

Vaginal hysterectomy allied with Kelly-Kennedy surgery and perineal repair for the treatment of patients with a prolapsed uterus and urinary stress incontinence

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Summary

Purpose: To evaluate patients with uterine prolapse, before and after surgical treatment, using urodynamic and bladder neck ultrasound.

Material and Methods: 33 postmenopausal patients with uterine prolapse were submitted to vaginal hysterectomy (Mayo-Ward technique) allied with Kelly-Kennedy surgery and perineal repair. The women were divided into three groups depending on the degree of prolapse. A urodynamic examination was performed before, after 30 days and in the third month after the operation. A bladder neck ultrasound was performed before and in the third month after the operation.

Results: In 23 women who lost urine preoperatively, 14 continued to show objective loss 90 days after the surgery. Ultrasound identified a significant elevation in the bladder neck during rest in groups I and II, but not in group III. There was a significant reduction in its mobility in all three groups.

Conclusion: Kelly-Kennedy surgery does not have any indication, even in patients with urinary stress incontinence and a prolapsed uterus who are submitted to vaginal hysterectomy.

Key words: Stress urinary incontinence; Uterine prolapse; Surgical treatment.

Introduction

Uterine prolapse results in an imbalance in the forces that maintain the uterus inside the pelvic cavity, and it is estimated that uterine prolapse is the main diagnosis for around 20% of women awaiting gynecological surgery [1].

Congenital weakness of the components that sustain or support the pelvic organs, and lesions of the muscles of the pelvic floor which occur during childbirth and/or surgery, are considered to be factors that predispose increases in intra-abdominal pressure [1-3].

The etiopathogenesis of uterine prolapse is similar to that of urinary stress incontinence and so the two conditions are, in general, associated [4].

Urinary stress incontinence is regarded as the involuntary loss of urine through the urethra, in situations where the bladder pressure exceeds the maximum urethral pressure, in the absence of detrusor activity [5].

It has been reported that around 59% of patients with a prolapsed uterus also have urinary stress incontinence [6].

The various urodynamic parameters found in pre- and postoperative women with uterine prolapse associated with urinary stress incontinence, present diverse results in the literature [6-11].

The therapeutic procedure is aimed at the anatomical and functional reconstruction of the pelvic and urogenital diaphragms and, consequently, the treatment is highly surgical.

The choice of vaginal access in the resolution of genital prolapse has its advantages provided that it is based on a

correct diagnosis, there are no other factors that would interfere in the surgical technique and the general condition of the woman and abilities of the surgeon have been brought into account [4, 6, 8].

We consider vaginal hysterectomy as the surgery of choice in patients who do not wish to have children and when there are no technical or clinical contraindications.

The first vaginal hysterectomy was performed in 1521, by Berengario de Capri, and consisted of gradually tightening a ligature placed around the prolapsed uterus until separation of the organ [12].

Whenever surgery for the correction of urinary stress incontinence is necessary, vaginal hysterectomy should also be performed. Intervention through the vagina for urinary stress incontinence has a cure rate that varies between 45% and 68%, with follow-up times of between 12 and 194 months [9, 10, 13, 14]; in comparison to other techniques these are unsatisfactory results.

Nevertheless, as the studies performed with respect to this association are scarce, incomplete and conflicting, we were interested in performing the present study in which we evaluated patients with a prolapsed uterus, before and after vaginal hysterectomy, allied with Kelly-Kennedy surgery and perineal repair.

Materials and Methods

Thirty-three postmenopausal patients diagnosed as having a prolapsed uterus were selected following rigorous anamnesis. A detailed gynecological examination aimed at identifying prolapse of the vaginal walls, loss of urine synchronized with stress and rupture of the perineum was carried out.

In order to avoid any interference in the results, fertile patients as well as postmenopausal patients undergoing

hormone replacement therapy and those using pharmaceuticals that act on the urinary tract or central nervous system were excluded from the study.

In all the patients the neck of the uterus was tensioned to confirm the degree of prolapse. If the neck of the uterus reached the lower third of the vagina it was classified as 'first degree' (Group I), if the neck and part of the body passed the entrance of the vagina it was classified as 'second degree' (Group II) and in cases where the neck and all the body were outside the vulva the classification was 'third degree' (Group III).

A urodynamic examination was performed before the operation, 30 days after surgery, and again during the third month after the operation.

An ultrasound examination of the neck of the bladder was performed in all the patients before surgery and in the third month after the operation. The examination was performed using a 6MHz transducer in the sagittal and sub-clitoridean positions with the patient lying down with a full bladder. In this way the pubic symphysis, the urethra, the neck of the bladder and the bladder were localized.

