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UNIVERSITY MOHAMMED V OF RABAT
FACULTY OF MEDICINE AND PHARMACY
RABAT

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RAPID EYE MOVEMENT SLEEP BEHAVIOR DISORDER
A STUDY OF ELEVEN CASES

THESIS

Presented and publicly supported : ……..

BY

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Born 20 August 1993 in Oujda.

For the Graduation of

Doctor of Medicine

KEY WORDS: RBD - parasomnia - Parkinson's disease - polysomnography

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Khaled Abdellah

Chef du Service des Ressources Humaines

DEDICATION

To

almighty ALLAH

Who inspired me

Who guide me on the right path

I owe you what I became today

praises and thanks

for your clemency and midericorde

TO

HIS MAJESTY THE KING HASSAN II

GOD HAS HIS SOUL IN HIS HOLY MERCY

TO

His majesty the king MOHAMED VI
SUPREME leader AND CHIEF OF STAFF MAJOR GENERAL OF THE ROYAL ARMED FORCES KING OF MOROCCO AND GUARANTOR OF ITS TERRITORIAL INTEGRITY

ALLAH GLORIFIES AND PRESERVES HIS SOUL

TO

HIS ROYAL HIGHNESS THE HERALD PRINCE MOULAY EL HASSAN

Allah preserves his soul

TO

HIS ROYAL HIGHNESS

THE PRINCE MOULAY RACHID

May god protect him

To

all royal family

TO

Mr Lt General Abdel Fattah Louarak , General inspector of FAR and commander of the sude area

in testimony of our great respect

our deepest consideration and sincere admiration

TO

MR Brigadier General Abdelkrim Mahmoudi Physician and Professor of Anesthesia- reanimation FAR Health Services Inspector

in testimony of our great respect

our deepest consideration and sincere admiration

TO

MR Brigadier General HAD ABDELHAMID

CARDIOLOGY PROFESSOR AND DIRECTOR OF HMIMV-RABAT

in testimony of our great respect

our deepest consideration and sincere admiration

TO

MR LHACHEMI KASSIMI COLONEL MAJOR

Professor of biology and director of HMMI-Meknes

in testimony of our great respect

our deepest consideration and sincere admiration

TO

MR KHALID SAIR MAJOR COLONEL MAJOR

Professor of general surgery, Director of

Avicenna military hospital of Marrakech

in testimony of our great respect

our deepest consideration and sincere admiration

TO

MR COLONEL MAJOR BAITE ABDELOUAHED

ANESTHESIOLOGY-REANIMATION PROFESSOR

DIRECTOR OF ERSSM AND ERMIM

in testimony of our great respect

our deepest consideration and sincere admiration

To

my dear mother Samira

who gave me life , you are my all

no tribute can pass on to you, the love and respect I have for you

without you I am nothing but thanks to you I become a doctor

I dedicate to you my thesis, because of you my work sees the day

I hope that after these long years of study, you will finally be able to savor the fruit of your hard work of the sleepless nights that you have spent watching over me, or praying for me

Your prayers have been a great support for me throughout my studies

May Almighty God protect you from evil and get you long life with us

I love you mum

To

my dear father Abdelaziz

who gave me life, you are my everything

you have always been the best father that can exist. always present at every step and at every event of my life

the words are not enough to express the love and the affection that I carry for you it is through your encouragements that I opted for this noble profession this work is your work .you, who made so much of sacrifices for me

may God preserve you from the misfortunes of life so that you will carry the torch illuminating my path

I love you dad

To

My sister and my brother: IMANE AND AYMANE

in testimony of all the affection and profound fraternal sentiments that I bear to you and of the attachment that unites us

I wish you hard lack and success in your life . I love you deeply

in the memory of my grand fathers Abdelkader et Mohammed

I wish you were here on this memorable day may the clemency of God reign over you and may His mercy soothe your souls

to my grand mothers Taoues et Rabiaa

despite the distance, you did not cease to lavish on me prayer and good wish for success

these few lines can not express all the affection and all the love I owe you

May God preserve you and grant you health and prosperity

To

All my aunts and uncles and cousins

I thank you all for all the moments of happiness we shared together

I dedicate this work to you by expressing my love and affection

To all my friends

You are more than friends, you are family, you were always present to support me

You helped me a lot and I will always be grateful to you

I love you and I dedicate to you this modest work

Thanks

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Benomar Ali, professor of neurology in specialty hospital

It is a great honor for us, you accepting the presidency of our thesis jury

Your knowledge, your skills and your human qualities arouse in us a great admiration

Please accept dear professor our deepest respect

To

my teacher and thesis supervisor, Physician

Amal Satte professor of neurology in HMIMV

we had the privilege of working among your team

to appreciate your qualities and your values

you have always welcomed us with kindness and sympathy

despite your many professional occupations

that this work is the expression of our deep gratitude and the

testimony of our great esteem

To

my teacher and thesis supervisor, Physician

Ahmed Bourezza professor of neurology and

head of department of neurology

in HMIMV

we had the privilege of working among your team

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To

my teacher and Thesis jury, physician

Regragui Wafa , professor of neurology

in specialty hospital

We thank you for your honor in accepting to judge this thesis please accept the expression of our sincere respect and thanks

To

my teacher and thesis jury, physician

Kadiri Mohamed, professor of psychiatry

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We thank you for your honor in accepting to judge this thesis please accept the expression of our sincere respect and thanks

To

my teacher and thesis jury, Colonel

Zalagh Mohammed, professor of ORL

in HMIMV

We thank you for your honor in accepting to judge this thesis please accept the expression of our sincere respect and thanks

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Summary

Introduction

Rapid Eye Movement (REM) sleep Behavior Disorder (RBD) is a REM sleep parasomnia first described by Schenck and collaborators in 1986 (1)

It is characterized by loss of the muscle atonia that typically occurs during REM sleep, therefore allowing patients to act out their dreams

in motor activity ranging from simple limb twitches to more complex, aggressive, and violent movements that may result in injury to the patient and/or sleeping partner RBD has a low prevalence in young adults, but is a more frequent parasomnia among the elderly, with an estimated prevalence of probable RBD of up to 7.7%

The diagnosis requires polysomnography (PSG) demonstrating a loss of normal skeletal muscle atonia during REM sleep. RBD results from dysfunction of brainstem circuits responsible for maintaining normal REM sleep atonia and suppressing behaviors during REM sleep. The diagnosis of "idiopathic" RBD (IRBD), that is, RBD without an identifiable etiology, is frequently followed years later by the development of a neurodegenerative disorder, most commonly one of the synucleinopathies. As such, RBD is often a step in the progression of a neurodegenerative disorder. In this circumstance, it is a manifestation of neurodegeneration occurring in the brainstem before spreading to adjacent and other CNS regions resulting in the development of symptoms and signs which permit recognition of a specific neurodegenerative disorder. RBD has been linked with narcolepsy and associated with a variety of other disorders.

The management of RBD focuses on preventative/safety measures, counseling, monitoring for the development of a neurodegenerative disorder and pharmacotherapy, which is typically effective but not well understood.

We conducted a case-series study of 11 patients with RBD that were diagnosed at the neurophysiology department of the Mohammed V military teaching hospital .The aim of this study is to describe the clinical specificities of RBD in our population, Diagnosis methods that can be used, association with synucleinopathies and treatment options available in our country and to discuss these items in the light of literature data.

I. Materials and Methods

A. Study presentation

We conducted a retrospective case-series study of the descriptive type, in neurophysiology department of Mohammed V military teaching hospital. The study included 11 patients with Rapid Eye Movement sleep behavior disorder, seen from 2009 to 2017. The purpose was to describe to describe the epidemiological, clinical specificities of RBD in our population, Diagnosis methods that can be used, association with synucleinopathies and treatment options available in our country and to discuss these items in the light of literature data

B. Study's localization

the neurophysiology department in Mohammed 5 military training hospital was founded in 2009, it has 3 units: epileptology, sleep medicine and EMG/ evoqued potentials unit. Our study was conducted in the sleep medicine unit, it has 2 rooms for polysomnographies that are performed twice a week. In addition to polysomnography, there are consultation rooms, where patients with various sleep disorders are being followed by doctors. The medical and paramedical staff in this unit include two physicians, nurses, secretaries, medical auxiliaries

C. inclusion and Exclusion criteria

1. Inclusion criteria

the patients that were followed in consultation in our neurophysiology department and were diagnosed with REM sleep behavior disorder were included in the study

2. Exclusion criteria

the patients with insufficient data medical records and patients that were diagnosed with RBD syndrome but not followed at the neurophysiology department were excluded

D. Data collection

During our study, patient's medical records were checked using a write-up model that contains many parameters studied, which are:

1. Patient Identity

2. Chief Complaint

3. Patient Illness History

A-Past Medical History: -Parkinson's disease – other synucleinoopathies

B-Past Surgical History

C-Drugs and allergies

+ Allergies for medications or otherwise

+ Past or present tobacco and illicit drug use, or alcohol use noted

D-Family history: family history of RBD or synucleinopathies

4. History of present Complaint

5. Physical examination

A-General examination:

-pulse rate

-orthostatic hypotension

B-Neurological examination:

-Gait: akinesia

-Motor strength: - muscles rigidity –Cogwheel rigidity -rest tremor

-Cranial nerves: hyposmia

6. Polysomnography

-Percentage of REM sleep without atonia

-Sleeping Latency

-Proportion of sleep phases

-Index Apnea-hypopnea

7. Diagnosis retained

Symptomatic or idiopathic RBD

8. Treatement

Molecule and dosage used

9. Evolution under treatment and duration

E. Ethical considerations

Patient confidentiality was well respected during the curse of data collection

II. Results

A. Cases presentations

1. Case 1

Mr. D.B is a 68 years old male, married, owns medical health care. He was diagnosed in 2008 with obsessive compulsive disorder, treated with Zoloft* 100mg, arterial hypertension since 2010 treated with Tecpril* 5mg and with Parkinson's disease since 2010 that was treated with Madopar* and Trivastal* .The patient was seen, in April 2011 for aggressive sleep behaviors, somniloqy and nightmares of varying duration and frequency, without a specific time frame of occurrence, causing the patient sleep disruption and bad sleep quality. Therefore daily drowsiness and wife discomfort. All the symptoms described were triggered by stress, associated with constipation and erectile dysfunction. In examination, the patient presented with akinesia, cogwheel sign, Muscles rigidity, rest tremor of upper left limb and hyposmia. In polysomnography, there were typical episodes of REM sleep behavior disorder with 40 percent of REM sleep without atonia. Therefore, symptomatic RBD was retained as a diagnosis and Clobazam was initiated at a dosage of 10mg a day, then switched to 5mg a day. The patient had a total recovery with the disappearance of all related RBD symptoms and there were no adverse effects

