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Case Report

Management of Peyronie's Disease using Yachia Technique : Case Report and Review of Literature

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Abstract

The penile curvature is a relatively common reason for consultation in urological clinical practice. The curvatures are generally subdivided into two types: the frequent congenital one, and the acquired one which contains the Peyronie's disease (PD).

A variety of surgical and non-surgical therapies have been proposed for PD to treat both types of curvature but none has been entirely satisfactory. The most popular is the Nesbit technique, described in1965 for congenital curvatures and adapted in 1977 for the PD. Numerous variants of this technique have been proposed in order to simplify the procedure, increase the rate of success and patient satisfaction and finally reduce the rate of surgical complications.

We report a case of a 43-years-old man suffering from a disabling PD with a curvature of 45°. We opted for the Yachia procedure wich is a variant of the Nesbit one. Through this clinical case and a literature review, we will analyse the therapeutic strategies of this enteresting entity and support the technique we have chosen.

Keywords : Peyronie's Disease; Penile Curvature; Nesbit Techniqu; Yachia Technique.

Introduction

The penile curvature is a relatively common reason for consultation in urological clinical practice. The curvatures are generally subdivided into two types: the frequent congenital one, and the acquired one which contains the Peyronie's desease (PD) [1].

The management of PD is a real challenge for both the surgeon and the patient. Numerous surgical and non-surgical therapies have been proposed but none has been entirely satisfactory. Indeed, with the various complications arising and the low success rate, urologists may be faced with a Chinese boxes effect that becomes complex to handle.

In the light of this case, we propose the Yachia technique which is a variant of the original Nesbit.

Patient and Observation

We report the case of a 43-years-old patient with no specific pathological history, who presented a penile curvature making sexual intercourse impossible.

Clinical examination showed an induration of the corpus cavernosum, and a ventral curvature of the penis (45 °) after artificial erection. The biological evaluation did not show any particular abnormality: no anemia, no electrolyte disturbance, and no disorder of blood dyscrasia. Medical treatment was offered to the patient. After a year of observation, results were disappointing, where the curvature degree has not changed.

Surgical correction was based on the technique of Yachia. Under spinal anesthesia, a circumferential subcoronal incision was made and the penis was degloved to the penile root. Buck's fascia was then longitudinally incised at the sides of the corpora cavernosa and freed. The dorsal neurovascular bundle was also freed and carried on an elastic strip. The urethral probe was installed. Isotonic saline

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serum was injected into the corpus cavernosum through a 16 gauge needle to achieve artificial erection (Figure 1).We used the surgical technique described by Yachia. Which consists in performing several longitudinal incisions of tunica albuginea with no more than 1 cm in the contralateral side of the curvature. We hence performed 2 incisions in each corpora cavernosa, followed by a transversal plication with 4-0, nonabsorbable sutures [2]. No intraoperative complications were recorded. Penile curvature was completely corrected (Figure 2). Neither residual curvature nor hypercorrection were recorded. The patient was discharged home the day after the procedure. After surgery, regular follow-up was recommended.

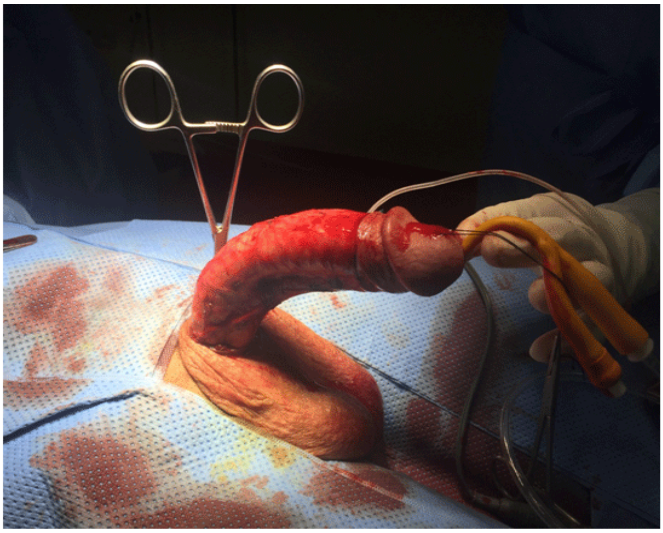

Figure 1. Circumferential subcoronal incision, the penis is degloved, ventral curvature of the penis 45 ° after artificial erection

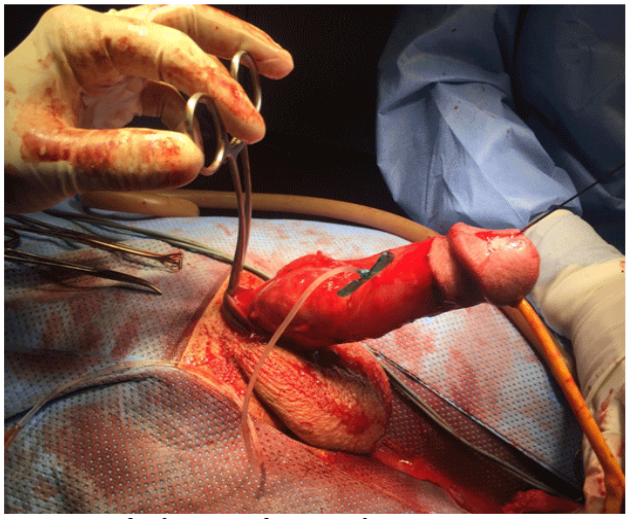

Figure 2. Artificial erection after surgical correction.

