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Study of Erectile Dysfunction in the Urology Department of the Gavardo Hospital

Ongoiba, S[1*], Sissoko, I[2], Ouattara, Y[3], Sogoba, S[4], Kone, O[4], Kanthé, D[4], Diarra, S[4], Diarra, T[4], Coulibaly, S[4], Malle, K[6], Fomba, D[3], Samake, B[7], Keita, M[7], Singuepiré, A[7], Yoroté, A[7], Diallo A T[8], Touré M[9], Diakite, M.L[5]

[1]Gavardo Hospital Bamako, Mali
[2]Kati University Hospital, Mali
[3]Health Centre in Commune V, Mali
[4]Markala Reference Health Centre, Mali
[5]Point G University Hospital, Mali
[6]Ségou Regional Health Department, Mali
[7]Nianankoro Fomba Hospital, Ségou, Mali
[8]Health Centre in Commune IV, Mali
[9]Hopital du Mali, MALI

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***Corresponding author:** Dr Ongoiba Souleymane
Urologist, Gavardo Hospital Bamako, Mali

Abstract **Original Research Article**

We report the results of a prospective descriptive study of erectile dysfunction in the Gavardo urology department. Over a 2-year period from 02 January 2021 to 31 December 2022 in the Gavardo urology department. We enrolled 7,230 patients, 113 of whom had erectile dysfunction, with a prevalence of 1.7%. The most common age group was 36-50 years. The mean age was 42.92 years with extremes of 20 and 73 years. Twenty-nine (29) patients (26.4%); 26 patients (23.3%) and 18 patients (16.4%) had a history of diabetes or hypertension and smoking respectively.22 patients (19.5%) presented with erectile dysfunction after adenomectomy. Farmers were the most affected compared with other occupations with a rate of 29.2% followed by civil servants with a rate of 20.4%. In our study, 83 patients (73.2%) were satisfied with IPDE5-based treatment.

Keywords: Erectile dysfunction -Smoking -Diabetes -Arterial hypertension.

INTRODUCTION

Erectile dysfunction (ED) is a symptom defined as the persistent or recurrent inability to obtain and maintain an erection that allows satisfactory sexual intercourse.

An objective assessment or the partner's statement can help in the diagnosis, but it is the patient's statement that is the decisive factor in the diagnosis.

Erectile dysfunction or impotence involves a complex constellation of both physical and psychological phenomena.

The first description of erectile dysfunction was found in Egypt, in the Kahun papyri, the oldest known medical treatise, dating from around 2000 BC. Erectile dysfunction is described according to two nosographic types: "the man is unable to perform the sexual act", either naturally or supernaturally, by charm or curse.

A first attempt at an epidemiological and pathophysiological description was made by Hippocrates in the veme century BC, who described impotence as the consequence of excessive horse-riding.

This impotence is said to be more common in wealthy men ("those who are most powerful because of their wealth"), because poor people don't ride horses.

From Antiquity to the Renaissance, little was known about the physiology of erection, which was based on the original concept described by Aristotle, involving the invisible shadow soul whose breath (pneuma) animates the human body. Leonardo da Vinci was the first to question the fact that it had been universally accepted since Aristotle that the erection of the penis was produced by air under pressure. In 1504, he produced the first text on the vascular physiology of erection, which remained unknown until the xxeme

century, protected in the Royal Collections at Windsor Castle.

In 1585, Ambroise Paré laid the foundations for an accurate understanding of the anatomy and mechanisms of erection and described organic, asthenic erectile dysfunction linked to hypogonadism, as well as priapism.

A great deal of fundamental and clinical research has gone into the development and marketing of type 5 phosphodiesterase inhibitors (IPDE5s), which have revolutionised the treatment of ED and ultimately led to the birth of sexual medicine. The availability of IPDE5s, most of which are now prescribed by GPs, brought human sexuality into the mainstream of medical practice, and the medicalisation of sexuality was born.

French, European, North American and international recommendations have been proposed for the management of ED [5-7].

In France, in the urology department of the Tenon hospital, a higher prevalence was found among diabetic patients, with less than 30% of them suffering from the disease [8].