2. Case2

Ms. F.B is a 67 years old female, married, and covered by medical health care. She was

diagnosed in 2002 with Parkinson's disease that was treated with Stalevo* and Trivastal*. The patient was seen in consult, in 2012, for aggressive sleep behaviors and somniloqy of varying duration and frequency, associated to nightmares, bad sleep quality and sleep disruption. In consequence, there were a discomfort of the husband and the patient suffered from daily drowsiness .Examining the patient, we found cogwheel sign, muscles rigidity akinesia and rest tremor. In polysomnography, there were no typical episodes of REM sleep disorder behaviors. Nevertheless, it was found out a moderate obstructive sleep apnea syndrome with an index apnea-hypopnea at 23, 75 per hour. A symptomatic RBD syndrome was retained as a diagnosis, treated initially with Clobazam 10mg ½ a p/d and with the existence of RBD related symptoms, the treatment has been adjusted to 1p/d. The patient had a total recovery of RBD syndrome related symptoms and a stationary condition of Obstructive sleep apnea syndrome

3. Case3

Mr. G.M is a 73 years old male, covered by medical health care, he was diagnosed in 2005 with Parkinson's disease that was treated with Madopar*, Azilect*, with depression that was put under Seroplex*(other medications: Melatonin and Gustron). With unprecised date of beginning of symptoms, the patient says he complained from simple abnormal sleep movement and somniloqy of brief duration and daily frequency, causing him drowsiness. Associated to constipation and erectile dysfunction. In physical examination, it was found akinesia, Cogwheel sign, rigidity of muscles, hyposmia and rest tremor. No polysomnographic examination was performed. The patient has been diagnosed with Symptomatic RBD. Therefore he was treated with Clobazam 10mg ½ a p/d with a total recovery of his symptoms under a total of 4 years of treatment

4. Case 4

Mr. M.A is a 76 years old male, married, covered by medical healthcare. He was diagnosed in 2011 with Parkinson's disease that was treated with Madopar* and Trivastal*. His RBD Syndrome history goes back to 2014 by the daily occurrence of simple abnormal sleep movements and vocalizations, causing his wife a discomfort and daily drowsiness. In physical examination, it was found akinesia, rest tremor, cogwheel sign, and muscles rigidity.

No polysomnography was done. Nevertheless symptomatic RBD was retained as a diagnosis .Therefore, treated with Clobazam ½ a p/d .The patient presented a total recovery under treatment from 2014 to 2015 and knowing that there were no therapeutic observance In the presenting period, the patient presented in 2015 daily hallucinations, anxiodepressif syndrome that was treated with Serpred* and memory disorders that were treated with Exelon

5. Case 5

Ms. B.A. is a 72 years old female, covered by medical health care, diagnosed with Parkinson's disease since 2012 treated with Madopar* 250mg and Trivastal* LP50mg.The patient RBD history goes to 2015, by the occurrence of different abnormal sleep movements that goes from simple abnormal sleep movement to aggressive sleep behaviors of brief duration and daily frequency causing her husband discomfort, and in physical examination there was found akinesia, rigidity of muscles and rest tremor. No polysomnography was performed and Symptomatic rbd was retained as a diagnosis and therefore the patient was delivered Clobazam 10 mg ½ a p/d. Therapeutic evolution concluded to a total recovery in a total of 3years of treatment with no adverse effects

6. Case 6

Ms. A.H is a 70 years old female, has medical health care diagnosed with Parkinsonism since 1990, treated with Stalevo* and Trivastal* (Laroxyl). The patient complaint history goes to2012, he has presented progressive abnormal sleep behaviors, varying from simple movements to an aggressive behaviors and vocalizations, of brief duration and daily frequency, causing husband discomfort. In physical examination, we found out akinesia, muscles and cogwheel rigidity, and rest tremor. No polysomnography was performed and we retained a diagnosis of Symptomatic RBD. Therefore, the patient was treated with Clobazam 10mg 1p/d. The patient had total recovery under a total of 6 years of treatment

7. Case 7

Mr. R.M. is a 66 years old male, has medical health care and have hypertension under Fludex* and he has been operated for ulcer with no documents of past medical history. The patient present complaint history goes back to 2003, which is 10 years before the patient

consulted for many episodes during the night for aggressive behaviors such as kicking, nightmares and abnormal vocalizations of brief duration and daily frequency, happening mostly in the last 1/3 of the night. With that, causing wife discomfort and daily drowsiness. In physical examination the patient presented a hypertension at 17/8 cm with no other physical signs. Polysomnography showed typical episodes of REM sleep behavior disorder with a percentage of 48 to 57% of REM sleep without atonia .Therefore, the patient was diagnosed as an idiopathic RBD syndrome that was treated initially with Clobazam 10mg ½ a p/d, then switched to a 1 p/d. The patient had total recovery under 4 years of treatment

8. Case 8

Ms. H.Z is a 74 years old female, widower, has medical health care, has been diagnosed with Parkinson's disease in 2002 and has been operated hysterectomy and thyroidectomy with no medical history presented by the patient. The present complaint history goes back to 2014 by the occurrence of abnormal behaviors, causing daily drowsiness and husband discomfort. In physical examination, there was found orthostatic hypotension, akinesia, muscles and cogwheel rigidity and rest tremor. No polysomnography was performed and symptomatic RBD was retained as a diagnosis. Therefore, the patient was treated with Clobazam 10 mg ½ a p/d and he had a total recovery of rbd related symptoms under 3 years of treatment

9. Case 9

Mr. R.B is a 55 years old male, has medical health care. Has ronchopathy with no medical records and he is a chronic tobacco user .The patient present complaint goes back to 2014, by the occurrence of aggressive sleep behaviors such as kicking and punching, nightmares and abnormal vocalizations of an hour duration and a weekly occurrence, causing wife discomfort. In polysomnography, the patient presented typical episodes. Therefore, the patient was diagnosed as idiopathic RBD syndrome and he has been treated with Clobazam 10mg ½ a p/d then switched to 1 p/d. He had a full recovery under a total of 2 years of treatment

10. Case 10

Mr. L.A. is a 73 years old male, has medical health care, has hypertension under

Fortzaar* and Kardegic* and glaucoma with no medical records. The history of present complaint goes back to a lucky found of RBD syndrome, in a diagnosis course for Obstructive apnea syndrome , RBD symptoms were abnormal sleep movements and vocalizations of brief duration and moderate intensity, causing daily drowsiness and wife discomfort. Physical examination was strictly normal and Polysomnography performed showed typical episodes of RBD syndrome with a percentage of REM sleep without atonia at, and a moderate SAOS associated. Therefore the patient was diagnosed with an idiopathic RBD that had been treated with Clobazam 10mg ½ a p/d. He had a total recovery under a total of 4years of treatment

11. Case 11

patient is 13 years old. As for his medical records, he has allergic rhinitis under treatment, good psychomotor development and good school results. His present complaints goes back to 3 years, after the divorce of his parents, the patient began to conduct nocturnal episodes of aggressive sleep behaviors especially kicking and sometimes crying associated with excessive diurnal episodes of drowsiness but no cataplexy episodes were reported or found. Examination was strictly normal. Polysomnogram resulted of typical RBD episodes and a short Sleep and REM sleep latency. For further explanation, a Tile was performed showing severe drowsiness. The diagnosis retained was a symptomatic RBD associated with Narcolepsy without cataplexy. Patient was treated with Madofanil 200mg 2 times a day.

B. Data analysis

1. Age

-We included, in our study, 11 patients, one child at the age of 13 years old, and 10 adult patients with an age frame between 55 and 76.

-The mean age in adult patients was 69, 4.

2. Gender

-Of the 11 patients, we included in our study, 64 percent were male gender (7patients) and 36 percent were women (4patients)

-Therefore, there is a male dominance with a sex ratio at 2

TABLE 1 : GENDER DIFFERENCE IN OUR PATIENTS

Gender	Number of patients	Percentage
Male	7	64%
Female	4	36%

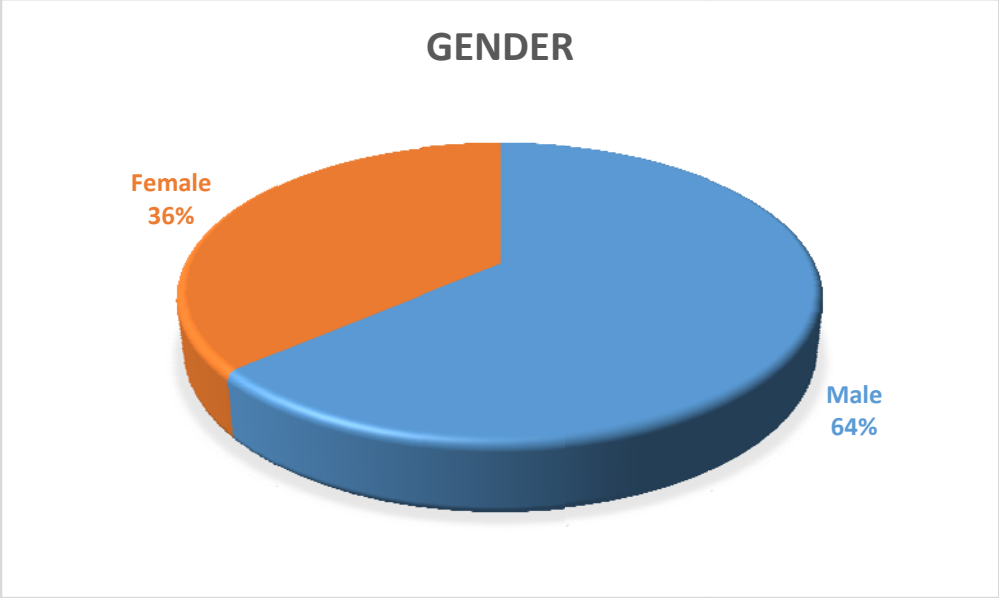


FIGURE 1: GENDER DIFFERENCE IN OUR PATIENTS

3. Past Illness history

a. Neurodegenerative disorders

-Of the 11 patient we included in the study, Parkinson's disease had the highest rating, it included 64% of the patients (7patients) and 9% had AMS (1patient)

