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Sexual functioning before and after vaginal hysterectomy to treat pelvic organ prolapse and the effects of vaginal cuff closure techniques: a prospective randomised study

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ABSTRACT

Objective: To evaluate sexual function in women before and after vaginal hysterectomy (VH) and to compare the effects of horizontal and vertical vaginal cuff closure on sexual function.
Study Design: Women with uterine prolapse of stage 2 or higher were included to this prospective, randomized study. All patients underwent VH with McCall Culdoplasty and patients were randomized into two groups in terms of the vaginal cuff closure technique employed which is either vertically (group 1, right to left) or horizontally (group 2, anterior to posterior). Pelvic Organ Prolapse Urinary Incontinence Sexual Questionnaire—12 Short Form was used to assess sexual function before and 6 months after surgery.
Results: A total of 78 women participated, 37 in group 1 and 41 in group 2. Significant improvements in were thus evident in both groups 1 ($p = 0.000$) and 2 ($p = 0.000$) after surgery; no significant between-group differences were evident. Overall, 61 women (78,2%) had improved PISQ-12 scores postoperatively, 11 (14,1%) scored the same pre- and post-operatively, and 6 (7,9%) scored lower postoperatively. Women who reported poorer sexual function postoperatively, or no improvement, had new-onset or worsening dyspareunia and/or incontinence.
Conclusion: Most women with uterine prolapse of stage 2 or higher who underwent VH with prolapse repair experienced improved sexual lives postoperatively, regardless of the cuff closure technique used. Although VH to treat POP improves anatomical and sexual concerns, surgery per se may have negative effects on sexual function if new-onset or worsening dyspareunia or incontinence develop.

Introduction

Healthy and satisfying sexual activity is an integral aspect of good quality of life. Multiple factors are involved in sexual functioning, including physiological, anatomical, developmental, and cultural factors, and a complex interplay among all such factors [1]. A pelvic floor disorder (PFD) causes functional and anatomical changes to the vaginal area, and is thought to have a negative impact on sexuality [2]. PFDs includes vaginal bulging, urinary or fecal incontinence, pelvic organ prolapse (POP), pelvic pain, pelvic pressure or a sense of heaviness, difficulties emptying the bladder, and other sensory and emptying abnormalities of the gastrointestinal tract [3]. These complaints can result in sexual inactivity and PFDs can affect the women suffering from them as well as their sexual partners. Given the sensitive nature of POP and its effects on the physical appearance of the female genitals, particularly when the condition is advanced, it seems likely that such prolapse would render some women self-conscious [4].

PFD affects a rather high proportion of women, particularly in older age. Population trend projections have indicated that nearly 25% of all women and more than 33% of older women have reported symptoms compatible with at least one PFD [3]. The rate of lifetime risk of stress incontinence or POP surgery by the age of 80 years is about 20.0% [5]. Given this significant public health concern, urogynecologists are increasingly aware of and interested in this area [6].

The major concerns after POP surgery include not only successful anatomical correction of any protrusion but also the impact of surgery on the quality of life. Improvements in sexual function and those of the lower urinary and gastrointestinal tracts

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are important outcome measures when treatments are evaluated in clinical trials.

Only a few prospective comparative studies on sexual function before and after POP surgery have been conducted, and only a few studies have attempted to define the optimal method of vaginal cuff closure after vaginal hysterectomy (VH). Those that have, have done so only in terms of the effects of the closure type on vaginal length; they did not assess the effects of various techniques on sexual functioning. To address this area, we prospectively evaluated sexual function in women before and after VH with McCall Culdoplasty and compared the effects of horizontal and vertical vaginal cuff closure on sexuality.

