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Is There A Late Onset Epilepsy Secondary To Alcoholism?

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Abstract:
Background*: Alcoholism is one of the leading causes of late-onset epilepsy in the West. Alcohol has a direct toxic effect on the central nervous system resulting in cerebral atrophy. Alcoholic epilepsy is estimated between 3 and 7%. Alcoholic epilepsy is defined by the occurrence of seizures in chronic alcoholics without a history of epilepsy, unrelated to withdrawal or excess alcohol and generally occurring after more than 10 years of alcoholism. The objective of our study was to determine and analyse late epilepsy secondary to Alcoholism in the Algerian population.*
Materials and Methods*: The study population includes all Algerian patients whose age of onset of the first seizure is 25 years or more, recruited during the period from January 2008 to December 2016 at ALI AIT IDIR Hospital in Algiers.*
Results: *In our study, there are no cases of late onset epilepsy secondary to alcoholism.*
Conclusion: *Our study confirms the absence of alcoholism in the etiologies of late onset epilepsy.*
Key Words*: Late onset epilepsy, Alcoholism, Alcohol, Algerian population.*

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I. Introduction

Alcoholism is one of the leading causes of late-onset epilepsy in the West. Alcohol has a direct toxic effect on the central nervous system resulting in cerebral atrophy. Alcoholic epilepsy is estimated between 3 and 7%. Alcoholic epilepsy is defined by the occurrence of seizures in chronic alcoholics without a history of epilepsy, unrelated to withdrawal or excess alcohol and generally occurring after more than 10 years of alcoholism. Alcoholic epilepsy is rarer, epileptic seizures occur according to studies in 5 to 15% of alcohol drinkers, the link between alcohol and seizures is dose dependent. Alcoholic epilepsy occurring mainly in patients with the highest consumption. Alcohol is the cause of newly diagnosed symptomatic epilepsy in 39% of cases between the ages of 30 and 50. Loiseau and Jallon 141 found 25% of late onset epilepsies due to alcohol. The occurrence of epileptic seizures in an alcoholic should first and foremost be sought for another possible potentially serious etiology such as cranial trauma, extradural hematoma, subdural hematoma, intracerebral contusions.

Of all the seizures occurring in an alcoholic patient, only 37% are related to alcoholic epilepsy, 51% occurring in withdrawal conditions, 11% are multifactorial with association of cranio-cerebral trauma, infection of the nervous system, metabolic disorders, intoxication, drug withdrawal, and 1% correspond to cases of convulsive drunkenness. We can observe generalized seizures without cry, more clonic than tonic and brief, occurring at night or in the early morning.

More rarely, focal seizures are found (16%). For partial seizures and particularly simple motor partial seizures, an underlying lesion must be sought. Very rarely partial, complex mal states can be observed.

Background activity is most often irregular and combines alpha activity with fast rhythms, sometimes slowed to 74 c/s, in other cases overloaded with slower theta frequency rhythms, when there are other abnormalities, they are bitemporal or unitemporal generalized sharp theta bursts. It is noted that rarely true epileptic grapho-elements, they are then generalized, more or less symmetrical discharges of polypoints and wave polypoints. Hyperpnea sometimes leads to the appearance of theta bursts. SLI does not bring any modification or very rarely micro-spikes. In the presence of an associated cause, sequelae anomalies can be found: slow waves or epileptic elements (in the event of hemorrhagic, traumatic, ischemic or infectious sequelae).

In subacute ethyl encephalopathy with epileptic seizures in alcoholism (SESA: subacute encephalopathy with epileptic seizures in alcoholism) the EEG is typical with patterns of periodic spikes (PLEDS) on the parieto-occipital regions lateralized on one hemisphere.

Radiological explorations must be carried out, as in all epilepsies, in order to eliminate associated causes (traumatic, vascular and infectious) an alcoholic origin is retained in the absence of other etiologies. CT and brain MRI may show cerebral and cerebellar atrophy related to chronic alcoholism.

In subjects over 60 years of age, alcoholic epilepsy represents a rate of 10% according to (Lundorf, 1986) [1], and 3% in the survey conducted by (Henny, 1990) [2].

II. Material And Methods

The study population includes all Algerian patients whose age of onset of the first seizure is 25 years or more, recruited at ALI AIT IDIR Hospital in Algiers.

Inclusion criteria:

1. The age of the patients must be greater than or equal to 25 years at the time of inclus.
2. Patient presenting with his first epileptic seizure at the age of 25 years or older.
3. Clinically and electrically confirmed diagnosis of epilepsy.

Exclusion criteria:

1. Age less than 25 years

III. Results

Our study population includes 336 patients, recruited during the period from January 2008 to December 2016. This figure corresponds to the number of patients selected according to the inclusion criteria.