In Morocco, in the Nephrology-Dialysis-Kidney Transplant Department at Ibn Sina University Hospital, the prevalence of ED in their patients prior to renal transplantation was 84% [9].

In Dakar, Africa, their prevalence was estimated at 16% [27]. No similar study had been carried out on this health problem in the urology department of the CHU du point G, hence the objectives of this study:

OBJECTIVE

❖ **General objective**

✓ **Studying erectile dysfunction in patients**

❖ **Specific objectives**

- Determining the frequency of erectile dysfunction
- Identifying the main sexual disorders
- Screening for organic disorders in the presence of a sexual disorder
- Identify the main clinical signs presented by patients
- Evaluate the results of the various treatments administered

METHODOLOGY

2-1-Type and period

This is a prospective descriptive study of patients who consulted the Gavardo Urology Department for erectile dysfunction.

It covers the period from January 2021 to December 2022 in Gavardo's urology department.

2-2-Inclusion criteria

All patients who consulted the Gavardo urology department for erectile dysfunction and were treated.

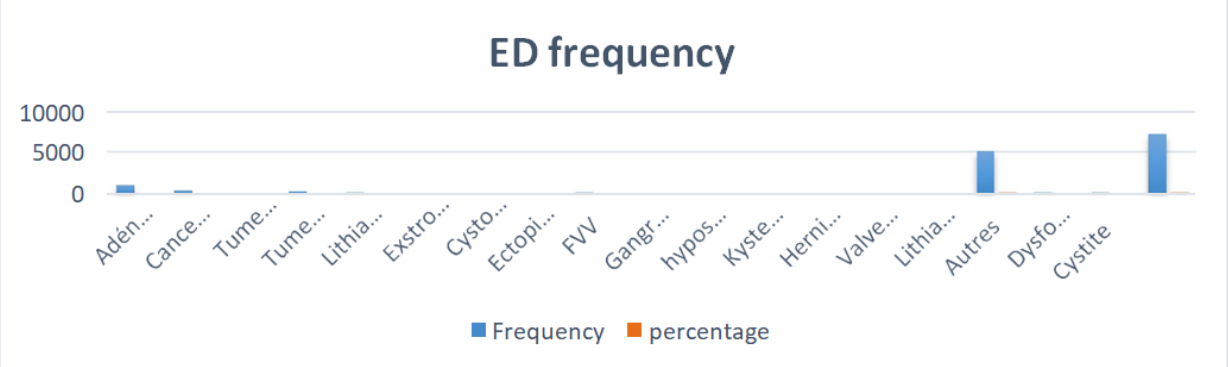
2-3-Non-inclusion criteria

All patients with incomplete medical records, as well as patients with urogenital malformations.

2-4-Methods and materials

A pre-established questionnaire was completed on behalf of each patient, and data collection was based on the patients' medical records, the consultation register and the operative report register. Data were analysed and entered using epi-info3.5.1version 6. forward Microsoft software.