-The rest of 27% (3 patients) had no synucleinopathies

TABLE 2 : PERCENTAGE OF PATIENTS BASED ON NEURODEGENERATIVE DISEASES

	Number of patients	Percentage
Parkinson's disease	7	64%
MSA	1	9%
No Neuro degenerative disease (ND)	3	27%

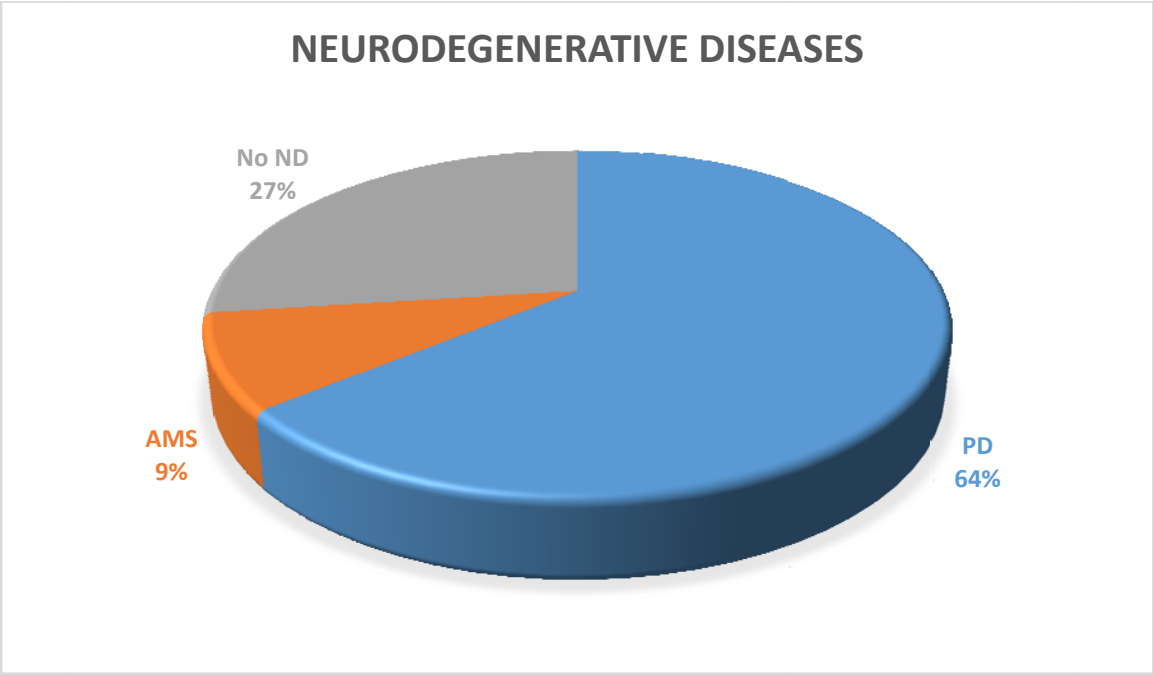


FIGURE 2: PERCENTAGE OF PATIENTS BASED ON NEURODEGENERATIVE DISEASES

-The delay between Neurodegenerative diseases and REM sleep behavior disorder

b. Narcolepsy

Of the 11 patients included in the study, 9% had narcolepsy (1 patient)

c. Other comorbidities

-Of the population studied, patients had many comorbidities, such as:

*27% had SAOS (3 patients)

*18% had hypertension (2 patients)

*18% had Tobacco chronic use (2 patients)

*18% had been operated (2 patients)

*9% had Obsessive compulsive disorder (1 patient)

*9% had Depression (1 patient)

TABLE 3 :PERCENTAGE OF COMORBIDITIES IN THE STUDY

	SAOS	HTA	Tobacco Use	Surgeries	TOC	Depression
Number of patients	3	2	2	2	1	1
Percentage	28%	18%	18%	18%	9%	9%

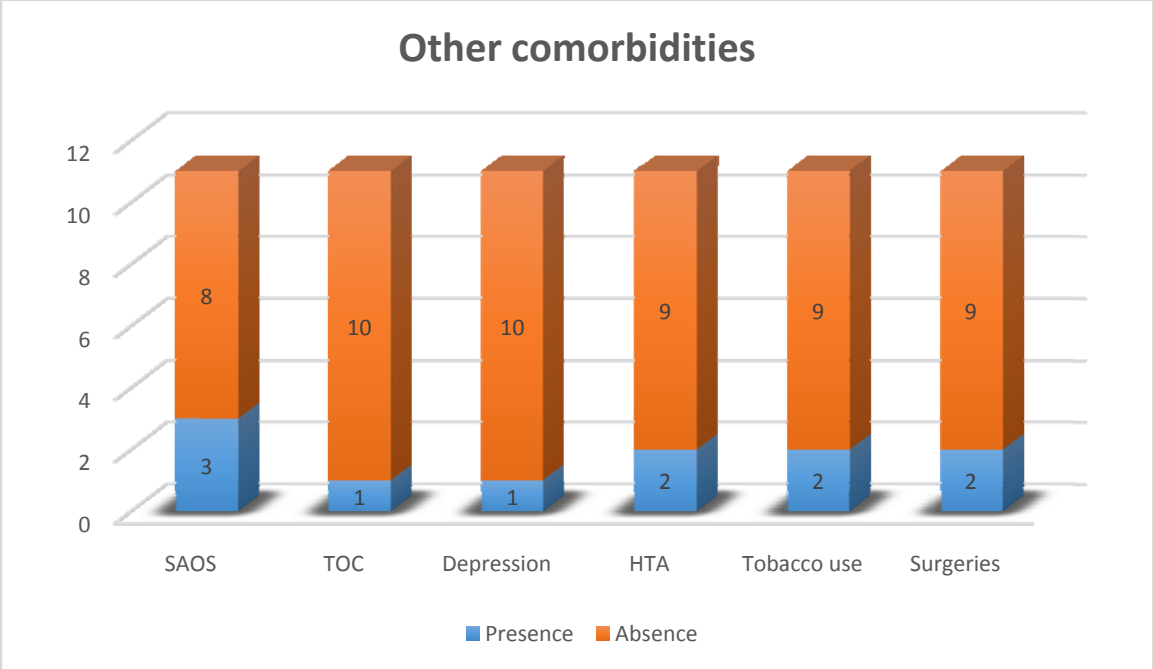


FIGURE 3: PERCENTAGE OF COMORBIDITIES IN OUR STUDY

4. Clinical aspects

a. Functional signs

Of the 11 patients included, we studied percentage of functional signs:

-100% had somniloquy, bad sleep quality, sleep disruption and spouse or caregiver discomfort

-91% (10 patients) had nightmares

-82% (9 patients) had aggressive sleep behaviors

-45% (5 patients) had daily drowsiness

-27% (3 patients) had constipation associated

-27% (3patients) had erectile dysfunction

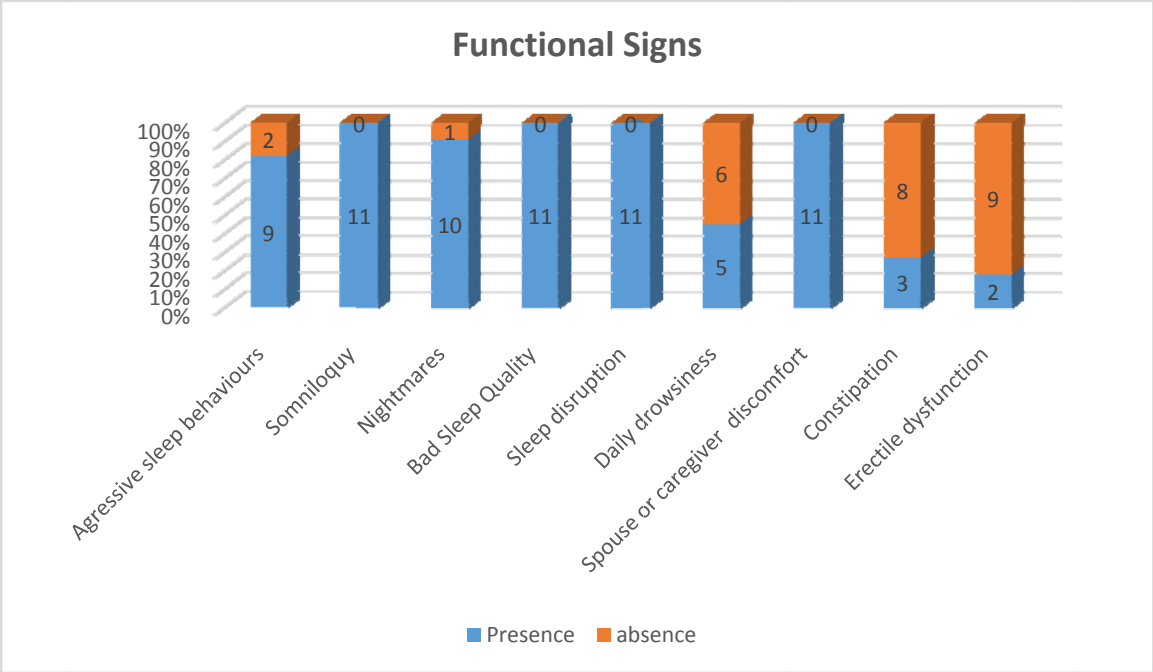


FIGURE 4: PERCENTAGE OF FUNCTIONAL SIGNS IN POPULATION STUDIED

b. Physical examination

-Out of the 11 patients included, 64% (7patients) had akinesia, muscles rigidity and rest tremor and 18% had orthostatic hypotension and hyposmia

TABLE 4 :PERCENTAGE OF PHYSICAL SIGNS IN OUR STUDY

	Orthostatic hypotension	Akinesia	Muscles rigidity	Rest tremor	Hyposmia
Number of patients	2	7	7	7	2
Percentage	18%	64%	64%	64%	18%