Materials and methods

Study design and participants

This prospective, randomized study compared sexual function before and after VH, and was conducted from December 2014 to October 2015 at two referral hospitals in Turkey (Faculty of Medicine of Selçuk University, Department of Urogynecology and Ümraniye Education and Research Hospital, Departments of Obstetrics and Gynecology). A total of 78 women with uterine prolapse of stage 2 or higher and requiring surgery agreed to participate (Fig. 1). The extent of prolapse was assessed using the Pelvic Organ Prolapse-Quantification System (POP-Q). Patients were randomized into two groups in terms of the vaginal cuff closure technique employed. During surgery, a staff member randomly selected 1 envelope to determine the cuff closure technique to be used; we had previously prepared envelopes, half of which contained a note reading "vertical" and half of which contained a note reading "horizontal." All procedures were applied in the same manner in both hospitals. To ensure that the study groups were of ideal size, patients who met the inclusion criteria were continuously invited to join the study until minimum 35 had been recruited for each group. For quantitative assessment, all women completed the Pelvic Organ Prolapse Urinary Incontinence Sexual Questionnaire—12 Short Form (PISQ-12) before and 6 months after surgery. Age, gravida, parity, menopausal status, operation time, total vaginal length before and after surgery, intraoperative and postoperative complications were recorded. Operative times were measured from first incision to closure. Vaginal length was measured before and 6 months after vaginal surgery. Vaginal length (In preoperative period, the distance between the posterior vaginal fornix and the hymenal ring; in postoperative period, the length between vaginal cuff and hymenal

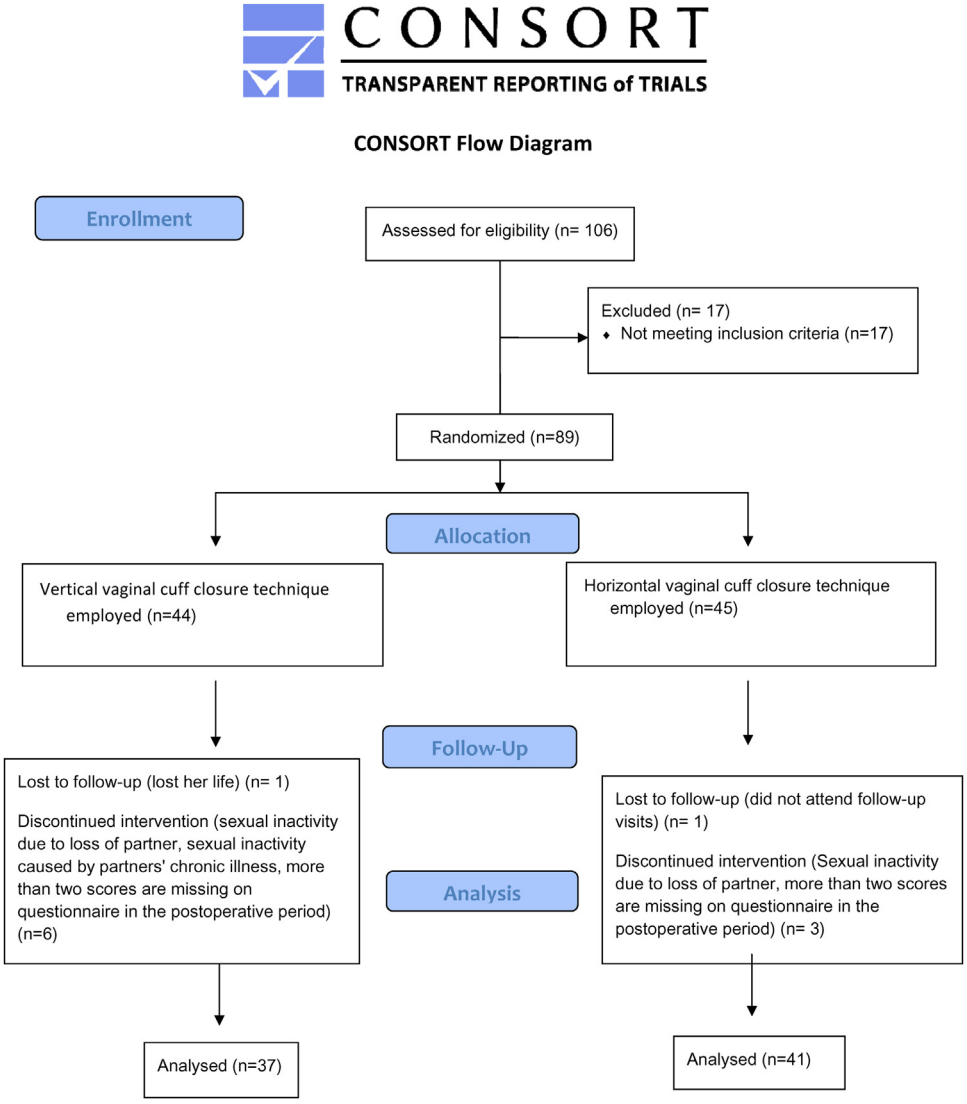

Fig. 1. The CONSORT diagram showing the flow of participants.