

CLINICAL EVOLUTION IN PATIENTS WITH PENILE PROSTHESIS IMPLANT.

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Summary.- OBJECTIVES: 1). To evaluate the satisfaction and clinical outcome in patients with penile prosthesis implant as a treatment to Severe Biogenic Erectile Dysfunction. 2). To identify the most frequent complications associated with the surgical intervention. 3). To compare the behaviour of sexual satisfaction in partners and patients with penile prosthesis implant before and after the application of the treatment.

METHODS: A descriptive, (longitudinal) study with quantitative and qualitative methodology was done, where 25 men with penile prosthesis implants, performed at Faustino Perez Hospital, were evaluated.

RESULTS: The complications presented in the procedures were perforation of the tunica albuginea, postoperative pain, thin penis and the expulsion of one or two cylinders, this latter case in a patient who presented periprosthetic sepsis.

CONCLUSIONS: The penile prosthetic implant constitutes an option of effective treatment which achieves an 88 % of sexual satisfaction in patients.

Both partners and patients treated with penile prosthetic implantation referred increase in erotism, satisfactory sexual activity, improvement of self-esteem, quality of communication with their partner, better labour results, interpersonal and social relationships and strengthening of couple's bonds.

Keywords: Tunica Albuginea. Prosthesis. Malleable. Periprosthetic.

Resumen.- OBJETIVOS: 1) Evaluar la satisfacción y evolución clínica de los pacientes con prótesis peneana, como tratamiento de la disfunción eréctil biogénica severa. 2) Identificar las complicaciones más frecuentes asociadas a la intervención quirúrgica. 3) Comparar el comportamiento de la satisfacción sexual de los pacientes con implante de prótesis peneana y su pareja, antes y después de aplicado el tratamiento.

MÉTODO: Se realizó un estudio descriptivo longitudinal con metodología cuantitativa y cualitativa donde se evaluaron a 25 hombres a los cuales se les había insertado prótesis peneana en el Hospital Faustino Pérez de Matanzas.

RESULTADOS: Las complicaciones que se presentaron en nuestra casuística fueron la perforación de la albugínea, el dolor post operatorio, el pene fino y la expulsión de uno o dos cilindros, esta última en un paciente que presentó sepsis peri protésica.



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CONCLUSIONES: El implante de prótesis peneana constituyó una opción de tratamiento efectiva que logró un 88% de satisfacción sexual en los pacientes implantados. Los pacientes tratados con la implantación de prótesis peneana y sus parejas refirieron incremento en el erotismo, la actividad sexual satisfactoria, mejoría en la auto estima, la comunicación de pareja, el rendimiento laboral, las relaciones personales y sociales y el fortalecimiento del vínculo de la pareja.

Palabras clave: Albugínea. Prótesis. Maleable. Peri protésica.

INTRODUCTION

The Erectile Sexual Dysfunction is the consistent inability to obtain or maintain an erection in order to achieve a satisfactory sexual function, according to patient and/or couple references or based on objective tests, in a three-month period minimum and after adolescence.

The incapability of having an erection may lead to the individual self-destruction, characterized by the loss of self esteem, dissatisfaction with professional results, self image, couple bonds and erotism, the loss of self trust, inferiority complex and decline in quality of life; due to these facts ESD represents an important health problem (1-3). The treatment for Erectile Dysfunction is approached from three main lines.

First-line:

Education, counselling and sexual psychotherapy, the control of modifiable risks factors and chronic diseases, oral drugs such as phosphodiesterase type 5 (sildenafil, valdenafil, taladafil) and hormonal replacement therapy.

Second-line:

Intracavernous injections of vasoactive drugs (PGE 1, papaverine, phentolamine), the administration of transurethral drugs, (Topical use of Prostaglandin E) and the use of vacuum erection devices.

These drugs previously mentioned, relax the smooth muscle directly or block the adrenergic induced tone.

Third-line:

Vascular surgery: Arterial or venous type, which has not proved to be effective after a long term, and occupying the primacy in this line, is the penile prosthesis implant (1-3).

When is a Penile Prosthetic Implant indicated?

1. When patients do not respond or do not accept oral medical or Intracavernous therapy available at the current moment, for they may result uncomfortable or painful.
2. When these drugs should not be prescribed due to Parallel Systemic Diseases or local conditions that discourage their use.