RESULT



Graph 1: Frequency of erectile dysfunction among other urological conditions

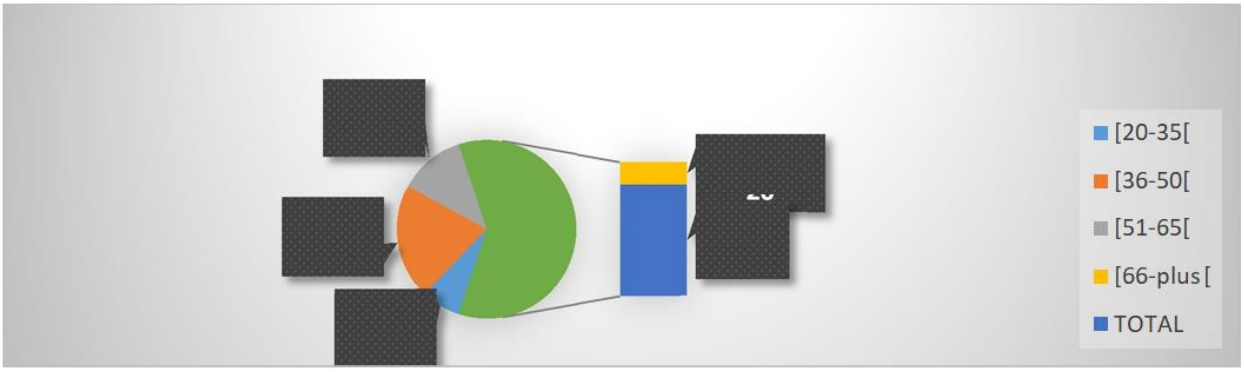


Chart 2: Age distribution

The 36-50 age group represented 42% of patients with erectile dysfunction, i.e. 47 patients.

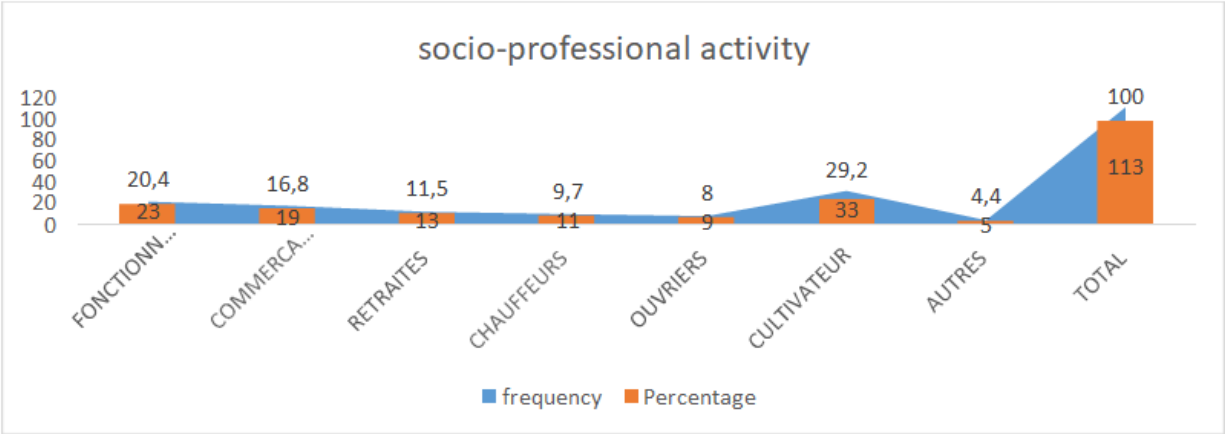
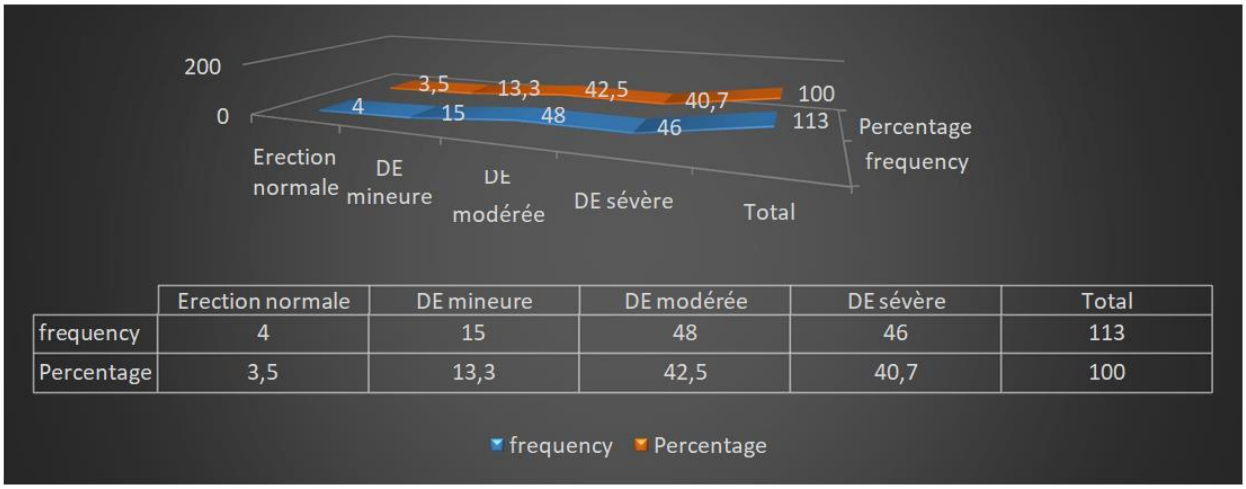