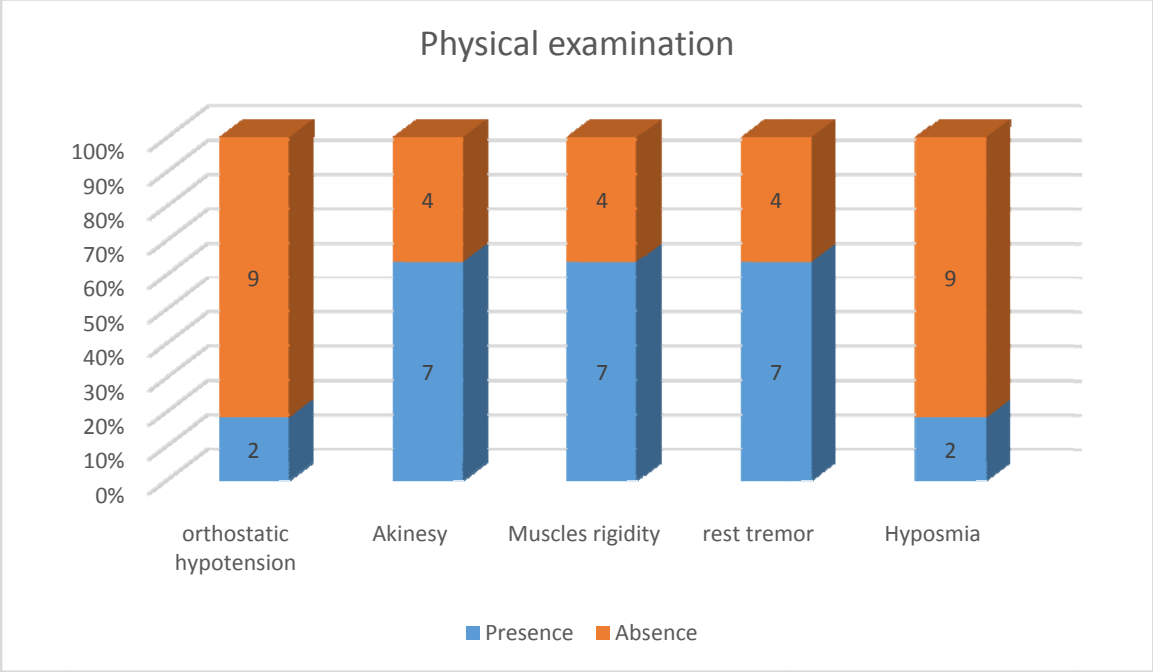


FIGURE 5: PERCENTAGE OF PHYSICAL SIGNS IN OUR STUDY

5. Polysomnography

-In our study, polysomnogram was performed in 45.45 %(five patients). Mean sleep latency is 23mins, mean percentage of Sleep phases are: light and intermediate sleep (N1+N2): 64.5%, Slow wave sleep (N3): 17%, REM sleep (REM.S): 18.5%. Mean Index apnea-hypopnea is 1.26. As for REM sleep without atonia, mean valor is 41.4%

-In 100% of patients, typical episodes were found and Periodic limb movement were absent

TABLE 5 :POLYSOMNOGRAPHIC FEATURES IN OUR PATIENTS

	Sleep latency (mins)	Sleep phases	IAH	RBD typical episodes	REM sleep without atonia	PLMD
Case 1	45	N1+N2:54% N3:26% REM.S:20%	0.88	Present	35%	Absent
Case 7	32	N1+N2:68% N3:18% REM.S:14%	3.62	Present	48.57%	Absent
Case 9	12	N1+N2:72% N3:10% REM.S:18%	0.29	Present	31%	Absent
Case 10	3	N1+N2:64% N3:14% REM.S:22%	0.27	Present	51.06%	Absent
Case 11	6	-	-	Present	-	Absent
Mean Valor	23	N1+N2:64.5% N3:17% REM.S:18.5%	1.26	100%	41.4%	0%

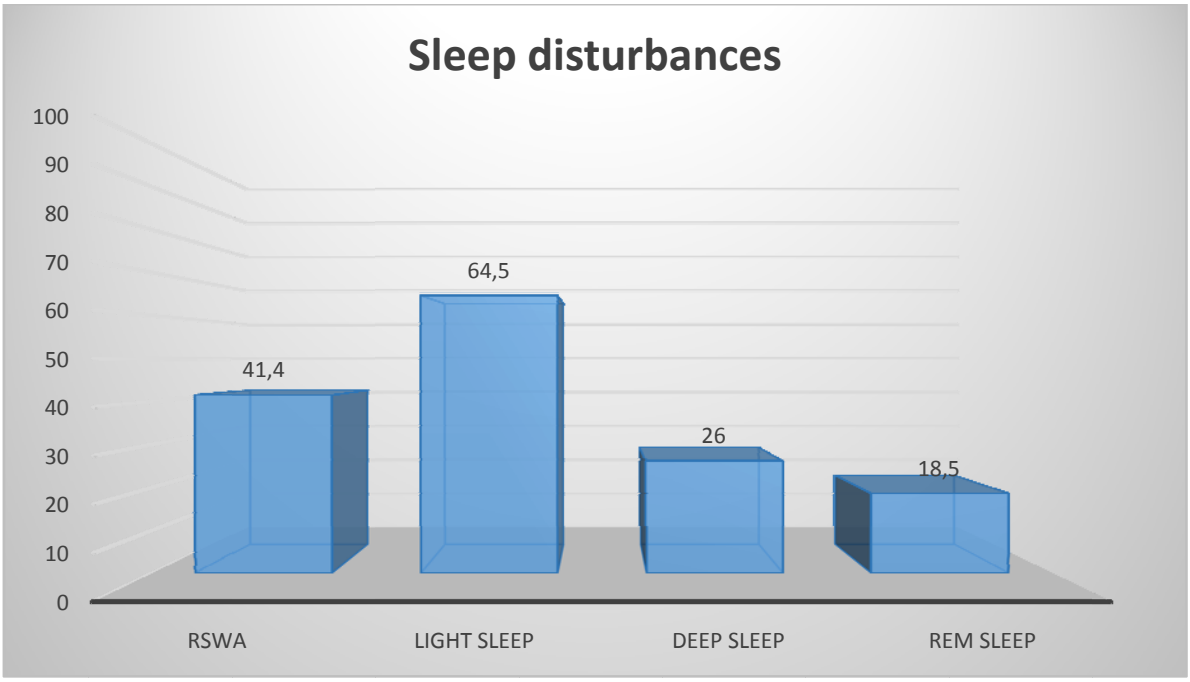


FIGURE 6: PERCENTAGE OF SLEEP DISTRUBANCES MEAN VALUES

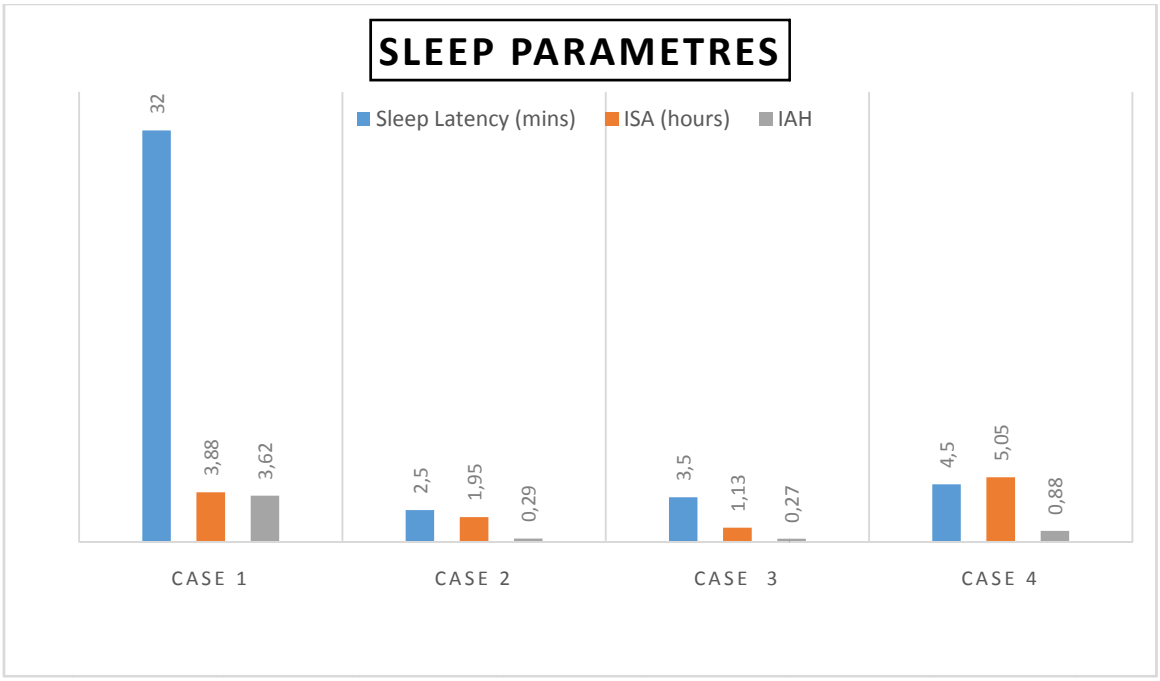


FIGURE 7: PERCENTAGE OF SLEEP PARAMETRES MEAN VALUES

6. Treatment

a. Optimal dose

-Of the 11 patients included in the study: The dose of 10mg of Clobazam had the highest rating, it included 55% of patients (6 patients). And 35% of patients (4patients) were treated with 5mg of Clobazam. The rest of 10% (The child patient) was not treated with Clobazam.

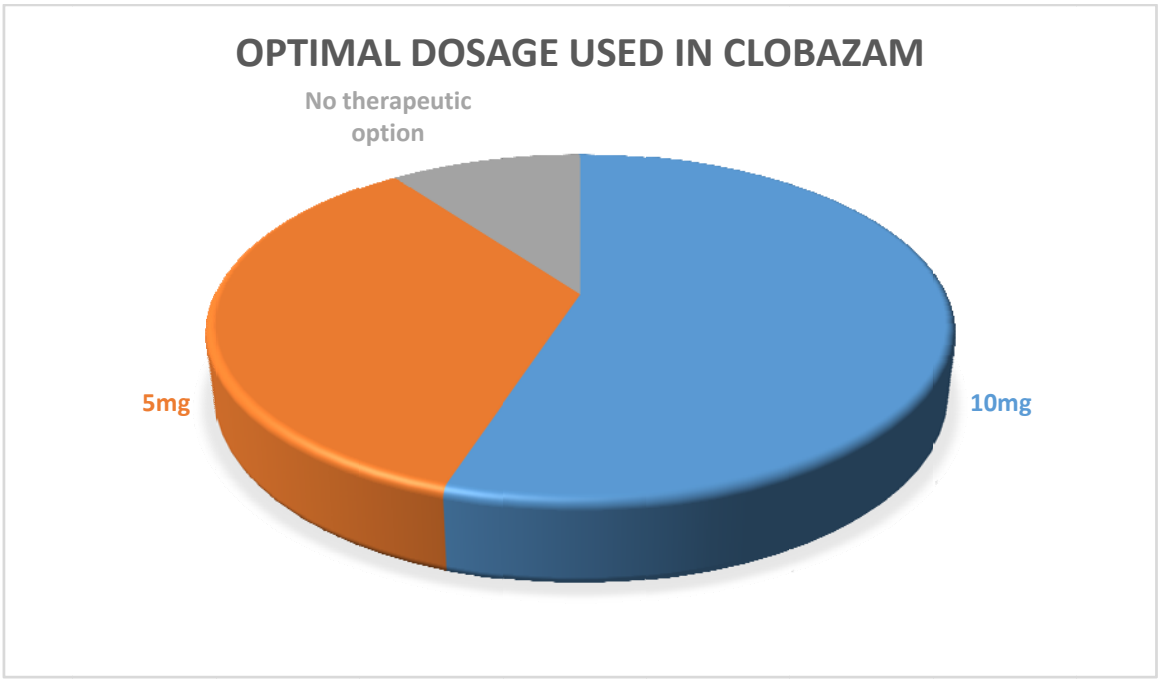


FIGURE 8: OPTIMAL DOSE USED IN CLOBAZAM

b. Treatment duration

-Of the 11 patients included in the study, the mean duration was 4.3 years, with a range year between 2 to 7 years.

