A NEW SURGICAL METHOD FOR THE CORRECTION OF CONGENITAL PENILE CURVATURE BASED ON GEOMETRIC PRINCIPLES AND SUPERFICIAL TUNICA ALBUGINEA EXCISIONS

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Objective: Congenital penile curvature can have detrimental effects on the life of patients. Surgical correction of a congenital penile deviation is associated with several side effects such as loss of penile length and formation of “dog ears”. We report our experience with a new technique for the correction of congenital penile curvature based on geometric principles.

Materials and methods: Between January 2009 and March 2011, 211 men with congenital penile curvature underwent our modified Nesbit technique. The technique consists of an objectification of the curvature and distribution of the bending force by multiple, small, superficial elliptical excisions of the tunica albuginea. 

Results: Overall success rate was 99.1%. Residual curvatures of less than 20 degrees was reported in 95% (n=209) of the cases, none of these patients opted for further surgical correction. Residual curvature of up to 30 degrees was observed in 4.8% (n=11). None of these patients underwent a re-operation. It was clearly shown, that the acquisition of the ability to perform sexual intercourse brought major relief and high rates of satisfaction and self-esteem. No significant penile shortening nor loss of genital sensation were observed.

Conclusions: Our modified Nesbit technique, consisting of superficial tunica albuginea excisions, according to the geometric principles of the Egydio technique leads to rapid and excellent results. Our technique is a safe and valid alternative for the treatment of congenital penile deviation.

INTRODUCTION

Penile curvature is a common urological problem, estimated to affect 3-5% of the male population. Abnormal penile deviations are divided into a congenital form, which is less frequent (37/100,000 men), and an acquired form, due to Peyronie’s disease, which affects a larger proportion of the male population (388/100,000).

Neyybits’ original technique: excision of paired ellipses of the tunica albuginea from the dorsal surface of the corpora cavernosa. Neyybits’ technique has been modified by various techniques. These techniques are based on the principle of the Egydio technique and the radial and incidentional excisions.

MATERIALS & METHODS

211 patients with disabling, congenital ventral and/or venstro-lateral curvature of the penis underwent our modified Neyybits’ surgical procedure. Mean age was 22.5 years (range, 14-45 years). Patients reported difficult vaginal penetration during sexual intercourse or that their partners had dyspareunia. Preoperative evaluation: goniometer, intracavernous injection of 20 mg of prostaglandin E1, dynamic duplex sonography. The indication for surgical intervention was a congenital penile curvature greater than 45 degrees (varying from 45 to 90°, mean of 60°), associated with loss of axial rigidity and stability.

SURGICAL TECHNIQUE

• Based on the geometrical principles of the Egydio technique
• Artificial erection intraoperatively - intracavernous injection of papaverine or prostaglandin E1
• From the point of maximum curvature (P), located at the intersection of the lines a-a’ and b-b’, a circumferential line was drawn at the bisection of the angle formed by these lines (Fig. 1). The point at which this circumferential line crossed the midline of the dorsal concave side of the penis, the intercavernous septum for ventral deviations and a slightly more lateral for ventro-lateral deviations, determined the location of the superficial, elliptical excision of the outer layer of the tunica albuginea
• A small, 3x2 mm ellipse of the outer layer of the tunica albuginea was excised (Fig. 3). The inner layer of the tunica was not incised
• The newly generated tissue defect was closed with 3, absorbable 3-0 polydioxanone sutures
• These steps are repeated until full correction of the curvature

The geometrical principle: from the point of maximum curvature (P) located at the intersection of the lines a-a’ and b-b’, a circumferential line is drawn at the bisection of the angle formed by these lines. The point at which this circumferential line crosses the midline of the dorsal concave side of the penis determines the location of the superficial elliptical excision of the outer layer of the tunica albuginea

RESULTS

• No intraoperative complications
• No significant penile shortening nor loss of genital sensation
• The acquisition or regaining of the ability to perform sexual intercourse brought significant psychosocial and/or psychological relief to the patients, accompanied by a high rate of satisfaction and improved self-esteem.
• Residual curvature of less than 20 degrees: 5% (n=11) of the cases. However, none of those patients opted for a second surgical correction, since their sexual life was normal.
• Residual curvature of up to 30 degrees was observed in 2 patients (0.9%). -> second surgery to correct the residual curvature

CONCLUSION

• Our modified Nesbit technique, consisting of superficial tunica albuginea excision according to the geometric principles of the Egydio technique leads to rapid and excellent results due to an objectification of the curvature.