Chart 3: Breakdown of patients by socio-professional activity



	Erection normale	DE mineure	DE modérée	DE sévère	Total
frequency	4	15	48	46	113
Percentage	3,5	13,3	42,5	40,7	100

Graph 4: Breakdown by reason for consultation and by age group The International Index of Erectile Function (IIEF-5)

42.5% of our patients had moderate erectile dysfunction,

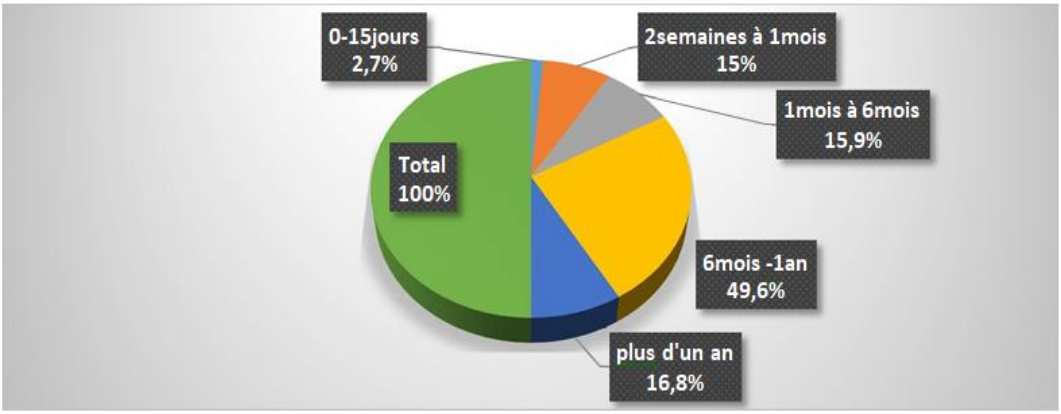
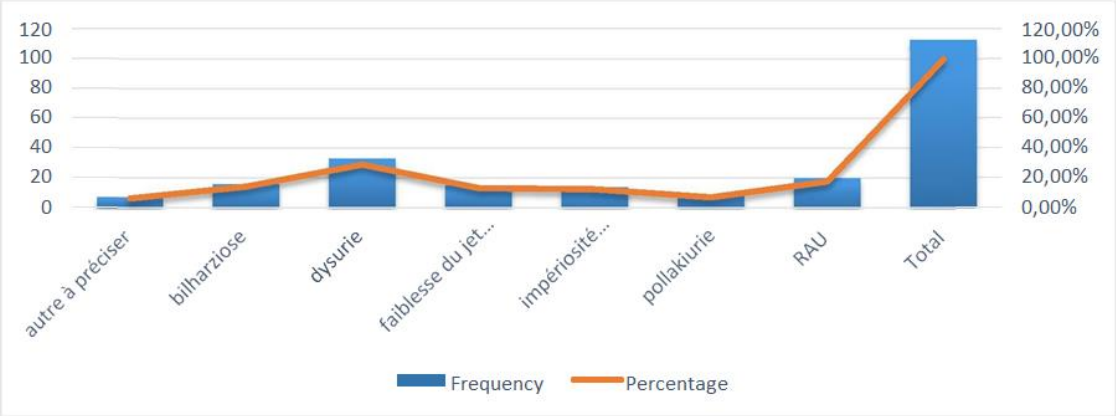