c. Evolution under treatment

-100% of patients (11 patients) had total recovery

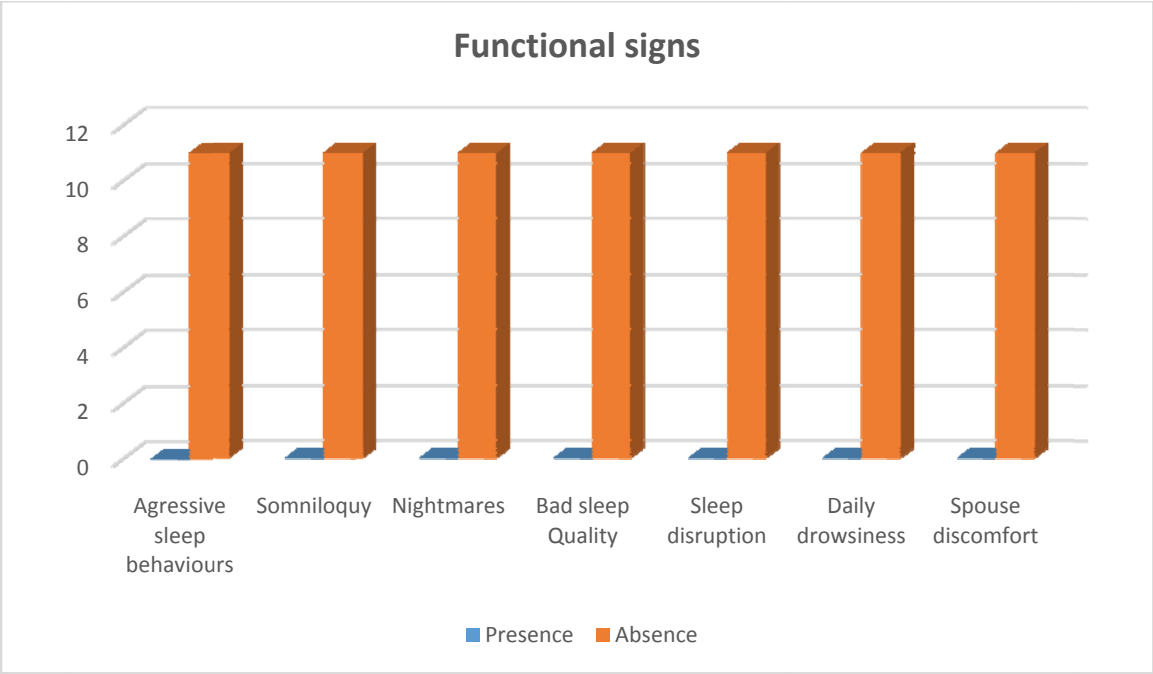


FIGURE 9: EVOLUTION UNDER TREATMENT BASED ON FUNCTIONAL SIGNS REGRESSION

d. Adverse Effects

-Of the 11 patients included in the study, none of them showed side effects along the therapy course

III. Discussion

A. Definitions and pathophysiology

Rapid Eye Movement (REM) sleep Behavior Disorder (RBD) is a REM sleep parasomnia first described by Schenck and collaborators in 1986. (1)

Based on the physiological criteria, sleep is divided into two independent states: non REM sleep (NREM) and REM sleep. NREM sleep is further divided into three stages(light, intermediate, and slow wave sleep). Primarily based on EEG criteria. NREM and REM sleep alternate, with each cycle lasting for approximately 90 to 100 minutes. Four to six such cycles are noted during a normal sleep period. The duration of the REM sleep cycle increases from the first to the last cycle, and dominates the last third. (2)

RBD is characterized by loss of the muscle atonia that typically occurs during REM

sleep, therefore allowing patients to act out their dreams (3)

Based on animal models in cats and rats, a pathophysiological basis for RBD was proposed by Boeve et al(4). Investigations have suggested that there are two motor systems involved in REM sleep (5-6). One system is responsible for producing atonia and the other involves the locomotor generators that are responsible for suppressing locomotor activity. These locomotor generators have not been identified.

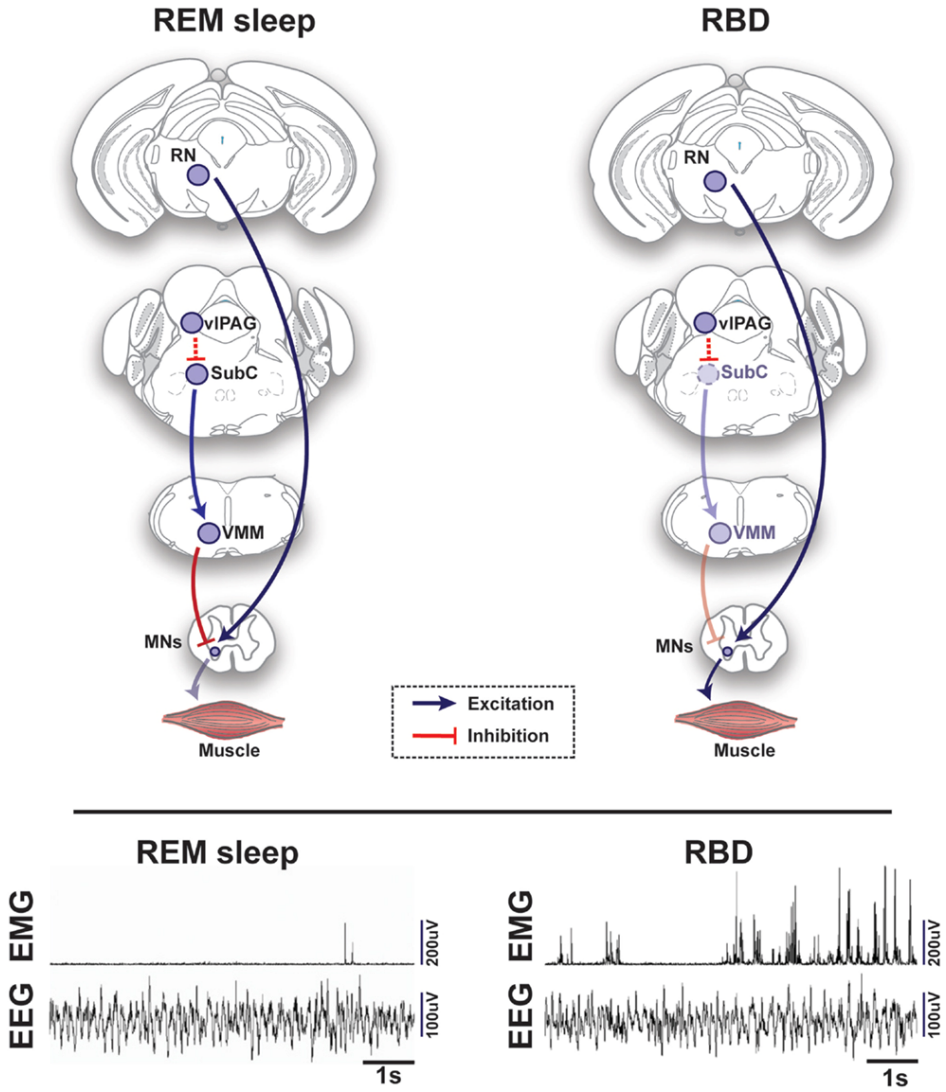


FIGURE 10: PATHOPHYSIOLOGY OF RBD FRAIGNE AND AL 2015

As for the system responsible for producing atonia, The "REM-on" regions include the pre-coeruleus and sublaterodorsal nucleus (SLD).During REM sleep, they activate two

inhibitory pathways, referred to as the direct route and indirect route. The pathways induce atonia by inhibiting the motor neuron through an active rather than passive process. They help ensuring atonia and paralysis during REM sleep. Figure A shows the physiology of REM sleep atonia.

Boeve et al (4) suggests that the most likely neuroanatomical abnormality in RBD resides in the human equivalent of the SLD nucleus in the rat. Lesions of this nucleus and its afferent or efferent pathways, or both, result in loss of the normal inhibition of the motor neuron, including both the anterior horn cells in the spinal cord and most of the cranial motor nuclei .Investigators have also postulated that an increased locomotor drive could play a role in the pathophysiology.RBD can be Idiopathic or symptomatic and iRBD refers to RBD in the absence of other neurological diseases but almost all of iRBD patients ultimately developed a defined neurodegenerative disease during follow‐up period. Whereas symptomatic RBD is secondary to neurological diseases such as Parkinson's disease, dementia

with Lewy bodies, and multiple system atrophy (7) . It can also cause by medications use such as fluoxetine, venlafaxine and clomipramine (8).

B. Diagnosis criteria

1. Demographic criteria

a. Age

Two studies conducted by Olson and al(9) and by S.J McCarter and al(5) showed a mean age of patients of 64.4 and 65.8. As for our study, adult patients (90%) had a mean age of 69.4, itis slightly delayed compared to literature finding due to patient's mystical and religious beliefs. It can also be explained by physicians focusing on motor aspects of synucleinopathies rather than both motor and non-motor behaviors.