During the consultations, the complications examined were: residual curvature or hypercorrection, impaired sensation of penis, erectile dysfunction, dyspareunia and the perception of the shortening of the penis. Also, we appreciated the overall satisfaction of the patient. The patient was satisfied and did not report these complications.

Discussion

First described by Francois De La Peyronie In 1743 [3], PD is a segmental fibrosis of the corpus cavernosum. It corresponds to an accumulation of very dense collagen fibers which can evolve towards the appearance of cartilage or even ossification. As a result, a localized modification of the elasticity of the corpus cavernosumoccurs which produces a curvature of the penis at the erection [4]. The disease can be explained by a broken inflammatory response to a sexual lesion of the tunica albuginea penis [5]. But the etiology and pathophysiology of PD needs better understanding.

The curvature centered on the fibrous core leads to a difficulty or an impossibility of penetration.

PD is the prerogative of men between 40 and 70 years old, its appearance is fast and it evolves in two phases. The first active or inflammatory phase lasts from 6 to 18 months and consists in the development of a plaque, pain and a curvature. Then, in the chronic phase, the erection pain decreases or disappears, the plaque remains stable and the deformation in erection persists. Nevertheless, it seems pertinent to recall the existence of a few cases where the plaque and the curvature disappear after several years of evolution [6,7].

The diagnosis is primarily clinical. Ultrasounds or magnetic resonance imaging are used only to specify the exact seat of the plate when it is difficult to palpate it [8].

Numerous non-surgical options for PD have been proposed including : Vitamin E, colchicine, and PDE-5 inhibitors among others. But the American Urological Association (AUA)doesn't recommends any of these oral agents [9].

In the active phase of PD, collagenase clostridium hystolyticum injection (first described by Gelbard) actually comprises the medical option according to several authors who report positive results [9,10].

Unlike collagenase clostridium hystolyticum injection, surgical treatment may be proposed after the stabilization of the plaque. The aim will then be to restore an erection facilitating intromission.

Plication or plaque incision or excision and grafting are recommended for patients with preserved erectile function, and penile prosthesis for the rest.

The 2010 consensus panel on PD recommended operative treatment for men with a stable and painless disease since 6 months or longer

who want a rapid and reliable result. Also, it suggest a plaque incision or excision and grafting formen with >60 degree curvature or hourglass deformity causing a hinge-effect [11].

Several surgical techniques have been described in the literature. We opted for the Yachia technique, which is a variant of the original Nesbit. In this context, we thought it was worthwhile reminding original Nesbit intervention principles, together with its variants.

Nesbit's intervention was adapted to Lapeyronie's disease only in 1979 [12]:An ellipse of tunica albuginea is excised at the top of convexity and the defect is closed with continuous 4-zero polypropylene suture. A second ellipse is excised if the deformity has not been completely corrected. The urethra (dorsal curves) and the vasculo-nervous pedicles (ventral curves) must be identified. As a general rule, respecting 1 mm corresponds to correcting 10 ° [13].

For the correction of the dorsal curves it is absolutely necessary to completely release the spongy body from the corpora cavernosa (14). By respecting all these rules, we can aspire to 82 and 100% of good results [15,16,17].

This technique is obviously not devoid of disadvantages: The shortening of the penis is constant and all the more important as the curvature is pronounced (on average of 1 to 3 cm). However, it generally does not affect intromission at first and sexual intercourse in its globality. Other consequences are reported in the literature: the trauma of the already altered erectile tissue, intraoperative hemorrhage, the hypoesthesia of certain areas and finally the urethral wound.

Recently, plication has increased in popularity and several modifications have been proposed.

The Nesbit procedure has been modified by Yachia, who suggested making a single or multiple 1 cm longitudinal incisions along the convex side of the tunica. Their closure will then be done in a transversal direction using non-resorbable points [2,18]. This technique reduces the injury of neurovascular bundle and the glans hypoesthesia [2]. We have been working on this task and have achieved a very satisfactory result. Recent reviews show a success rates of straightening (93%) and satisfaction (78-83%) with the Yachia technique [19].

Kelami [20] recommends correcting the curvature by placing the Allis forceps on the convexity of the corpus cavernosum and then respecting the ellipses thus delimited. The closure of the albuginea will then be done.

Essed and Schroeder [21] have popularized the simple tunical imbrication without incision which seems to have a high rate of relapse even in case of non-resorbable suture.

Lue and Gholami propose to invert suture knots and also to imbricate multiple, parallel lines of tissue around the point of maximal curvature : the 16-dot plication technique [22].

Concerning the plaque incision or excision and grafting, numerous modalities have been proposed. Most procedures involve the dissection through Buck's fascia, mobilizing the dorsolateral neurovascular bundles, and exposing the tunica albuginea, which is carefully incised over bilateral cavernosa at the point of maximal curvature. Many graft materials have been proposed in the literature as autologous or donor vein, dermis, buccal or lingual mucosa and fascia lata [23,24].

Conclusion

PD is a pathology that causes disabling penile deformities. Indeed, besides the pain it is especially the distortion which greatly alters the quality of sexual life. A surgical correction is necessary.

The technique of Yachia, derivative of the Nesbit one, seems to be appropriate for patients with functional impairment from their Peyronie's disease after the stabilization of the plaque (chronic phase).

A better knowledge of the path physiology is necessary to improve both the modalities of management and their effectiveness.

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