All the patients were submitted to vaginal hysterectomy allied with Kelly-Kennedy surgery and perineal repair. The Mayo-Ward technique was used for the hysterectomy.

Following the operation, all the patients were maintained with a bladder catheter for 48 hours, and received antibiotic therapy and a non-hormonal anti-inflammatory.

This study was approved by the Medical Ethics Committee of the Federal University of São Paulo and all the patients gave their written consent to participate.

The results were analyzed through the calculation of mean and standard error and the creation of mean graphs. Statistical analysis was performed using the Barlett and Levene test for homogeneity of variance, an analysis of variance and the standard t-test [15].

Results

There were no differences between the three groups in relation to age, body mass index, parity or number of normal births.

A significant reduction in maximum urinary flow was observed in the patients in group III on the 30th day after the operation in relation to the 90th day (Figure 1). The other groups did not present any significant differences.

There was a significant decrease in the bladder capacity at the first desire to void when the patients in group II were compared before and 30 days after surgery (Figure 2).

A comparison of the preoperative values for maximum bladder capacity and those 30 days after surgery showed

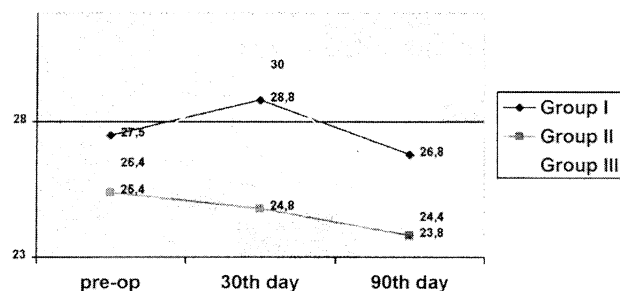


Figure 1. — Maximum urinary flow (ml).

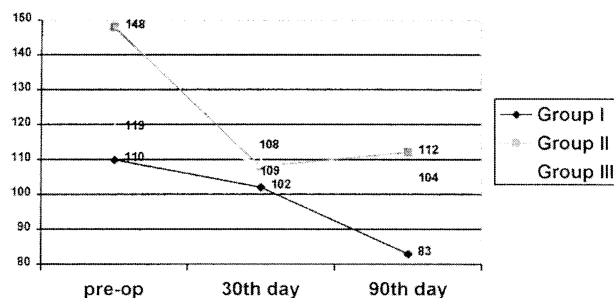


Figure 2. — Bladder capacity at the first desire to void (ml/seg).

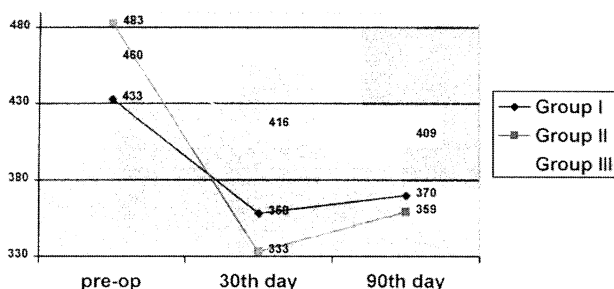


Figure 3. — Maximum bladder capacity (ml).

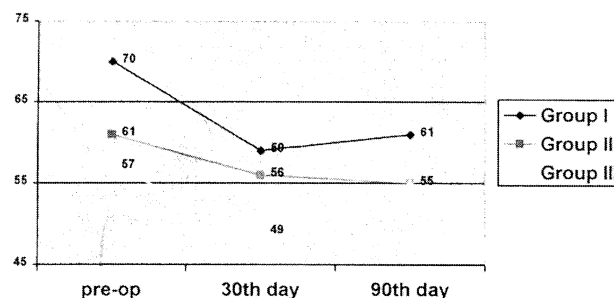


Figure 4. — Maximum urethral closing pressure (cm of water).

a decrease in all three groups, although this decrease was only statistically significant in the patients in group II (Figure 3).

No significant alterations were observed in the maximum urethral closing pressure or in the functional length of the urethra (Figures 4 and 5).

During the urodynamic examination, all the patients were evaluated for objective loss of urine, both before and after the surgical correction. In 23 of the women who lost urine preoperatively, 14 continued to show objective loss 90 days after the surgery. Of the ten preoperatively continent patients all were still without objective loss 90 days after surgery. There was no disagreement between the urodynamic findings and the subjective complaints of urinary loss reported by the patients.