Chart 5: Breakdown by consultation time



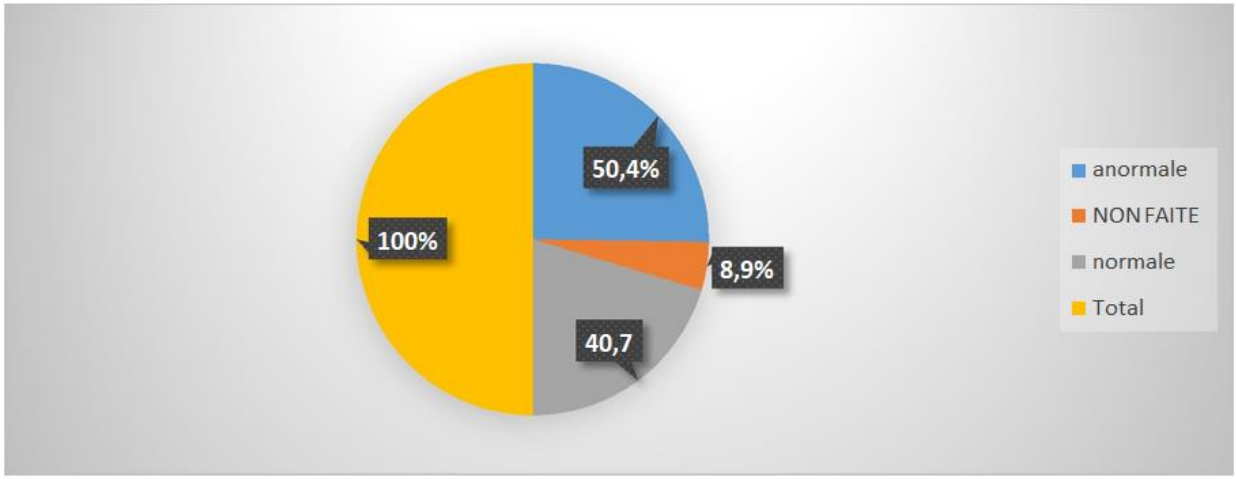
Graph 6: Distribution according to associated urinary signs

Table 1: Breakdown by comorbidity

Comorbidities	**Frequency**	**Percentage**
AVC	7	6,4
Diabetic	**29**	**26,4**
heart disease	3	2,7%
Bilharzia	*13*	*10,0*
Sickle cell	7	6,4
HTA	**26**	**23,6**
LAPEYRONIE'S DISEASE	3	2,7
Nephropathy	3	2,7
Neuropathy	1	0,9
PRIAPISM	2	1,8
Smoking	18	16,4
Total	113	100,0

Table 2: Breakdown by surgical history

Surgical history	**Frequency**	**Percent**
cure of an ICH	11	9,7%
appendectomy	7	6,2%
other	3	2,7%
varicocele treatment	5	4,4%
Adenomectomy + TURP	22	19,5%
pulpectomy	4	3,5%
CLEAR	**56**	**49,6%**
uretroplasty	5	4,4%
Total	113	100,0%



Graph 7: Pulsed Doppler ultrasound

Table 3: Breakdown by treatment received prior to referral to the urology department

Treatment received prior to referral to the urology department	Frequency	Percentage
self-medication	**37**	**33,0**
medical	15	13,4
CLEAR	29	25,9
without Treatment	17	15,2
Traditional	14	12,5
Total	113	100,0

Table 4: Breakdown by type of treatment carried out in the department (phosphodiesterase 5 inhibitor-based drug (IPDES5))

Type of treatment carried out in the departments (phosphodiesterase inhibitor 5 (IPDES5)-based medication)	**Frequency**	**Percentage**
CLEAR	26	23,9%
SILDENAFIL (Viagra)	57	50,4%
TADANAFIL (Cialis)	19	16,%
VARDENAFIL (Levitra)	11	9,7%
Total	113	100,0%

Table 6: Breakdown by patient satisfaction

Patient satisfaction	**Frequency**	**Percentage**
not Satisfied	30	26,8
Satisfied	**83**	**73,2**
Total	113	100,0

COMMENT AND DISCUSSION

Exploring and assessing erectile dysfunction is one of the historic daily tasks of urologists. The emergence of sexual disorders in patients' consciousness now constitutes a frequent request for care during urological consultations, with erectile dysfunction at the top of the list.

