

Use of the Labhardt procedure to repair pelvic organ prolapse

G. Kilic¹, M.D.; J.C. Tunca², M.D.

¹Department of Obstetrics and Gynecology, Mount Sinai Hospital,

²Chicago Gynecologic Oncology Group, Northwest Community Hospital, Chicago, IL (USA)

Summary

Purpose of investigation: We share our 3-year follow-up results of using the Labhardt procedure as an alternative to Le Fort's operation for vaginal prolapse.

Methods: Forty-two consecutive women referred to our clinic from 1994 to 1997 with vaginal prolapse underwent the Labhardt procedure.

Results: At the end of 3-year follow-up, one patient had had total re-prolapse two years after the initial procedure; she underwent Labhardt surgery again and was free of symptoms at her last follow-up. Two patients had had partial prolapses, one year and six months, respectively, after their initial surgery. Two patients experienced postoperative urinary retention, for one and three months, respectively, which resolved with intermittent catheterization. The mean estimated blood loss for the entire procedure was 85 ml, and the mean operating time was 51 minutes. Most patients were discharged home within 36 hours.

Conclusion: The Labhardt technique is simple, safe, and short, and, with proper patient selection, is an excellent alternative to other vaginal obliterative procedures.

Key words: Colpocleisis; Uterus; Vagina; Prolapse.

Introduction

Pelvic prolapse is a very common and disturbing problem in women's health care. Approximately 200,000 women undergo inpatient procedures for prolapse in the United States each year [1]. The prolapse repair procedure taught to the vast majority of obstetrics and gynecology residents in this country is Le Fort's operation (Le Fort's colpocleisis); the various other available procedures in use elsewhere in the world are not being explored in this country. One such alternative is the Labhardt procedure. Although the Labhardt technique is well known in Europe, the medical literature in the United States is deficient in publications on this subject. However, this technique can easily be mastered in teaching institutions, and it is faster and less complicated to perform than Le Fort's operation.

The purpose of this article is to share our experience with the largest patient series in the United States treated so far, to our knowledge, with the Labhardt procedure as an alternative to Le Fort's operation. Thus, we review the surgical approach taken and present 3-year follow-up data obtained after we had performed the Labhardt procedure on 42 women with vaginal prolapse, including the morbidity and complications associated with the technique.

Materials and Methods

Patients

Patients were recruited by the community physicians. For inclusion, women had to have the most severe form of vaginal

prolapse and no genuine urinary incontinence. A Pap smear was obtained from every patient before the procedure, and an endometrial biopsy was performed unless they had undergone previous hysterectomy for a benign condition. Subjects with a history of any gynecologic malignancy, endometrial hyperplasia, or cervical dysplasia were excluded. All our patients had different degrees of chronic medical problems and had suffered from vaginal prolapse for at least two years before they were referred to us. During this period, attempts at nonsurgical therapy had failed because they had been unable to retain a pessary placed by their primary care physicians.

All patients were meticulously informed that vaginal function would no longer remain as a consequence of the procedure, and they signed informed consent forms before undergoing the procedure. Approval by our local ethics committee was not required because the Labhardt procedure is considered usual practice for treating prolapse.

Operative technique

In all the cases, we consulted with an anesthesiologist preoperatively. Based on the patients' medical conditions, nine patients received general anesthesia, and the remaining received epidural or spinal anesthesia.

In the Labhardt procedure [2] the initial incision is made as a triangular segment of the posterior vaginal mucosa, extending upward to the posterior fornix. Having exposed the anterior wall of the rectum, the surgeon then makes another acutely angled triangular incision at the inner aspect of the labia minora bilaterally up to the level of the urethral meatus. The pararectal tissue is plicated with several interrupted delayed-absorption sutures, and then the edges of the inner vaginal incision are sutured up to the labial incision. The surgeon next begins to join the inner edges of the labial incisions, followed by the outer edges in approximation. The levator ani muscles are dissected free and joined together along the midline; doing so buries the rectum under the levator muscle. Finally, the vaginal opening is almost completely closed.

Results

We analyzed data from our experience using the Labhardt colpocleisis procedure in 42 consecutive patients referred to us from 1994 to 1997. The patients' mean age was 70 years (range, 47 to 96 years). Among the 42 patients, only one was lost to follow-up during the 3-year period after the surgery.