The I Latin American Consensus of Erectile Dysfunction of the Latin American Society for the Study of Impotence and Sexuality (SLAIS) Salvador de Bahia, Brazil celebrated from 28th to 31st of August, 2002 acknowledges the following indications for penile prosthesis implant:

1. Individuals with ED of an organic cause where other treatment varieties were not satisfactory, either for being contraindicated or because they are not tolerated by the patient.
2. It can be considered in cases of psychogenic refractive ED, ruling out conventional therapy and even well conducted psychotherapy after 6 to 12 months-period of treatment, in the absence of psychopathy and oriented by the Mental Health professional. The psychological evaluation of the patient should be careful. Avoid building false hopes about the future results. Therefore it is recommended to avoid the indication of prosthetic implants in patients with a high level of anxiety, depression or low self esteem, which have not been treated.

In our experience, counselling and the informed consent have been of great importance in the results of the treatment.

The history of penile implants started with professor Nicolai Borgoras in 1936 when trying to reconstruct a penis with the objective of facilitating urination and sexual activity through the use of a costal cartilage. Several months after, its gradual reabsorption made impossible to fulfil the objective. The firsts prosthesis with heterologous material dated in 1950, when acrylic implants started being used. Later on, silicon and synthetic material cylinders were used until the upcoming of hydraulic penile prosthesis in 1973, which intended to outgrade the aesthetics and to improve the functionality of the malleable prosthesis previously designed.

The prosthesis only offers or restores the necessary rigidity to fulfil penetration, but it can not be compared to a normal penis functionally speaking, even implanting a hydraulic prosthesis from the last

generation, they do not obtain flaccidity as the physiological one or a full normal erection, it does not produce changes in sensibility or size, it does not increase the capacity of having an orgasm, although facilitates it since the prosthesis allows penetration, it does not increase the libido and represents a risk of complications.

There are generally two types of penile prosthesis: malleable and hydraulic. The first is composed by two silicon cylinders with a central core covered with stainless steel or silver (rigid).

In hydraulic prosthesis, the erectile bodies are sealed tubes (or reinforced with silicon, polyurethane, or similar polymers) which remain flaccid during sexual inactivity. These cylinders are connected to a liquid reserve, placed in the anterior abdominal wall or inside the scrotum, connected to an intrascrotal pump at the same time. The pump is activated manually to inflate the cylinders with the liquid through a valve mechanism, which leads to erection and, later on the liquid returns to the reserve, to produce penis detumescence. The obvious advantages of these two types of prosthesis are that they simulate better a normal erection, are simple and have an acceptable durability. However, they are more expensive than malleable prosthesis and can produce hydraulic failure during prolonged usage (10-13). Several profound investigations have been devoted to study the effectiveness of the prosthetic implant, procedure which

has been performed in our country for several years now, aiming at giving solution to the severe erectile dysfunction at the Urology Service at Comandante Faustino Perez Hernandez Hospital in the Province of Matanzas, then we needed to perform a clinical evaluation of the evolution of the patients in relation to the success of the surgical procedure.

Though some information has been recorded in the existing bibliography about the evolution of the patients treated with this surgical modality, it represents a question for us to determine a long term evolution in those patients.

MATERIAL AND METHOD

This study derives from the qualitative and quantitative methodology, with a descriptive longitudinal design; the sample is composed by 25 patients with penile prosthesis implant in a time period from

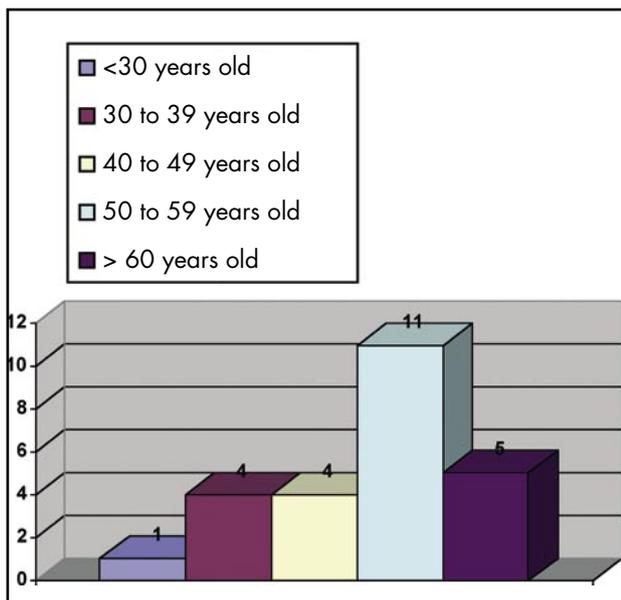


FIGURE 1. Patients with penile prosthesis implant according to age. Comandante Faustino Perez Hospital 2005-2008

