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Epidemiological and Clinical Aspects of Acute Delirious Puff at Emile Badiane Psychiatric Center in Senegal (Cpeb): Study of 340 Cases

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ABSTRACT

Background and Objectives: *The acute acute delirious puff named BDA in french, from French psychiatric nosology, is similar to schizophreniform disorder (CIM) and brief psychotic disorder (DSM). In Africa, its prevalence is between 11.34% and 32% [3-5]. The aim of our study was to determine the epidemiological and clinical and characteristics of BDA in hospitalization at the Psychiatric Center of Ziguinchor.*

Methodology: *It was a retrospective, descriptive study carried out at the Emile Badiane Psychiatric Center (CPEB) in Ziguinchor, which focused on the records of patients followed in this center from January 1, 2014 to December 31, 2019. All patients hospitalized for BDA during the study period were included.*

Results: *In total out of 1370 hospitalizations recorded, 400 were for BDA, i.e. a hospital prevalence of 29.1%. Men represented 67.9% of the workforce. The mean age was 32.09 ± 11.62 years. The age group [20 to 39] represented 68% of the workforce. Family psychiatric history was found in 33.8% of cases. Hospitalization in the first month following the onset of the disease occurred in 54.7% of cases. Cannabis consumption was found in 102 cases, polymorphic delirium in 55.6%, persecution in 92,6% and the hallucinatory mechanism in 51.7%.*

Behavioral disorder was noted in 86.2% of our patients, including 28.3% physical and/or verbal aggression. The average duration of hospitalization was 19.75 ± 8.9 days with extremes of 2 and 62 days. Normal output was 89.7%. Persistence of delirium at discharge was noted in 30 patients (8.8%). Neuroleptics were used in 33.2% of cases.

Conclusion: *Our study confirms the prevalence of BDA in Africa which remains high. It occurs in a young adult, male, single, educated, unemployed and with a family psychiatric history. It is characterized by a predominantly "persecutive" polymorphic delirium with a hallucinatory mechanism responding favorably to neuroleptics after a 19-day hospital stay.*

It also shows the need to encourage the proliferation of psychiatric care centers such as that of Ziguinchor, which draws a good part of the patients from the south of the country.

Keywords
BDA, Epidemiological and clinical and characteristics, Senegal, Ziguinchor.

Introduction

Acute delusional puffs are defined as the sudden onset of a polymorphic transient delirium in its themes and mechanisms, experienced as an experience imposed on the subject associated with mood, behavior and consciousness disorders. It belongs to French nosography and is similar to the schizophreniform disorder of the ICD and the brief psychotic disorder of the DSM.

Acute delusional outburst (ADB) is a common psychopathological disorder in developing countries [1]. According to Collomb [2], BDA has particular characteristics in African psychiatry, both in its form and in its frequency, and could be considered as the psychopathological form of this African psychiatry [3]. In Africa, this prevalence is between 11.34% and 32% [3-5].

In Senegal, studies were carried out at the psychiatric clinic of the Center Hospitalier National Universitaire (CHNU) in Fann main psychiatric structure in the capital.

We are witnessing a few years of a decentralization of the management of psychiatric disorders, particularly in the regions. Areas in which the populations are more anchored in traditional beliefs and practices, with the corollary of different modes of presentation. It is for this reason that we have a work on delirious puffs at the Emile Badiane psychiatric center in Ziguinchor, a region located in the south of Senegal.

Materials and Methods

This was a retrospective, descriptive study carried out at the Emile Badiane Psychiatric Center (CPEB) in Ziguinchor, a locality in southern Senegal located 450 km from Dakar in the Casamance region on the border with Guinea.

In the early 1970s, French and Senegalese psychiatrists Henri Collomb and Moussa Diop opened two "psychiatric villages" in Senegal where patients could come and settle with their whole family. Breaking with colonial psychiatry, the two men paid particular attention to the socio-cultural environment of patients. The current Emile-Badiane center was one of these "villages". At the end of the 1990s, the village fell into disuse. It was not until 2006 that the complex became a psychiatric care center. Currently, there are also psychiatric consultations and hospitalizations, general medicine consultations, laboratory analyzes and electroencephalogram sessions. So many services that attract patients from the sub-region, from The Gambia to the two neighboring Guineas. Different ethnic groups live in this southern region of Senegal: the Diolas, the Socés, the Hal Pulaar, the Bambaras, and the Wolofs among others.