One patient experienced a total re-prolapse two years after the initial procedure. She underwent Labhardt surgery again and was free of symptoms at the time of her 3-year follow-up. Two other patients had a partial prolapse, one at one year the other at six months after the initial surgery. The partial prolapse in the first of those two patients was repaired under local anesthesia with separate supporting sutures. The second of those patients refused to undergo another procedure; instead, she underwent an elective reversal of the surgery at another institution and had it converted using Le Fort's operation.

Two patients experienced a problem with urinary retention, one for one month and the other for three months postoperatively; in both cases the problem was resolved with intermittent catheterization. These two patients were retrospectively evaluated, and we found that the small triangular incision on the interior aspect of the labium minus reached above the level of the external urethral orifice instead of up to the level of the external meatus.

The mean estimated blood loss for the entire procedure was only 85 ml, and the mean amount of time required for the procedure was 51 minutes. Most patients were discharged home within 36 hours.

Discussion

Le Fort's colpocleisis is an effective method of vaginal obliteration, but it has several notable disadvantages; an alternative technique, the Labhardt procedure, can be used to overcome some of these disadvantages. First, in Le Fort's operation, by fixing the base of the bladder and vesicourethral junction to the anterior rectal wall, the surgeon may create a flattening of the posterior urethrovesicular angle, permitting urinary stress incontinence [3, 4]. This socially disabling problem, which occurs with approximately 15% incidence after Le Fort's operation, will not be encountered with the Labhardt procedure because the latter involves mainly the posterior vagina [5], leaving the urinary control mechanism unaffected. Second, when Le Fort's operation is performed in patients with an enterocele, the enterocele will remain untreated and will often progress [6]. In contrast, the Labhardt procedure, which involves joining the levator muscles together at the midline, provides better support to avoid an enterocele. In addition, the Labhardt procedure is more durable because it uses the ischiocavernous

and bulbocavernous muscles instead of the already worn-out atrophic vaginal mucosa alone. Finally, in the Labhardt procedure, the vaginal introitus is almost completely occluded up to the urethral meatus by the formation of a tissue wedge, which is further strengthened by the additional posterior repair to reduce the likelihood of re-prolapse.

Because pelvic prolapse is usually the result of multifactorial events, simply restoring the pelvic anatomy may not be the best answer for adequate treatment [7]. Given the fact that affected women are generally elderly and have multiple chronic medical problems, one should opt for a minimally traumatic procedure that requires a short operation time. In this study, our estimated mean blood loss was only 85 ml, and the procedure took a mean of only 51 minutes to perform. In comparison with the published results on colpocleisis, our results showed much less blood loss and less time to perform the procedure [8]. Therefore, the use of the Labhardt technique seems to be more appealing than the use of Le Fort's operation, especially for older patients with considerable numbers of medical problems.

Acknowledgments

The authors thank Prof. Mujmir Sonek for teaching this technique at the University of Wisconsin. The major support for this work came from Chicago Medical School, and the authors also thank the chairman, Prof. Joseph Blankstein, for making this study possible.

References

- [1] Boyles S.H., Weber A.M., Meyn L.: "Procedures for pelvic organ prolapse in the United States. 1979-1997". *Am. J. Obstet. Gynecol.*, 2003, 188, 108.
- [2] Reiffens G.: "Vaginal operations, surgical anatomy and techniques". Baltimore, MD, Lippincott Williams and Wilkins, 1996, 161.
- [3] Pratt H.J., Baker R.K.: "Urinary incontinence following the Le Fort operation". *Obstet. Gynecol.*, 1960, 16, 722.
- [4] Hanson G.E., Keettel W.C.: "The Neugebauer-Le Fort operation". *Obstet. Gynecol.*, 1969, 34, 352.
- [5] Morley G.W.: "Treatment of uterine and vaginal prolapse". *Clin. Obstet. Gynecol.*, 1996, 39, 959.
- [6] Rock J., Thompson J.D.: "Te Linde's Operative Gynecology". In: Nicholes D.H. Central Compartment Defects. Baltimore, MD, Lippincott Williams and Wilkins, 1997, 1013.
- [7] Delancey J.O.L.: "Anatomic aspects of vaginal eversion after hysterectomy". *Am. J. Obstet. Gynecol.*, 1992, 166, 1717.
- [8] Cespedes R.D., Winters C.J., Ferguson K.H.: "Colpocleisis for the treatment of vaginal vault prolapse". *Tech. Urol.*, 2001, 7, 152.

Address reprint requests to:
J.C. TUNCA, M.D.
Chicago Gynecologic Oncology Group
Northwest Community Hospital
Chicago IL (USA)