Catatonia in Adolescents: About a Series of 12 inpatients

La catatonie chez l'adolescent: A propos de 12 cas

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RÉSUMÉ

Prérequis : La catatonie est un syndrome psychiatrique sévère dont l'étiologie peut être médicale ou psychiatrique. Elle touche rarement l'enfant et l'adolescent et pose des difficultés diagnostiques dans cette tranche d'âge.

But : Ce travail a eu pour objectif de déterminer l'étiologie et le traitement mis en place chez les jeunes de moins de 16 ans hospitalisés en pédopsychiatrie pour un syndrome catatonique.

Méthode: Il s'agit d'une étude rétrospective qui a porté sur tous les cas de catatonies hospitalisés au service de pédopsychiatrie de l'hôpital Razi entre janvier 2006 et décembre 2013. Le diagnostic de catatonie a été établi par l'échelle de Bush-Francis Catatonia Rating Scale. Tous les patients ont bénéficié d'un examen médical approfondi, d'examens biologiques ainsi que des examens complémentaires en fonction de l'orientation clinique. Le diagnostic psychiatrique a été établi selon les critères du DSM IV.

Résultats: Notre série comporte 12 cas âgés de 12 à 16 ans avec une prédominance féminine (sexe ratio de 0,5). Une étiologie médicale a été retrouvée dans trois cas. Les diagnostics psychiatriques se sont répartis comme suit: épisode maniaque (N=3), épisode dépressif majeur (N=2), schizophrénie à début précoce (N=2), un cas trouble envahissant du développement et un cas de trouble de conversion.

Conclusion: La catatonie est un syndrome sévère et rare chez l'enfant et l'adolescent. Le diagnostic est souvent difficile à établir et nécessite une exploration approfondie. Le traitement est essentiellement symptomatique et orienté par la pathologie causale.

Mots-clés
Catatonie, Adolescent, Trouble de l'humeur.

SUMMARY

Background: Catatonia is one of the most severe psychiatric syndromes that might be caused by many medical as well as psychiatric conditions. Catatonia in adolescents is rare and largely understudied.

Aims: This papers aims to examine cases of catatonia among adolescent psychiatric inpatients, and to scrutinize both the etiologies and the management options.

Methods: A retrospective descriptive study involving all cases of catatonia among adolescents admitted to the Department of Child and Adolescent Psychiatry in Razi Hospital – Manouba - Tunisia between January 2006 and December 2013. Catatonia was confirmed by Bush-Francis Catatonia Rating Scale. Medical records were examined for gender, age, clinical presentation, medical or psychiatric diagnosis as well as management. Psychiatric diagnoses were made according to the DSM-IV criteria.

Results: Our series consisted of 12 cases, aged between 12 and 16 with a sex ratio male/female of 0.5. Catatonia was due to a medical condition in three cases and to a psychiatric disorder in the other nine cases. Psychiatric diagnoses included: manic episode (n=3), major depressive episode (n=2), schizophrenia (n=2), pervasive developmental disorder (n=1) and conversion disorder (n=1).

Conclusion: Catatonia is rare yet life-threatening. Careful and thorough examination is needed to determine the etiological disorder, on which depend both treatment and prognosis.

Key-words
Catatonia, Adolescent, Mood disorder.

Catatonia was first described in adults by Kahlbaum in 1874 as a syndrome characterized by mutism, negativism, stereotypies, catalepsy and verbigeration [1, 2]. It was later recognized as a subtype of dementia praecox by Kraepelin [1], then considered almost a century later as a clinical presentation of severe mood episodes [3]. Several neurologic, medical and iatrogenic conditions have also been associated with catatonia [1].

Catatonia was mostly studied among adults. Its prevalence ranges between 7.6% and 38% in adult psychiatric inpatients [4]. Catatonia can occur in children and adolescents but seems to be rare. Its prevalence among children and adolescent psychiatric inpatients ranges from 0.6% to 17.7% depending on the exact inclusion criteria [5]. Catatonia likely represents the most severe psychiatric syndrome since it increases the risk of premature death 60-fold [6]. However, despite its severity, catatonia in adolescents remains largely understudied [5].

The purpose of our work was to examine cases of catatonia among adolescent psychiatric inpatients, and to scrutinize both the etiologies and the management options offered to those patients.

METHODS

We carried out a retrospective descriptive study reviewing all cases of catatonia among adolescents admitted to the Department of Child and Adolescent Psychiatryin Razi Hospital – Manouba - Tunisia between January 2006 and December 2013. The department is the only public psychiatric inpatient clinic for children and adolescents, serving a population of more than five million according to the National Institute of Statistics (http://www.ins.nat.tn), mainly from the Northern part of the country including the capital.

The diagnosis of catatonia was made if the patient had at least two motor symptoms or one motor symptom and one non-motor symptom indicative of severe behavioral or emotional impairment. We used the catatonia symptom list of the modified version of the Bush and Francis Scale (BFCRS)[7]. We used the first 14 items from the BFCRS to determine the scores according to the presence (item score:1) or the absence (item score:0) of each symptom.

Medical records were examined for gender, age, clinical presentation, medical or psychiatric diagnosis as well as management. Psychiatric diagnoses were made according to the DSM-IV criteria [8].

RESULTS

Our series consisted of 12 cases: eight females and four males (sex ratio=0.5), aged between 12 and 16. Thorough physical and specialized neurological examinations were performed in all patients. Cell Blood Count (CBC), renal function, liver enzymes and thyroid function tests were carried out. Depending on the clinical presentation, a brain imaging and/or an electroencephalography were also performed.