TABLE 6 :MEAN AGE IN RBD IN COMPARISON TO LITERATURE

Authors	Country	Year	Number of patients	Mean age (years)
Olsen and al(9)	USA	2000	93	64,4
S.J McCarter and al(5)	USA	2013	45	65,8
Our study	Morocco	2018	10	69,4

b. Gender

Male dominance (64%) Found in our study agrees with literature. Studies conducted by Olson, al(9), and S.J McCarter (5)and al, both reported that RBD is predominant in males

TABLE 7 :GENDER IN COMPARISON TO LITERATURE

Authors	Country	Year	Number of patients	Percentage of males	Sex-ratio (M/F)
Olsen and al(9)	USA	2000	81	87%	6,75
S.J McCarter and al(5)	USA	2013	35	77.8%	3,5
Our study	Morocco	2018	7	64%	1,75

c. Prevalence

Literature research of RBD prevalence indicates a prevalence-range that goes from 0.38% to 2.01%. The research were gathered around from a study done by Ohayon and al(10), whose researchers interviewed 4,972 subjects and found that 106 of them exhibited violent behaviors during sleep. Of these, 25 (0.5%) demonstrated features suggestive of RBD. Another study done by Kang et al (11) investigated prevalence in the Korean elderly population, reporting a prevalence estimation of RBD of 2.01% () and as for the study done

by H.F.Chiu and al(12). RBD prevalence is estimated at 0.38%.

Prevalence was notassessedin our study due to small sample of the population studied

TABLE 8 :PREVALENCE OF RBD

Authors	Country	Year	Number of patients	Prevalence
H.F.Chiu(12)	China	2000	1034	0,38%
Kang and al(11)	Korea	2013	348	2,01%
Ohayon and al(10)	USA	2017	4972	0,5%
Our study	Morocco	2018	11	Not assessed

2. Past illness history

a. Neurodegenerative disease

RBD can be idiopathic, without etiology identified or symptomatic to another pathology. Nevertheless, patients with idiopathic rapid eye movement sleep behavior disorder eventually develop neurodegenerative diseases, particularly α-synucleinopathies such as Parkinson's disease (PD), Lewy body dementia (DLB) and multiple system atrophy (MSA) and therisk for neurodegenerative syndrome to onset is 33.1% at five years, 75.7% at 10 years is and 90.9% at 14 years. (13) .In general, it takes 25 years for neurodegenerative syndrome symptoms to take place(14).

Literature findings in research of synucleinopathies ratings indicate that either Parkinson’s disease or Lewy body dementia or both dominate the highest ratings in RBD patients. Comparing literature findings to ours, Parkinson’s disease is the most common synucleinopathy, but no case of Lewy body dementia was found. On the other hand 9% had MSA. Furthermore, larger sample size and longer follow-up are needed to assess our population epidemiological specifities in synucleinopathies associated to RBD.

FIGURE 11: NEURODEGENERATIVE DISEASE IN RBD PATIENTS IN COMPARISON TO LITERATURE

Authors	Country	Year	PD	DLB	MSA
Claassen DO and al(14)	USA	2010	48%	48%	3,7%
S.J McCarter(5)	USA	2013	42%	12%	25%
A. Iranzo and al(13)	Spain	2014	33,8%	44,6%	3%
Our study	Morocco	2018	64%	0%	9%

b. Narcolepsy

RBD in patients with narcolepsy is characterized by a distinct phenotype consisting of less violent behavior, elementary rather than complex movements, tends to occur at a much younger age than RBD and appear during childhood, absence of a sex predominance, and a strong association with narcolepsy type 1. That is, narcolepsy with cataplexy (15)

Both literature and our study suggest that RBD associated with narcolepsyinvolves young ages including children and young adults. As for Narcolepsy's prevalence in a population affected by RBD, our study indicate a 9% prevalence. A valor that responds to literature findings of a prevalence that ranges from 6.6% to 38.4%(16).

On the other hand, Mattarozzi and al found a prevalence of 61.4% of RBD in a population affected by narcolepsy

c. Other comorbidities

Most common comorbidities similarly found in literature and in our study aretobacco use, psychiatric disorders and selective serotoninergic reuptake inhibitors.

Idiopathic RBD (IRBD) patients frequently report depression in the prodromal stages of a neurodegenerative disease,(17) as for other psychiatric disorders, they are uncommon (18).

As for our study, 18% reported to have depression.

For patients in whom an antidepressant treatment preceded, or was temporally associated with, the onset of RBD symptomatology, the situation is more complex. Whether antidepressant-induced RBD is simply a sideeffect that resolves when the drug is stopped or unmasks a latent neurodegenerative process is uncertain (19). In our study 9% take antidepressants.

Obstructive sleep apnea (SAOS) was the most common comorbidity after PD in our study, it affected 27%. RBD and SAOS are distinct pathologies and The association between the two is common (20)

Iranzo et al. reported that severe OSA can imitate RBD symptoms defining it as a pseudo-RBD and that this phenomenon can be successfully treated by CPAP (21).

In literature, Smoking was found to have higher odds in patients with RBD, therefore it is considered as a common comorbidity and 18% of our patients had tobacco use (22)

Even though Lower educational level and head injuries and alcoholic use were not evaluated in our study, they are common in literature findings. Therefore, further evaluation of these parameters and their relationship with RBD is needed.

TABLE 9 :COMORBIDITES OF RBD IN COMPARISON TO LITERATURE

Authors	Country	year	Risk factors or Comorbidities
Postuma and al(22)		2012	-Tobacco use -Head injury -Pesticide exposure -farming
C. Yao and al (23)	Canada	2012-2015	-lower educational level -Alcohol and tobacco use -Anxiety, depression and PTSD -selective serotonin reuptake inhibitor
Jian-Fang Ma (24)		2017	-lower educational level -head injury -atrial fibrillation -hyperlipidemia -alcoholic use -selective serotonin reuptake inhibitor
Our study	Morocco	2018	-SAOS (27%) -Hypertension (18%) -Tobacco use (18%) -Surgeries (18%) -Psychiatric disorders (18%) -selective serotonin reuptake inhibitor (9%)

3. Clinical aspects

a. Functional signs

1-Dream enactment behaviors:

1-1- Agressive sleep behaviors:

Literature and our study, both indicates that violent sleep behaviors are common in REM sleep behavior disorder and women are less to experience violent dream enactment,

which make them less likely to seek medical help (18).

The most common dream enacting behaviors are flailing the arms and punching the bed partner for men, and flailing the arms for women (25).Sleep-related injuries that results from RBD symptoms behaviors can go from bruises, lacerations to dislocations, fractures, and, in extreme cases, subdural hematomas. As for our study, none of the patients presented with severe injuries related to RBD(26).

TABLE 10 :VIOLENT SLEEP BEHAVIOR IN RBD IN COMPARISON TO LITERATURE

Authors	Year	Number of patients with RBD	violent sleep behaviors
Boeve BF and al(27)	1998	37	65%
D. Oudiette and al(28)	2006	60	82%
Our study	2018	11	80%

1-2-Vocalizations:

-Literature and our study agrees that vocalizations are very common in RBD. Vocalizations can occur in 89% and up to 100% of patients affected with RBD.

TABLE 11 :VOCALIZATIONS IN RBD IN COMPARISON TO LITERATURE

Authors	Year	Number of patients with RBD	Vocalizations
Olson EJ and al (9)	2000	93	89%
Leora L.Borek and al (25)	2007	36	100%
Our study	2018	11	100%

2-Dream content: ‘’Nightmares’’

Literature and our study agree that nightmares are very common in RBD with a percentage of nightmares that goes from 77.8% to 91%explaining that violent sleep enactment are common as well. Especially in men, having dreams that usually involve violence whereas women with RBD tend to dream of threats and fears. Which can result of less aggressive sleep behaviors in women as noted earlier. Women having less aggressive behaviors make them less likely to seek medical help or even ignoring RBD signs resulting of male dominance in RBD (29)

TABLE 12 :DREAM CONTENT IN RBD IN COMPARISON TO LITERATURE

Authors	Year	Number of patients with RBD	Nightmares
Olson EJ and al (9)	2000	93	87%
Leora L.Borek and al (25)	2007	36	77.8%: -74% are men -3.8% are women
Our study	2018	11	91%

3-Sleep disturbances:

Sleep disturbances determine sleep and life quality of the patient and his bed partner, affecting both his professional and social life, what makes assessing these parameters important in RBD. In our study we evaluated three parameters, drowsiness, sleep disturbance to caregiver or sleep partner and sleep disruption. In both literature and our study, drowsiness incidence occurred in 34% to 63% of the population. As for sleep disturbance to bed partner or caregiver, our study’s findings agrees with the study conducted by S.P.LAM and al (30), whereas the results found in the study conducted by Eric J Olson (9) shows lower frequency of this parameter. Finally, sleep disruptionwas found to be in 100% of patients both in our study and in Rositsa Poryazova and al (31), but in Eric J Olson (9) and al study sleep disruption had lower frequency at 70%.

TABLE 13 :SLEEP DISTURBANCES IN RBD IN COMPARISON TO LITERATURE

Authors	Year	Patients number	Sleep disruption	Assaults/sleep disturbance to bed partner	Drowsiness
Poryazova and al (31)	2013	172	100%	Not assessed	Not assessed
S.P.LAM and al (30)	2016	40	Not assessed	90%	Not assessed
Claassen and al (14)	2010	23	Not assessed	Not assessed	34%
Olson and al (9)	2000	93	70%	64%	63%
Our study	2018	11	100%	100%	45%

4-Constipation and Erectile dysfunction:

Values of constipation and erectile dysfunction found in our research are less frequent in comparison to literature. All RBD patients are susceptible to develop constipation or erectile dysfunction. Therefore, further follow up is needed.

TABLE 14 :CONSTIPATION AND ERECTILE DYSFUNCTION IN RBD PATIENTS IN COMPARISON TO LITERATURE

Authors	year	Number of RBD-patients	constipation	Erectile dysfunction
Postuma and al (32)	2006	25	48%	72%
Aguirreand al (33)	2015	44	50%	38.6%
Our study	2018	11	27%	27%

4-2-Physical signs:

Hypotension and hyposmia are frequently associated in patients with IRBD reflecting an early phase of a neurodegenerative process. Our research for hyposmia and hypotension parameters in patients with RBD showed an inferior incidence in comparison to literature. Further follow up is needed for patients are susceptible to develop hypotension or hyposmia.