Ultrasound examination identified a significant elevation in the neck of the bladder during rest in groups I and II, although this did not occur in group III (Figure 6). There was also a significant reduction in its mobility in all three of the groups studied (Figure 7).

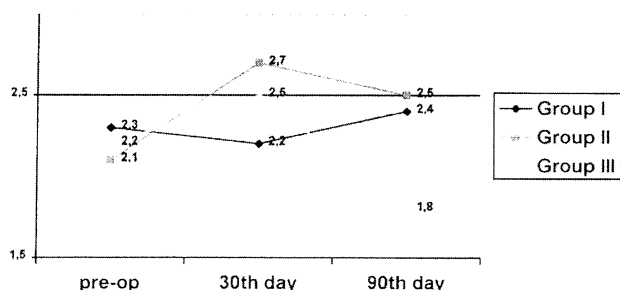


Figure 5. — Functional length of the urethra (cm).

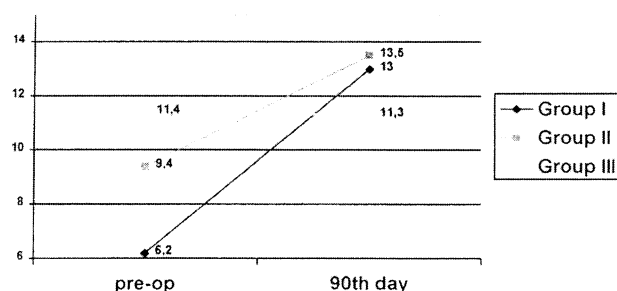


Figure 6. — Topography of the neck of the bladder when at rest, evaluated by ultrasound.

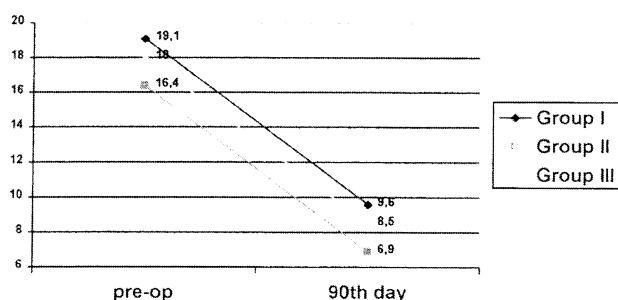


Figure 7. — Mobility of the neck of the bladder (cm), evaluated by ultrasound.

Discussion

Faced with the high frequency of uterine prolapse in our environment, where multiparity is a factor that contributes decisively to the lowering of the uterus, it is clearly important to study this infirmity.

Although the association between a prolapsed uterus and urinary stress incontinence is frequent, because of the similar etiopathogenesis many times the diagnosis of urinary loss is not made, thus prejudicing the correct therapy.

For this reason, the urodynamic study was performed in the preoperative phase to evaluate the integrity of the lower urinary tract so that following the surgery it would be possible to assess the efficacy of the surgical technique used.

In relation to the urodynamic parameters, the differences observed were not of practical importance. Some

patients reported symptoms of urgency and urge-incontinence following the operation, however uninhibited contractions of the detrusor were not identified in any cases.

Concerning the surgical technique adopted, a vaginal hysterectomy, allied with Kelly-Kennedy surgery and perineal repair, were performed in all the patients. Although the data in the literature shows low cure rates for Kelly-Kennedy surgery in patients without uterine prolapse [9, 10, 13, 14], we have continued to perform this surgery, although only in cases with prolapse, as, following a prior retrospective study in which the case histories of 37 women submitted to the same procedure were analyzed, only 10.8% had a reoccurrence of urinary incontinence after an average 31-month follow-up [16].

However, in the current results, of the 23 patients with urinary stress incontinence before the operations, 14 (60.86%) still had objective loss of urine in the urodynamic examination performed three months after the surgery.

One aspect that should be emphasized is the fact that we observed elevation of the neck of the bladder to its usual retropubic position, as well as a reduction in its mobility, suggesting that the objectives of the surgical technique had been achieved.

These results were surprising, as the failure rate after three months was extremely high, leading us to reevaluate the indication of Kelly-Kennedy surgery in cases of vaginal hysterectomy for the treatment of a prolapsed uterus.

It is worth mentioning that the fact that all the patients selected were in postmenopause and were not undergoing hormone replacement therapy, may have contributed to the poor postoperative results. However, although we do not believe that estrogen therapy could have improved the results in a significant way, new studies need to be performed to clarify this important point.

Thus, we have concluded that Kelly-Kennedy surgery does not have any indication, even in patients with urinary stress incontinence and a prolapsed uterus who are submitted to vaginal hysterectomy.

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