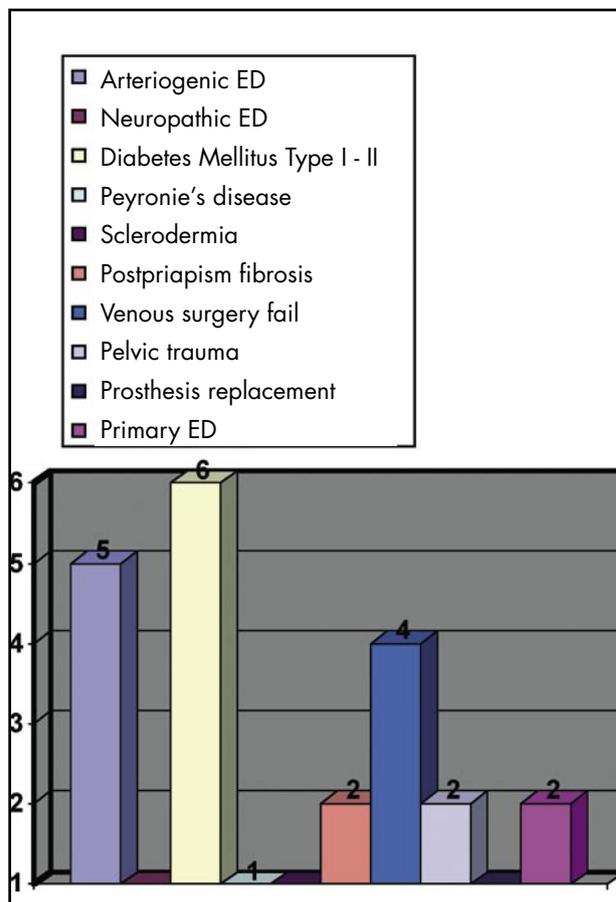


FIGURE 2. Patients with penile prosthesis implant according to the Etiology. Comandante Faustino Perez Hospital 2005-2008

year 2005 to year 2008, at the Comandante Faustino Perez Hernandez Hospital of Matanzas, with an evolution period of more than 6 months after the prosthetic implant.

Inclusion Criteria

- Patients with a penile prosthesis implant with a minimum period of 6 months after performing the procedure.
- Patients who voluntarily agree to participate in the investigation.

Exclusion Criteria

- Patients with prosthetic implant for a period minor than 6 months.
- Patients who do not wish to participate in the investigation.

Information analysis and processing

A data base was created with the SPSS program, version 10.0; summary measures were used for

quantitative variables. The results were presented in tables and graphics using the Microsoft Word Program.

Ethic aspects of the study

The patients are previously informed about the objectives of the investigation and their right to refuse to participate, taking into account it is a voluntary process.

- Informed consent (oral and written) (Annex 3) as a process.
- Confidentiality of shared information.
- Privacy conditions.
- Universal measures of bio-security.
- Benefits.
- Feedback.

Analysis and discussion of the results

Out of the 25 patients who received the prosthetic implant, the most frequent age ranked from 50