TABLE 15 :PHYSICAL SIGNS IN RBD IN COMPARISON TO LITERATURE

Authors	Year	Number of patients with RBD	Signs of Parkinson's disease.	Orthostatic Hypotension	Hyposmia
Kolster and al (34)	2005	30	16.7%	-	63%
Postuma and al (32)	2006	25	-	-	56%
Classen DO and al (14)	2010	27	-	59%	-
Kim and al (35)	2015	53	17%	41.5%	-
Aguirre and al (33)	2015	44	-	-	36.4%
Our study	2018	11	64%	18%	18%

4. Polysomnography

Diagnosis of RBD requires polysomnographic features. As for our study Polysomnography was performed in 45% of the patients (5 patients) for it is expensive and not always available

Values of Different sleep stages evaluated in our study (light sleep (LS), slow wave sleep (SWS) and REM sleep (REMs)) and index apnea-hypopnea (AHI) correspond with literature findings. As for REM sleep without atonia (RSWA) found in our study, its percentage is close to the studies conducted by Yun Shena and al (36) and Juan-Ying Huang and al(37).

TABLE 16 :POLYSOMNOGRAPHIC FEATURES IN RBD IN COMPARISON TO LITERATURE

Authors	RBD patients	SL (min)	L.S (%)	SWS (%)	REMs (%)	RSWA (%)	AHI
Jun-Ying Huang And al (37)	92	13.5	63.55	16.40	14.60	41.37	1.40
P.Song and al(38)	149	16.41	74.07	4.83	20.72	-	11.55
Raffaele Ferri and al(39)	13	18	53.9	18.5	18.9	-	-
Yun Shena and al(36)	56	14	72.5	11.1	16.6	36.8	1.7
D. Guttowski and al(40)	20	38.2	72.6	8.8	18.7	-	3.36
Our study	11	23	64.5	17	18.5	41.4	1.26

C. Therapeutic approaches

1. Purpose

-Safety measures in bed are also important to prevent injuries in patients and their bed partner

-RBD current pharmacologicaltreatment is symptomatic, because interventions to prevent or slow the conversion toward neurodegenerative diseases in susceptible subjects are not available at the moment (41).

2. Therapeutic options

a. Non pharmacological options

b. Pharmacological options

1-Benzodiazepines:

Clonazepam (CNZP) is a long-acting 1-4-benzodiazepine GABAA receptor agonist.For as it mechanism of action, it suppresses the excessive phasic motor-behavioral activity, rather than restore REM-atonia (42). Its effectiveness in RBD was studied for the first time by Schenck in 1986, and since then it has been prescribed as a first-choice therapy in RBD (1).Clonazepam is effective in 66.7% up to 87% of patients with RBD, when it isused in a dosage range that goes from 0.125 to 3mg per day. Its main side effectsare early morning sedation, incoordination, falls, confusion, memory impairment, sexual dysfunctions, and worsening of sleep-disordered breathing (43).Furthermore , caution is needed in elderly subjects for the possibility to impair both postural instability and cognitive performances, up to the occurrence of confusional states in subjects with cognitive decline (44)

In addition, it should be prescribed at the lowest effective dose in patients with sleep apnea, and respiratory pattern should be assessed during treatment. (41). Despite its satisfactory effectiveness, Clonazepam is not the best therapeutic option in our context and that is due to frequent discontinuation and prescriptions issued in the form of counterfoil books which most of physicians do not have access to in Morocco. Therefore, an alternative of Clonazepam was to consider. Aside from Clonazepam, Clobazam is also a benzodiazepine,

available in our country and was proven to have less side effects. Therefore, it was used as a therapeutic option in our study.

Clobazam is a long acting 1.5-benzodiazepine whose structure distinguishes it from the classic 1.4- benzodiazepines. Since its approvals in Australia in 1970 and France in 1974, clobazam has been employed as an anxiolytic agent, as an adjunctive medication for the treatment of epilepsy and seizures associated with Lennox-Gastaut syndrome, as monotherapy for partial and generalized epilepsy in children. As compared with other benzodiazepines, clobazam has been shown to have decreased affinity for the GABAa subunits that mediate the sedative side effects (46). Therefore, Clobazam has fewer psychomotor side effects and is considerably less sedating than clonazepam. (47) which may explain our patients having total recovery and No adverse effects. Even though, there were no side effects found in our study, the most common in literature are somnolence, lethargy, drooling, fever and constipation (48). Other reported problems include mood changes, irritability, depression, aggression and disinhibition (49).Based on previous results of Clobazam effectiveness in our patients and Clonazepam difficult access in our context .Clobazam is to consider as an alternative pharmacological option in RBD patients. Therefore, larger studies and longer follow up are needed for effectiveness evaluation versus Clonazepam in RBD population.

TABLE 17 :CLONAZEPAM IN RBD IN LITERATURE FINDINGS

Authors	Study type	Patients	Drug	Results
Schenck and al (50)	Prospective	11	Clonazepam	-fully or total Effective in 81.8% -0.25 mg to 2.0 mg
Olson EJ and al (9)	Retrospective	93 61% of patients received clonazepam	Clonazepam	-total or partial recovery in 87% of RBD subjects -0.25-1.5mg/d -early morning sedation, early morning motor incoordination, impotence
Wing and al (51)	Prospective	82 patients 71 were treated with clonazepam	Clonazepam	-Completely or partially successful in 87% -1.4mg -5 reported intolerable daytime somnolence, and one had transient and reversible increase in liver enzyme
Li SX and al (45)	Prospective	39	Clonazepam	-66.7% had complete remission -0.125–3mg/d
Our study	Retrospective	11	Clobazam	-100% total recovery -5-10mg /d

2-Melatonin :

Differently from clonazepam, melatonin has univocal evidence of restoring REM sleep muscle atonia (52) and melatonin has been shown as being approximately equally effective at reducing RBD severity in respect to clonazepam (43).

In a comparative study to clonazepam, melatonin resulted in better tolerability, with subjects taking clonazepam reporting more frequently drowsiness, instability, and

neuropsychological impairment (53). Dosages used are 2 mg to 12 mg at bedtime. Melatonin at a median dosage of 6 mg proved to be as effective in reducing RBD behavior as clonazepam (0.5 mg) (53) and it is usually well tolerated, despite dose dependent side effects, such as morning headache, sleepiness, delusions, and hallucinations (54).

Because of its profile of effectiveness and tolerability, melatonin is a valid option in RBD subjects and can be preferred to clonazepam in the case of background disease features, consisting of sleep-disordered breathing, disorders of gait and unsteadiness, or cognitive impairment but it is unavailable in Morocco(41)

TABLE 18 :MELATONIN IN RBD ACCORDING TO LITERATURE

Authors	Study type	Patients	Drug	Results
Lin et al (55)	retrospective	28	Melatonin clonazepam0.5–1 mg	Significant reductions of nights with dream-acting-out, nights with vocalizations, and percent of high EMG during total REM sleep time from baseline with the use of melatonin alone and with combination therapy
Mc Carter et al (53)	Retrospective	45	Melatonin	reduced injuries and fewer adverse effects
Boeve et al (54)	Retrospective	14	Melatonin	- effective in 12 patients - 14 months -Side effects: -morning headaches-morning sleepiness, and hallucinations -doses 3-12mg/d

3-Dopamine agonists: ‘’Pramipexole’’:

Controversial results were carried out by efforts in treating RBD with pramipexole(PPX). Pramipexole was reported to reduce RBD symptoms in some studies (56-57) And seemed to be effective mainly in the form of RBD with limited loss of atonia.(58). However, no changes were found in RBD subjects in other research (59)Overall, pramipexole should be considered when other treatments have failed to control RBD. Since its efficacy in restless legs syndrome, pramipexole can be considered initial treatment of subjects with comorbid restless legs syndrome, but deserves a short-interval follow-up visit to assess RBD evolution (41).

TABLE 19 : PRAMIPEXOLE IN RBD ACCORDING TO LITERATURE

Authors	Patients	Drug	Results
Kumuru and al (59)	11	PPX	-Not effective -2-10 mg /night -3 months
Sasai and al (58)	98	PPX and CNZP	-Response rate: PPX 61.7%, CNZP 88.2%, combined 75.8%; -Next-day hangover, muscle weakness Gastro intestinal complaints -Doses: *PPX 0.270-1 mg/night *CNZP 0.670-3 mg/night *Combined therapy (PPX 0.37-1 mg/night CNZP 0.770-3 mg/night) -1.4 years
Schmidt et al (57)	10	PPX	-80% had moderate/total reduction in the frequency of symptoms; Nausea, hallucinations 0.89+/-0.31 mg in the evening 13.1 months

4-Melatonergic Agents:

Effects of ramelteon at doses of 8 mg/d, in improving RBD control in subjects affected by extrapyramidal disorders (60) but were not confirmed on objective polysomnographic assessment of RBD behavior and REM sleep without atonia (RSWA), despite a subjective reduction in dream enactment frequency and severity (61).

In the same way, agomelatine (25 mg) proved to improve RBD symptoms in idiopathic RBD, but did not change RBD motor events frequency and RSWA on polysomnographic assessment (62). Overall, these drugs should be considered when other therapeutic options are consumed

5-Acetyl cholinesterase inhibitors:

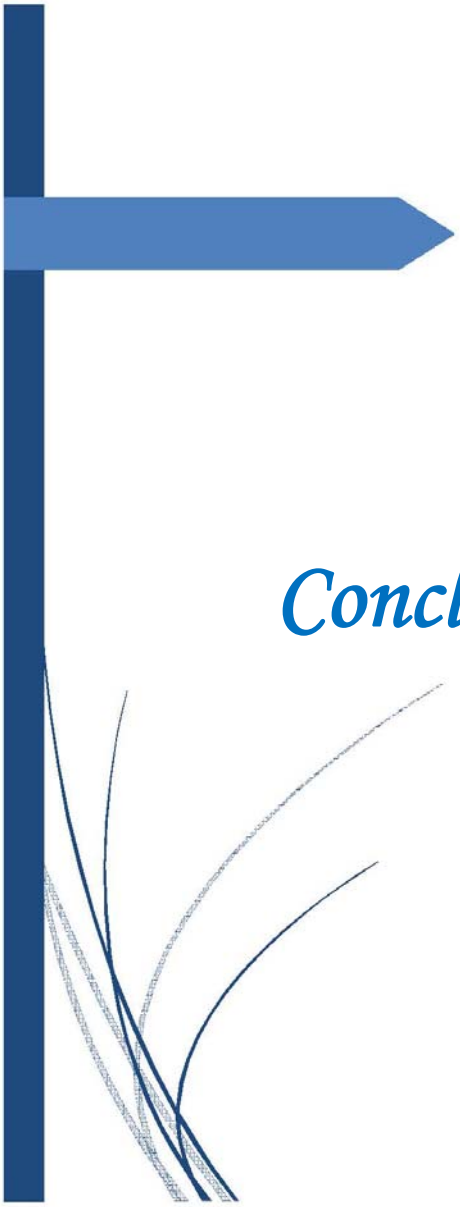
Considering the limited and conflicting data about the efficacy of acetyl cholinesterase inhibitors in RBD, these drugs should be used as a third-line treatment analogously to pramipexole, in cases of clonazepam or melatonin failure (41)

6-Cannabidiol:

The efficacy of cannabidiol, the non-intoxicating constituent of cannabis, in ameliorating RBD in subjects with Parkinson disease was reported, together with a good tolerability profile (63).