Our study focused on the records of patients followed in this center from January 1, 2014 to December 31, 2019. All patients hospitalized for BDA during the study period were included. The INSERM classification made it possible to retain the diagnosis. A pre-established collection sheet including epidemiological, clinical and therapeutic data was used. Data collection was done in the entry register, hospitalization records and individual patient follow-up sheets. The data collected was entered into an Excel spreadsheet and analyzed using Sphinx Plus² software.

Results

We collected 400 patient records. Three hundred and forty were mined. The other 60 could not be due to missing data.

Hospital Prevalence

Between January 1, 2014 and December 31, 2019, the total number of hospitalizations at the CPEB amounted to 1,370, including 400 hospitalizations for BDA, which corresponded to a hospital prevalence of 29.1%.

Sociodemographic Data

Our workforce was composed of 231 men (67.9%) and 109 women (32.1%), i.e. a sex ratio of 2.12. The mean age of the patients was 32.09 years with a standard deviation of 11.62 years. The extremes were 14 and 90 years. The most represented age groups were those of 20 to 29 and 30 to 39 (Table 1).

Table 1: Distribution of BDA cases by age group.

Age groups	Percentage
[20] ans	9,7
[20 – 29] ans	41,2
[30-39]	26,8
[40-49]	12,4
[50-59]	6,8
[60]	3,2

Single people represented 62% of the workforce (n=211). Among them, those with children numbered 31 (9.1%) and those without children numbered 180 (52.9%). About 34.4% of these single people were in the age group [20 to 29 years old].

The level of education of the patients was noted in 294 cases. Patients were educated in 256 cases, or 87.8% of the total. The most represented level of schooling was secondary with 110 cases or 37.4%. Employees made up 33.5% of the workforce (n=112) and 25.6% of patients (n=87) were unemployed.

Geographical Origin and Nationality

The Ziguinchor region was the most represented geographical origin with 58.2% of cases (n=198), followed by Sédhiou with 15.9% (n=54). Nationalities were represented as follows: 83.8% (n=285) Senegalese, 7.9% (n=27) Bissau- Guineans, 4.4% (n=15) Guineans, 3.5% (n=12) of Gambians and a Frenchman, i.e. 0.3% of cases.

Consultation Period

In 54.7% of patients (n=186), hospitalization took place during the first month following the onset of the disease (Table 2).

Table 2: Distribution of patients according to consultation time.

Delay (day)	Percentage %
[1]	3,8
[1-6]	24,7
[7-30]	26,2
[31-210]	38,2
[120]	7,1

Clinical Data

Forty eight percent of the patients had a psychiatric history. Among them 56.4% were followed by the traditional healer. Regarding their lifestyle, cannabis use was found in 114 patients (26.3%). Consumption of alcohol and tobacco was found respectively in 14.1% and 13.6% of cases (n=61; n=59). The most frequent association was cannabis/alcohol/tobacco found in 24 patients followed by the cannabis/alcohol association found in 20 patients.

Table 3: Frequency of land identified during the BDAs

Land	Effectif	Frequency
None	300	88.2%
Hypertension	12	3,5%
Diabetis	1	0,3%
Heart disease	1	0,3%
Sickle cell disease	3	0,9%
Hyperthyroidism	2	0,6%
Migraine	1	0,3%
Epilepsy	6	1,7%
Infection	4	1,2%
Asthma	3	0,9%
Hearing and visual disorders	8	2,3%
Chronic colopathy	1	0,3%
Pregnancy	1	0,3%
Physical disability	3	0,9%

A psychiatric history in the family was found in 33.8% of hospitalized BDA cases (n=103).

No comorbidity was found in patients in 86.7% of cases (n=300) (Table 3).

Circumstances

Circumstances had not been identified in 34.2% of cases (n=138).

Table 4: Distribution according to circumstances.

Circumstances	Effectif	Frequency
Not found	138	40.6 %
Cannabis	102	0,3 %
Alcohol	27	8 %
Unobserved treatment	88	26 %
Puerperium	18	5,3 %
Socio-professional affective shock	13	3,8 %
Organic affection	6	1,7 %
Family marital conflict	11	3,2 %

Cannabis use (25.3%; n=102) and discontinuation/poor treatment compliance (21.8%; n=88) were the most common triggering factors. It is possible to see several triggering factors or circumstances in the same patient (Table 4).

Clinical Aspects

Wacky Themes

Delusional themes were mentioned in all cases. In 151 cases or 44.4%, the delirium was monothematic and in 189 cases or 55.6%, the delirium was polymorphic. The main theme found was persecution with a number of 315 patients or 92, 6% (Table 5).

