others	6%	2%	3%

Results

There were total of 394 admissions made during the study period. 125 patients required restraint. 97 of them required only chemical restraint while 28 of them required mechanical restraint. The mean age of patients who chemically restrained was 37.54(SD ± 11.63) and the mean age of those who were mechanically restrained was 39.67(SD±9.99).(Table 1 and 2)

Among those who received chemical restraint (n=97) 60% of them were males and 40% were females. Among those who were mechanically restrained 53% were males and 47% were females. More number of male patients required chemical restraint than female patients. Similar trend was seen with mechanical restraints. This was not statistically significant.(p=0.6 and p=0.56 at p<0.01)(Table 2)

The diagnostic categories which required chemical restraint were Schizophrenia and related disorders in 52% of the cases. 31% the cases were mood disorders while around 14% were belonging to substance use disorders. Organic mood disorders, dementia

constituted just around 3%. Among the mechanically restrained patients 43% of them were having substance use disorders, 33% of them had schizophrenia and related disorders and 24% of them had mood disorders.(Table 3)

More than 75% of those who received mechanical restraint were between the age 21-50yrs. Those less than 20yrs and those >60 yrs were mechanically restrained less than 4% and 8% respectively. (Table 4)

43% of the time the duration of mechanical restraint was limited to 60 to 120minutes. Around 24% of the time the duration was less than 30minutes. Only in 13% of the time it exceeded 180min.(Table 5)

Lorazepam was the most common chemical restraint used constituting 56% of the chemical restraint events. Haloperidol and phenergan constituted 25% and olanzapine in 19% of the chemical restraint events.(Table 6)

Lorazepam was most commonly used in substance use disorders, Patients with schizophrenia received the maximum number of haloperidol and phenergan injections, whereas olanzapine was most commonly used in mood disorders.(Table 7)

Discussion

The hospital where the study is done is a tertiary psychiatric centre which caters to mentally ill patients. 31.72% of patients admitted required some kind of restraint. In more than 2/3rds of the cases chemical restraint was administered to manage the violent or aggressive behaviours. Only 7.10% of admissions in intensive care unit required mechanical restraint. In review of restraint practices in various countries it was found that the Percentages of admissions exposed to restraint varied from 1.2% to 35.6%.⁽¹⁾ A study of restraint practices in a general hospital psychiatric unit reported that 18% of the admissions required restraint.⁽⁶⁾ It is understandable that more disturbed patients are admitted in psychiatric hospitals compared to general hospitals.

Out of 128 restrained patients 60.8% were males and 39.2% were females. Among the mechanically restrained group 53.6% were males and 46.4% were females. The restraint events were not significantly higher in males than females ($p = 0.60$ and 0.56 respectively in each group at $p < 0.01$).

About half of the patients who required any type of restraints had schizophrenia (51.54%) and related disorders. This was followed by mood disorders (30.92%) especially patients who were going through manic episodes of bipolar disorder. In our study population, the mental and behavioral disorders due to psychoactive substance use was the commonest diagnostic category which lead to mechanical restraint use. Similar scenario was reflected in the summary of restraint use in mental health in patients in Ontario with regard to all group intervention whereas schizophrenia

and related disorders were the leading cause of mechanical restraint.^(5,6)

Those aged between 21-50yrs were more likely to be restrained than other age groups. This predilection for younger individuals to experience restraint events have been observed in earlier studies on restraint use.⁽⁵⁾

The mean duration of the mechanical restraint was found to be 113.9 minutes. More than 75% of the time the duration of mechanical restraint was less than 2 hrs. Similar trends of average duration of mechanical restraint has been observed in various countries which ranged from 9min to 4.5hrs.⁽¹⁾

There are limited data regarding the pattern and frequency of chemical restraint use. Considering the total number of admissions the percentage receiving chemical restraint was seen in just above 30%. Lower rates of chemical restraint 15.4% has been reported in Ontario mental health inpatient restraint summary.⁽⁵⁾

Conclusion

1. Restraint is required in some of the patients and it cannot be avoided totally
2. Chemical restraint was the most common type of restraint used to control agitation and violence
3. Only 1/3 rd of patients admitted during the study period of two months required restraint.
4. Only 13% of the restraint events was mechanical restraint.
5. The duration of mechanical restraint was less than 2hrs in 75% of the time and it did not exceed 4.5hrs at any time.

Limitations

The clinical characteristics of those patients who did not require restraints during the study period were not considered. However the main aim of the study was to understand the nature and duration of restraint in a psychiatric hospital.

There is no comparable data from the general hospital in the Indian clinical setting. This would have been helpful to know the practice of restraint in a general hospital psychiatric unit.

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