D. Limits of the study

The different limits faced in our study included the small sample size of the population studied. Therefore, it is difficult to project our findings on larger population. Also, polysomnogram was not performed in all patients due to its cost and for it not always being available. In that matter, clinical features are required to establish diagnosis.



Conclusion

RBD is an early manifestation of a neurodegenerative process. Therefore, conducting a study around its epidemiological, clinical and polysomnographic features is important. Our patients had male dominance. Also, PD and SAOS were the most common comorbidities in our sample. Nevertheless, a study of larger population is necessary to evaluate demographic and clinical specifities of RBD in our country. Also Polysomnography is expensive and not always available. Therefore, it was not performed in all patients

On another hand, shedding the lights on Treatment options is important in preventing severe injuries in patients with RBD and their bed partner. In that matter, Clobazam was found to be effective in our patients affected by RBD. Furthermore, a study is needed to evaluate effectiveness versus Clonazepam in RBD population

Resume

Abstract

Title: Rapid eye movement sleep behavior disorder: A study of eleven cases

Author: AbirRadouane

Supervisor: Pr Ahmed Bourezza

Keywords: REM sleep behavior disorder, synucleinopathies, parkinson'sdisease ,polysomnography

Background: Rapid eye movement behavior sleep disorder (RBD) isa common parasomnia in the elderly. It has a risk for injuries to patients with RBD and their bed partners as well as a connection to synucleinopathiesthat makes this disorder important to be recognized by physicians

Material and methods: This is a retrospective descriptive studyconducted at the neurophysiology department of Mohammed V Teaching Military Hospital. The study included 11 patients followed at the department for RBD between 2009 and 2017. Various parameters were collected in the aim of studying the clinical specifities of Rbd in our country, the association with synucleinopathies and therapeutic options used in our context.

Results:eleven patients that met the inclusion criteria were included in the study. The mean age was 69, 4 years old, and the sex ratio was 2. Sixty-four percent had Parkinson's disease. Among our patients, 82% had aggressive sleep behaviors. Examination found 18% of orthostatic hypotension and 18% hyposmia. Polysomnography was performed in 50% of our patients, and revealed typical episodes in all patients. Nighty one per cent of patients were treated with Clobazam, for a mean duration of 4.3 years. All the patients responded to the treatment with no adverse effects

Conclusion: RBD is important in predicting neurodegenerative process in the elderly. As polysomnography is expensive and not always available, the diagnosis can sometimes rely on clinical features. According to our study, Clobazam was found to be effective in treating RBD symptoms with no adverse effects. a large comparative study is needed to compare effectiveness versus clonazepam

Résumé

Titre: Trouble du comportement en sommeil paradoxal : a propos de onze cas

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Mots-clés: trouble du comportement en sommeil paradoxal (TCSP), synucléinopathies, maladie de Parkinson, polysomnographie

Contexte : le TCSP est une parasomnie courante chez les sujets âgés. Il existe un risque de blessure pour les patients atteints de TCSP et leurs conjoints, ainsi qu'un lien avec les synucléinopathies qui rend ce trouble important pour être reconnu par les médecins.

Matériel et méthodes : Il s'agit d'une étude rétrospective type descriptive menée au département de neurophysiologie de l'hôpital Mohammed V d'instruction militaire. L'étude comprend 11 patients suivis au service de neurophysiologie entre 2009 et 2017. Divers paramètres ont été recueillis dans le but d'étudier les spécificités cliniques de TCSP dans notre pays, l'association avec les synucléinopathies et les options thérapeutiques utilisées dans notre contexte.

Résultats: onze patients répondant aux critères d'inclusion ont été inclus dans l'étude. L'âge moyen est de 69.4 ans et le sex-ratio est de 2. Soixante-quatre pour cent sont atteints de la maladie de Parkinson. Parmi nos patients, 82% avaient des comportements de sommeil agressifs. L'examen a révélé 18% d'hypotension orthostatique et 18% d'hyposmie. La polysomnographie a été réalisée chez 50% de nos patients et a révélé des épisodes typiques chez tous les patients et 91% des patients ont été traités avec du Clobazam pendant une durée moyenne de 4,3 ans. Tous les patients ont bien répondu au traitement sans effets indésirables

Conclusion: le TCSP est important dans la prédiction d'un processus neurodégénératif chez les personnes âgées. La polysomnographie étant coûteuse et pas toujours disponible, le diagnostic peut parfois s'appuyer sur des caractéristiques cliniques. Selon notre étude, le clobazam est efficace dans le TCSP sans effets indésirables. Une vaste étude comparative est nécessaire pour comparer l'efficacité versus le clonazépam

ملخص

العنوان: اضطراب نوم حركة العين السريعة: دراسة إحدى عشر حالة

المؤلف: عبير رضوان

المشرف: البروفسور أحمد بورزة

الكلمات الرئيسية: اضطراب نوم حركة العين السريعة،الأمراض العصبية التنكسية، مرض باركنسون، دراسة النوم

الخلفية: اضطراب نوم حركة العين السريعة هو ظاهرة شائعة في كبار السن. تشكل خطر الإصابة على المريض وعلى شريك السرير وكذلك يتعلق بالأمراض العصبية التي تجعل هذا الاضطراب مهمًا ليتم التعرف عليه من قبل الأطباء

المواد والطرق: هذه دراسة وصفية بأثر رجعي أجريت في قسم الأعصاب في المستشفى العسكري الدراسي محمد الخامس. شملت الدراسة 11 مريضًا تم تتبعهم بين 2009 و2017. تم جمع العديد من المعلومات بهدف دراسة المواصفات السريرية لاضطراب نوم حركة العين السريعة والارتباط بالأمراض العصبية التنكسية والخيارات العلاجية المستخدمة في سياقنا.

النتائج: تتضمن الدراسة أحد عشر مرض الذين استوفوا معايير الاشتمال في الدراسة. متوسط العمر 69,4 سنة، وكانت النسبة بين الجنسين 2. أربعة وستون بالمائة (64٪) مصابون بمرض باركنسون و82 ٪ لديهم سلوكيات النوم العدوانية. وجد الفحص 18 ٪نقص الشم و18٪ انخفاض ضغط الدم الانتصابي وقد تم إجراء دراسة النوم في 50 ٪ من مرضانا وكشفت عن حلقات نموذجية في جميع المرضى. تمت معالجة 91 ٪ من المرضى بالكلوبازام في معدل 4.3 سنة.

الاستنتاج:

اضطراب نوم حركة العين السريعة مهم في التنبؤ بمرض عصبي تنكسي في المسنين. بما أن علم دراسة النوم مرتفع التكلفة وغير متاح دائمًا، يمكن أن يعتمد التشخيص في بعض الأحيان على الخصائص السريرية.

وفقا لدراستنا، كلوبازام فعال ودون آثار ضارة. هنا كحاجة لدراسة لمقارنة فعالية كلوبازام مقابل كلونازيبام

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Serment

Au moment d'être admis à devenir membre de la profession médicale, je m'engage solennellement à consacrer ma vie au service de l'humanité.

- *Je traiterai mes maîtres avec le respect et la reconnaissance qui leur sont dus.*
- *Je pratiquerai ma profession avec conscience et dignité. La santé de mes malades sera mon premier but.*
- *Je ne trahirai pas les secrets qui me seront confiés.*
- *Je maintiendrai par tous les moyens en mon pouvoir l'honneur et les nobles traditions de la profession médicale.*
- *Les médecins seront mes frères.*
- *Aucune considération de religion, de nationalité, de race, aucune considération politique et sociale ne s'interposera entre mon devoir et mon patient.*
- *Je maintiendrai le respect de la vie humaine dès la conception.*
- *Même sous la menace, je n'userai pas de mes connaissances médicales d'une façon contraire aux lois de l'humanité.*
- *Je m'y engage librement et sur mon honneur.*

قسم أبقراط

بسم الله الرحمان الرحيم

أقسم بالله العظيم

في هذه اللحظة التي يتم فيها قبولي عضوا في المهنة الطبية أتعهد علانية:

- بأن أكرس حياتي لخدمة الإنسانية.
- وأن أحترم أساتذتي وأعترف لهم بالجميل الذي يستحقونه.
- وأن أمارس مهنتي بوازع من ضميري وشرفي جاعلا صحة مريضي هدفي الأول.
- وأن لا أفشي الأسرار المعهودة إلي.
- وأن أحافظ بكل ما لدي من وسائل على الشرف والتقاليد النبيلة لمهنة الطب.
- وأن أعتبر سائر الأطباء إخوة لي.
- وأن أقوم بواجبي نحو مرضاي بدون أي اعتبار ديني أو وطني أو عرقي أو سياسي أو اجتماعي.
- وأن أحافظ بكل حزم على احترام الحياة الإنسانية منذ نشأتها.
- وأن لا أستعمل معلوماتي الطبية بطريق يضر بحقوق الإنسان مهما لاقيت من تهديد.
- بكل هذا أتعهد عن كامل اختيار ومقسما بشرفي.

والله على ما أقول شهيد.

المملكة المغربية
جامعة محمد الخامس بالرباط
كلية الطب والصيدلة
الرباط

سنة: 2018

أطروحة رقم : 389

اضطراب نوم حركة العين السريعة: دراسة إحدى عشر حالة

أطروحة

قدمت ونوقشت علانية يوم:

من طرف

السيدة: عبير رضوان

المزدادة في: 20 غشت 1993 بوجدة .

لنيل شهادة

دكتور في الطب

الكلمات الاساسية :اضطراب نوم حركة العين السريعة- خطل نومي - مرض باركنسون- دراسة النوم.

تحت إشراف اللجنة المكونة من الأساتذة

السيد: بنعمار علي أستاذ في علم الاعصاب	رئيس
السيد: بورزة احمد أستاذ في علم الاعصاب	مشرف
السيدة: صاط امال أستاذة في علم الاعصاب	عضو
السيدة: ركراكي وفاء أستاذة في علم الاعصاب	عضو
السيد: قاديري محمد أستاذ في علم الطب النفسي	عضو
السيد: زلاغ محمد أستاذ في علم طب الانف والأذن والحنجرة	عضو