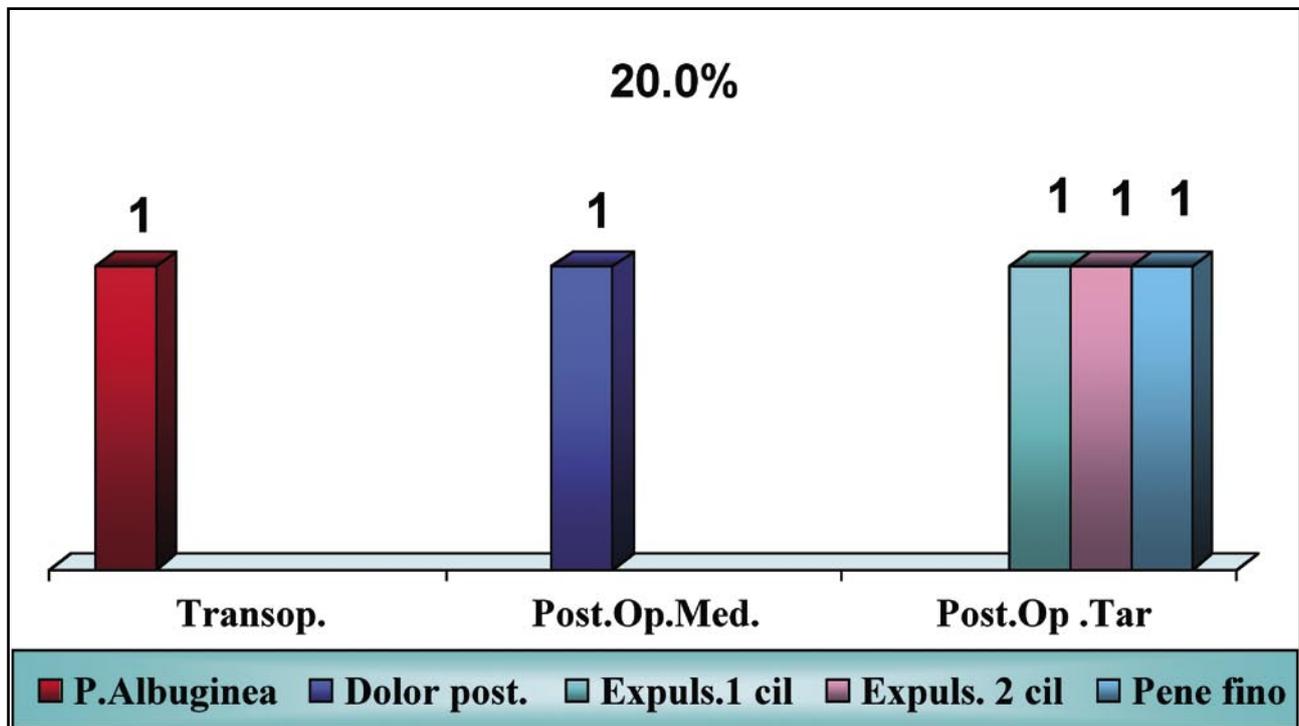


FIGURE 3. Operatory complications in penile prosthesis implants. Comandante Faustino Perez Hospital 2005-2008

TABLE I. TYPES OF PROSTHESIS USED IN PENILE IMPLANTS. COMANDANTE FAUSTINO PEREZ HOSPITAL 2005-2008.

Types of Prosthesis		
	Frequency	Percentage
AMS600	1	4
AMS650	2	8
Brazilian H R	7	28
MENTOR GENESIS	1	4
MENTOR, ACUFOM	1	4
TUBE Argentina	13	52
Total	25	100

Source: Clinical History

to 59 years old in 11 patients and in second place 5 patients older than 60 years old, facts that coincide with the reviewed bibliography (Figure 1).

Among the most frequent causes of erectile dysfunction in our study were Diabetes Mellitus with

TABLE II. SURGICAL APPROACHES IN PENILE PROSTHESIS IMPLANTS. COMANDANTE FAUSTINO PEREZ HOSPITAL 2005-2008.

	Frequency	Percentage
Subcoronal Incision	3	12
Longitud. Penoescrt. Inc.	10	40
Transv Penoescrt. Inc	12	48
Total	25	100

Source: Clinical History

6 cases, Arteriogenic Erectile Dysfunction with 5 cases and the failure of vascular reconstruction with 6 cases, it should be taken into account that in the reviewed literature the most frequent cause is mixed ED, the 40% of our patients presented biogenic erectile dysfunction predominantly (1-3). (Figure 2).

The most used penile prosthesis model was the Argentinean TUBE, which was used in 13 patients (Table 1); as a surgical approach, the transverse peniscrotal incision performed in 12 cases and longitudinal peniscrotal incision in 10 cases, the subcoronal incision was performed in 5 cases only.

Five of the assisted patients presented post operative complications, one patient with Albuginea perforation during the transoperative; another patient with postoperative pain; the expulsion of one cylinder in one case; another case with the expulsion of both cylinders due to periprosthetic sepsis, and one patient with thin penis due to an atrophy of the erectile tissue (Figure 3). The reviewed literature also describes urethra lesions, immediate postoperative events such as: bleeding, scrotal and perineal bruises, complete urine retention, penis edema; late postoperative events such as fibrosis, short prosthesis and prosthesis fracture.

CONCLUSIONS

1. The predominant age rank in patients with Erectile Dysfunction who received penile prosthesis implants was of 50-59 years old.
2. The most frequent causes of Erectile Dysfunction were Arteriogenic and Diabetes Mellitus I and II.
3. Transversal peniscrotal incision gives a better surgical exposure to place the implant.
4. The most frequent failure cause in all the cases treated was the periprosthetic sepsis.

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