Table 5: Frequency of delusional themes in the study population.

Land	Effectif	Frequency
Persecution	315	92,6%
Greatness	84	24,7%
Mystical-religious	72	21,1%
Influence	22	6,5%
Sadness	15	3%
Filiation	6	1,8%
Claim	2	0,6%
Dépersonnalization	1	0,3%
Passionate	2	0,6%

Mechanisms of Delirium

The mechanism of delirium was polymorphic in 204 patients (60%). The hallucination/intuition association was the most frequent with 175 cases or 51.5% followed by the hallucination/interpretation association. The frequency of the different delusional mechanisms was 51.7% for hallucination, 42.3% for intuition, 5.7% for interpretation and 0.3% for imagination. Acousto-verbal hallucinations were the most common type of hallucination in our study with 57.3% of all hallucinatory mechanisms. Mood was affected in 39.1% of our patients (19.1% elated, 12.1% unstable, 4.4% depressed and 3.5% indifferent). Similarly, behavioral problems were found in the vast majority (86.2%). These disorders were dominated by physical and/or verbal aggression (28.3%), running away (18.2%) and wandering (12.7%). However, it should be noted that there had been suicide attempts, self-harm, acts of arson and sexual assault. Food restriction was found in just over half of the patients (57.6%). Dissociative elements were found in 18.2% of cases.

Evolutionary Aspects

The average duration of hospitalization was 19.75 ± 8.9 days with extremes of 2 and 62 days. Normal discharge on medical advice was the most frequently found mode of discharge, i.e. 89.7% of cases (n=305). At discharge, persistent delirium was noted in 30 patients (8.8%), consciousness was clear in 337 patients (99.1%), mood was normal in 334 patients (98.2%). Insomnia persisted in 11 patients (3.2%).

On the therapeutic level, neuroleptics and antiparkinsonian correctors were used in 33.2% and 33.1% of cases each. Anxiolytics and mood stabilizers were necessary for 22.4% and 4.4% of patients respectively. Hypnotics were used in 1.7% of patients. Other associated treatments for various symptoms were also observed.

Discussion

We conducted a retrospective and descriptive work consisting in evaluating the epidemiological-clinical aspects in the psychiatric center of Ziguinchor, a hospital located in a region in the south of Senegal.

Sociodemographic Characteristics

We collected 340 patient records, 231 men (67.9%) and 109 women (32.1%), i.e. a sex ratio of 2.12. The hospital prevalence of delusional flushes in our series was 29.1%.

In the study by Kandji et al. [6] conducted at the Moussa Diop clinic in Dakar, the prevalence was 19.34%. It should be noted that this structure is the largest psychiatric center in the country, which receives an average of 1330 patients per year [6]. Kassé et al. [7] had noted, in this same structure, a prevalence of 13.3% two years earlier.

In Burkina Faso, the hospital prevalence of delusional puffs was 19.53% in the study by Karfo et al. conducted at the Yalgado University Hospital, the main center in this Karfo country [8]. In Morocco, a prevalence of 13.1% was reported by Bentiss et al. [9].

Delusional puffs are more rarely reported in Western series as evidenced by the values of 4.1% and 6.2% respectively noted in Germany and France [10,11]. These results confirm us all the same in the idea that the BDA are a frequent pathology especially in the African hospital environments. The age groups of 20 to 39 years (68%) were the most represented in our series with 32.09 years. In the study by Kassé [4] in Senegal (Dakar), Menick [12] in Cameroon and Karfo [8] in Burkina Faso, the age groups most concerned were respectively [20 to 40]-85, 8% with an average of 31.23 years; [15 to 34 years] - 71.03% with an average of 29.97 years; 28 years old - 55.60% with an average of 28.19 years old.

Our figures are consistent with the age pyramid of the Ziguinchor region, which has a wide base and steep sides reflecting a large percentage of children and young people, and a low proportion of elderly people [13].

The young age of our study population can be understood because it is a pivotal period in several areas (first internship, first job, disappointment in love, marriage) which are as many upheavals as some cannot bear. Single people were predominant in our study with 62% of the workforce and among them 52.9% were childless. Although the percentages are lower, Karfo and Kassé each find 59.44% and 53% single [7,8] . The high frequency of BDA in young subjects could explain these data. Indeed, 34.4% of single people in our study were in the age group [20 to 29 years old]. Moreover, as Collomb points out [2], prolonged celibacy is a pathogenic factor, particularly in our African society where marriage and lineage are very important.