Catatonia was explained by a medical condition in three cases: the diagnosis of temporal epilepsy was made in two cases, and porphyria was strongly suspected clinically in one case. The patient dropped out, however, before biological confirmation of porphyria could be obtained.

Catatonia was attributed to a psychiatric conditionin the other nine cases. Diagnoses included: manic episode (n=3), major depressive episode (n=2), schizophrenia (n=2), pervasive developmental disorder (n=1) as well as conversion disorder (n=1). We did not notice any worsening of symptoms in patients started on antipsychotics. Table 1 summarizes the clinical features of the reported cases.

DISCUSSION

The minimum age in our series was 12 years. Even though catatonia might occur in children, its incidence is very low in this age group. In the largest cohort study published about catatonia in children and adolescents (58 cases in 16 years), all but three patients were post pubescent [4].

A female predominance was observed in our population (sex ratio=0.5). This result is not consistent with data from other similar studies. Indeed, while most studies about catatonia in adults show a female predominance, studies in children and adolescents report a male predominance : in Cohen's study, for instance, sex ratio was 2.33 [9]. The lower sex ratio in our study might be attributed to the low number of patients with early-onset schizophrenia, a disorder more commonly seen in males [9].

Table 1: Clinical features of catatonia cases

Case N°	Gender	Age (in years)	BFCRS	Diagnosis	Treatment
1	Female	14	5	Pervasive developmental disorder	Haloperidol Chlorpromazine
2	Female	13	4	Severe manic episode with mood-congruent psychotic features	Valproate Chlorpromazine
3	Male	15	6	Temporal epilepsy	Lorazepam
4	Male	15	9	Severe manic episode with mood-congruent psychotic features	Haloperidol Clonazepam
5	Female	15	7	Porphyria*	Transferred to the Department of Pediatrics
6	Female	12	10	Severe manic episode with mood-congruent psychotic features	Lorazepam Valproate Risperidone
7	Female	12	5	Disorganized Schizophrenia	Amisulpride
8	Male	15	6	Severe major depressive episode with mood-congruent psychotic features	Lorazepam Haloperidol
9	Female	15	4	Temporal epilepsy	Transferred to the Department of Neurology
10	Male	15	5	Disorganized schizophrenia	Amisulpride
11	Female	13	5	Conversion disorder	Meprobamate
12	Female	13	7	Severe major depressive episode with melancholic features	Fluoxetine Lorazepam

* Diagnosis suspected without biological confirmation

In our series, mood disorders represented the most common etiology (5 cases). Such a high proportion of patients with affective disorders is usually reported in studies about catatonia among adults [10], whereas schizophrenia seems to be the most common disorder among children and adolescents with catatonia [4]. This discrepancy might be due to the small size of our sample. Moreover, the difficulty disentangling mood disorders from schizophrenia in adolescents, still likely leads to high rates of misdiagnosis [11]. Indeed, even though juvenile bipolar disorder is now better recognized, atypical presentations are common: cardinal mood symptoms are absent in more 30% of adolescents with bipolar disorder, whereas psychotic symptoms are observed in 42% of the cases, according to Kowatch's meta-analysis [12].

In our series, catatonia was attributed to pervasive developmental disorder in one patient. Indeed, catatonia has already been reported among patients with a history of pervasive developmental disorder or intellectual disability [13].

A medical condition was diagnosed in three cases, two of which present temporal epilepsy. Catatonia is one of the psychiatric syndromes most frequently associated with medical etiologies, accounting for up to 20% of cases [4, 14]. Among the medical conditions associated with catatonia, Consoli et al. reported auto-immune encephalitis, seizures, ciclosporin encephalitis, post hypoglycemic coma encephalitis and genetic or metabolic conditions [4]. Thus, it is a real challenge to determine etiological diagnosis for youth patients with catatonia and without pathological antecedents, and it is important to explore the organic causes, some of which may involve life-threatening. The main causes of organic catatonia are : infectious disorder, neurological conditions, toxic states and genetic conditions. Authors proposed guidelines for clinical and paraclinical investigations to determine the medical conditions associated with catatonia [14]. In our series, conversion disorder was diagnosed in one patient. This disorder is seldom reported in similar studies in Europe or North America. However, conversion disorder appears to be a common means of expression of "psychological conflicts" in Arab patients [15]. According to recent guidelines, treatment of catatonia is mainly based on benzodiazepines, especially lorazepam, and electroconvulsive therapy [16]. Due to electroconvulsive therapy being unavailable in our department, etiological treatment was used whenever the etiological disorder was confirmed or strongly suspected. No exacerbation was noted in patients we started on antipsychotics, even though antipsychotics have been associated with a possible worsening of catatonic symptoms [17]. This worsening has been more commonly associated with first-generation agents; the use of atypical antipsychotics might be useful in some patients with non-malignant catatonia, although there is not enough evidence yet to warrant their routine prescription [17].

CONCLUSION

Catatonia has not been fully investigated in children and adolescents, but the few recent studies indicate that catatonia in this age group might occur in patients with schizophrenia, mood disorders, pervasive developmental disorders as well as in patients with various neurologic and medical conditions. This disorder involves a multidisciplinary approach.

The prevalence of catatonia in adolescents is low, but the severity of this syndrome as well as the diagnostic and therapeutic difficulties it induces, warrant the need of more studies about the subject.

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