Alcoholism:

In our study, there are no cases of late onset epilepsy secondary to alcoholism.

IV. Discussion

A cause was found in 58.3% of cases. This situation has been observed in several studies (José Luis Perez Lopez, 1985 [3] - Roberto Suastegui et al, 2009 [4] - Lars Forsgren, 1990 [5]) with respectively 50.8%, 51%, and 49%.

Our study confirms the predominance of vascular pathology which represents 30.6% of cases, followed by tumor pathology 21.9% of cases. The other causes include: inflammatory pathology 11.2% (multiple sclerosis 7.6%), infectious pathology 7.1%, arteriovenous malformation 9.7%, degenerative pathologies 6.1%, head trauma 5.1%, mesial sclerosis 2.5%, alcoholism 0%. this could be explained by the low alcohol consumption by Algerians due mainly to Muslim customs and traditions.

According to a WHO report [6]: Only 3.2% of Algerians consume alcohol. Alcohol consumption in Algeria seems very low, according to the latest data from the World Health Organization (WHO) [6]. Indeed, according to the latest report of this organization published on the consumption of alcohol in the world, 93.5% of the Algerian population has never consumed alcohol during their life, and only 3.2% of the population in consumes alcohol.

According to this WHO report, which is based on data for 2016, to the rate of 93.5% who have not consumed alcohol throughout their life, add the 3.3% of the population classified in the category of "former drinkers", and who have not consumed alcohol during the last 12 months, which gives. According to the same source, a rate of 96.8% of the Algerian population do not consume alcohol

The distribution by age group shows a predominance of cerebrovascular pathology, for the age groups (60-64 years, 65-69 years, 70-74 years, 75-79 years, 80 years and over). Tumor causes are frequent for the age groups (35-39 years) and (50-54 years). Inflammatory pathology is predominant in the groups of subjects (30-34 years, 40-44 years, and 50-54 years). Multiple sclerosis is predominant in the age groups (30-34 years, 50-54 years).

Infectious pathology is common in the group of subjects (30-34 years) and (35-39 years). It is especially in the group of subjects (25-29 years old) that the arteriovenous malformation was dominant, and the cranial trauma in the group of subjects (30-34 years old), and finally mesial sclerosis in the subjects whose the age group (30-34 years).

Our results agree with the literature data. In the work of Lars Forsgren, 1990 [5], a cause was found in 49% of cases, cerebrovascular pathology was the most common 21%, brain tumors were found in 11% of cases, and head trauma in 7 % of cases. It was also found that in the study by Lars Forsgren, 1996 [7] cerebrovascular

accident was the most frequent etiology, detected in 30% of cases, brain tumors were detected in 11% of cases, and the disease of Alzheimer's was detected in 7% of cases.

The finding of the dominance of cerebrovascular causes is not unanimous in the literature José Lwis Lopez et al, 1985 [3], had shown that alcohol was the most frequent cause 24.8%, followed by tumor pathology 16.4% , ischemic vascular causes 13.2%, and head trauma 11.2%. Agnet Mouritzen Dam et al, 1985[8] found that tumor pathology was the cause in 16%, and ischemic stroke in 14%, alcohol in 23% and head trauma in 4%. The work of Belaidi et al, 1986 [9], shows that the main etiologies: tumor 29.2%, infectious 20.8%, traumatic 18.7%, vascular 14.6%, and alcoholic 10.4%.

Table 1. Literature review of alcoholism in the etiologies of late onset epilepsy

Study	Country	Alcoholism
José lwis Perez Lopez, 1985	Spain	24.8%
Agnete Mouritzen Dam, 1985	Denmark	23%
R.Sridharan et al, 1986	Libya	ND
Belaidi et al, 1986	France	10.4%
Basim A.Yakoub et al, 1987	Saudi Arabia	ND
Anthony Hopkins et al, 1988	United Kingdom	ND
Lars Forsgren, 1990	Sweden	ND
Daniel Arbaiza 1995	Peru	ND
Lars Forsgren et al, 1996	Sweden	ND
Marcelo Rigatti et al, 1999	Brasil	ND
Andre Oun et al, 2003	Estonia	ND
GCY Fong et al, 2003	Hong Kong	ND
David Ortega Rivero et al, 2003	Ecuador	ND
Christian Napon et al, 2009	Burkina Faso	ND
Robero Suastegui et al, 2009	Mexico	ND
Ewan Hunter et al, 2012	Tanzania	ND
Sudhir Chasani et al, 2015	India	ND
Our series	Algeria	0%

V. Conclusion

Our study confirms the absence of alcoholism in the etiologies of late onset epilepsy in the Algerian population

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