The frequency of BDA in married patients is also high; the 30% obtained can be explained by the many stressful factors emanating from family life in Africa. Family burdens and constraints, as well as polygamy and its often anxiety-provoking sphere, are among the factors likely to cause BDA to hatch in individuals.

The Diagnosis Delay

Cultural beliefs and the use of traditional medicine, particularly rooted in this area, contribute to the delay in diagnosis. He was a month into our series.

In Casamance, where animist rites are still present, almost all patients first turn to traditional healers before coming to consult, sometimes late.

“According to families, healers treat the cause of the disease, while doctors treat the symptoms [3].

In the first month following the onset of the disease, 54.7% of patients were hospitalized. Although patients and their families prefer to consult a traditional healer first, the psychiatric center is increasingly becoming the first resort. This result shows that families are giving more and more importance to modern medicine in the management of mental illnesses. Elsewhere, especially in the West, easier access to healthcare structures could explain the lower delays.

Clinical Characteristics

Circumstances and triggering factors were dominated by cannabis use (25.3%) and rupture/poor treatment compliance (21.8%). Cannabis consumption is alarming, representing a quarter of patients and in the potentially active segment of the population. Persecution was the strongest delusional theme (92,6%followed by greatness 24,7%. This frequency is in agreement with the usual data in Africa. Indeed, according to Collomb [3] persecution colors all African psychiatry. In the study by Diop [14] carried out in Dakar in the 1960s found that the theme of persecution was the most frequent and came up 90 times. Kassé, for his part, found this theme at 31% [7]. The mechanisms of delirium were multiple in 204 patients in our series. In many cases, 51.7%, it was hallucinatory including 57.3% acoustico-verbal hallucinatory.

In the Burkinabé study by Ouédraogo et al. [15] in Burkina Faso, the most frequent mechanism of delirium was hallucinatory (42%). of the most found delirium was auditory hallucination (46.59%) [4]. Different mechanisms of delirium were associated in several patients. These associations of delusional mechanisms imply a more rigorous clinical approach for the practitioner.

The various mood and behavioral disorders are most often a reaction of the patient to his delirium. Even if some behavioral disorders are relatively mild, others such as suicide attempts or sexual assault often push the family or neighborhood to bring the patient to consult. This thymic involvement, although spectacular, is generally a good prognosis. Dissociative elements, found in 18.2% of cases, were poor prognosis criteria.

Evolutionary Aspects

The average duration of hospitalization during our study period was 19.75 ± 8.9 days with extremes of 2 and 62 days. Our results

are similar to those of the studies by Kassé [7], Ouédraogo [15] and Oubda [16] which obtained 17.19 ± 12.44 days, 15.9 ± 10.4 days and 16 ± 11.8 days respectively days.

This difference in duration can be explained by the improvement in the care of hospitalized patients, the advent of new neuroleptic molecules, and a great involvement of the family. Normal discharge on medical advice was the most frequently found mode of discharge, i.e. 89.7% of cases. The rate of early discharges on request and runaways (each 1.8%), that of discharges against medical advice (5.3%) were low compared to those found by Oubda [16] with a total of 36.3%. discharges against medical advice, runaways and early discharges.

The large proportion of normal discharges on medical advice could be explained by the distance from the place of origin. Indeed, the families of patients living in the surrounding regions, sometimes bordering countries, are more cooperative and will stay for the time requested to avoid the many round trips.

On discharge, only 8.8% of our patients had persistent delirium, mood was normalized in 98.2% of cases and insomnia persisted in 11 patients (3.2%). The evolution of the puffs responding to the rule of 1/3, the recurrence or the onset of chronic psychosis poses the problem of their future. Neuroleptics and antiparkinsonian correctors, in addition in case of side effects, were used in 33.2% and 33.1% of cases respectively.

In our study, classic neuroleptics with their share of side effects were used, due to the financial inaccessibility and non-availability of atypical neuroleptics.

Conclusion

Our study confirms the prevalence of BDA in Africa, which remains high. It occurs in a young adult, male, single, educated, unemployed and with a family psychiatric history. It is characterized by a predominantly "persecutory" polymorphic delirium with a hallucinatory mechanism responding favorably to neuroleptics after an average hospital stay of 19 days. Faced with this relatively high prevalence rate, it is important to strengthen prevention among young people and improve care through early diagnosis and treatment, which involves making the latest generation antipsychotics available.

It also seems appropriate to encourage the proliferation of psychiatric care centers such as that of Ziguinchor, which draws a good part of the patients from the south of the country.

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