1. Frequency

Over a 2-year period from 02 January 2021 to 31 December 2022, we collected 7230 patients, 113 of whom had erectile dysfunction, with a prevalence of 1.7%. In Dakar, Africa, the prevalence of ED was estimated at 16% [26]; in Morocco, in the Nephrology-Dialysis-Renal Transplant Department at the Ibn Sina University Hospital, the prevalence of ED in their patients before renal transplantation was 84% [9]; in France, in the Urology Department of the Tenon Hospital, *the* prevalence was higher in diabetic patients, with less than 30% of them suffering from ED [8]. Our prevalence is significantly lower than that of other authors, which could be explained by the small size of our sample, or the under-use of our hospitals.

2. Age

The influence of age on the prevalence of erectile dysfunction is well established; all the surveys conducted in the general population and in our patients have shown that age is the greatest risk factor for erectile dysfunction. In addition to the increase in prevalence, a worsening of the severity of erectile dysfunction has

been classically found in the literature through variations in the proportions of erectile dysfunction. In our study, the most common age group was 36-50 years. The mean age was 42.92 years, with extremes of 20 and 73 years. This could be explained by the combination of risk factors that classically affect adults after certain ages. These causes are multifactorial, of a psychological and organic nature: diabetes, hypertension, atherosclerosis, heart failure, neurogenic, hormonal and metabolic disorders and adverse drug reactions.

The rate of erectile dysfunction was 60% for minor disorders in T. Bouattar, [25]; 15% in M. Bamba [21]. Bouattar [25]; 15% in M. Bamba [21]; and 13.3% in our study.

This rate is comparable to that of M. BAMBA and lower than that of T. BOUATTAR, which could be explained by the fact that his patients had consulted before the aggravation of the disorders.

Twenty-nine (29) patients (26.4%); 26 patients (23.3%) and 18 patients (16.4%) had a history of diabetes or hypertension and smoking respectively. These main risk factors have been found in other authors [21, 25]. 22 patients (19.5%) had erectile dysfunction after adenomectomy. This could be explained by the fact that these patients had erectile dysfunction before the operation.

Farmers were more affected than other occupations with a rate of 29.2%, followed by civil servants with a rate of 20.4%; this rate is lower than that of M. Bamba [21] who found 32.9% for civil servants. The high rate among farmers in our study could be explained by their low social status.

All our patients have benefited from psychotherapy before undergoing medical treatment, which has proved effective for some of our patients.

Medical treatment has involved the use of IPDE5s (phosphodiesterase type 5 inhibitors). Finally, numerous studies have shown that PDE-5 inhibitors, until now only used for the treatment of erectile dysfunction, significantly improve urinary symptoms, even though they have no effect on flowmetry or other urodynamic parameters [26].

In our study, 83 patients (73.2%) were satisfied with IPDE5-based treatment. These results are consistent with those of Hadiji [18], who found that 30% of his patients had an erection greater than 4/5 with IPDE5. Our satisfaction criteria were based on the following elements: patients who had normal sexual intercourse without recourse to medication after several unsuccessful attempts between 2 and 4 months, normal results on cavernography and pulsed Doppler ultrasound and hormonal check-ups.

The mechanism of action is difficult to explain. The only hypothesis that could be put forward is the reinforcement of sympathetic erection, which potentiates the rigidity of the penis.

CONCLUSION

ED is more prevalent in diabetic patients, affecting at least 30% of them. The pathophysiology is complex and multifactorial, mainly involving damage to the vascular endothelium, diabetic neuropathy and psychological factors. ED is responsible for a deterioration in quality of life.

Therapeutic management is based on specific treatments on the one hand, and the prevention and treatment of complications of diabetic disease and psychological support for patients on the other.

IPDE5s have become the first-line treatment, with proven safety and efficacy. In the second line, local treatments such as intracavernosal injections of prostaglandins or vacuum may be considered.

As a last resort, penile implants can also be considered for diabetic patients, although the risk of infection on the prosthesis is greater in these patients.

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