

Impact of apical prolapse surgical correction on the quality of life of women

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Abstract: Introduction and Objectives: The surgical treatment of vaginal prolapses improves the quality of life of women, namely the social and sexual aspects. The present study was designed to evaluate the impact on the quality of life of women undergoing surgical correction of genital prolapse, using the "Prolapse and quality of life (P-QOL) of Brazilian women with pelvic organ prolapse (POP)". **Patients and Method:** 31 women were interviewed and 4 were lost in the follow-up. Twenty seven women with anterior vaginal wall prolapse associated with apical prolapse, stage ≥ 3 of the POP-Q Classification, were enrolled. The "Prolapse and quality of life" (P-QOL) questionnaire provided the subjective evaluation. All patients were submitted to surgery for prolapse correction. **Results:** At least three months after surgery, the questionnaire was applied to compare the score obtained before and after surgery. The anatomical cure criteria can be defined as POP-Q stage < 1 or absence of prolapse beyond the hymen (point C position zero), with no symptomatic prolapse or surgery due to recurrence. Improvement in the quality of life was taken into account with the decrease of the symptoms score. A data exploratory analysis was performed using the summary measures (average, standard deviation, minimum, median, maximum, frequency and percentage). Times were compared by using ANOVA for repeated measurements, adjusting for the postoperative time, the variable responses being transformed into points. The significance level adopted was 5%. **Conclusion:** The women's quality of life had a statistical improvement with the surgical treatment of apical prolapse and the techniques were safe and efficacious.

Keywords: Anterior prolapse; Apical prolapse; Quality of life.

INTRODUCTION

Longevity is one of the major changes that took place in the 21st century. Humans have never lived so long in our society. The number of supercentenarians increases year after year and these alterations in the demographic profile also change the morbimortality pattern resulting in new needs from the health point of view.

The aim is to have a healthy ageing, that is, *to age with quality of life*. The quality of life concept is related to family, decent housing, sexual life, to have friends and we can also add labor activities, frequent social contacts among others. General and specific questionnaires were developed as tools for an objective evaluation of the quality of life levels that are presently currently found¹.

The increase in women's longevity has resulted in an increase in pelvic organ disorders (POD). More than 50% of postmenopausal women have DOP, with a marked effect on their family relationships, their sexuality and self-esteem². As the elderly population increases, we will have to know how to manage and treat this population, emphasizing this new approach: *quality of life*.

POP has a marked effect on patients' quality of life, with impacts on social, psychological, and occupational aspects; on physical and domestic activities; on general and sexual well-being, sexuality is an important factor in quality of life^{3,4}.

Several techniques can be used to correct POPs. The *Cochrane Data Base of Systematic Reviews* did not show significant differences among the methods in relation to the recurrence statistics⁵.

Objectives: To evaluate the impact of apical prolapse surgical correction, associated or not to prolapse of the vaginal anterior wall on patients' quality of life using the P-QOL questionnaire for *Brazilian women with pelvic organ prolapse (POP)*⁶.

MATERIALS AND METHODS

Twenty-seven women with an indication for surgery to correct symptomatic apical prolapse at the Female Urology

Outpatient Department of the Unicamp (University of Campinas) Hospital de Clínicas were included in the study. The patients were selected between June 2015 and October 2016.

Only the patients that agreed with and signed the Free and Clarified Consent Term (Annex 1) were enrolled. The study was approved by the Ethics and Research Committee of the School of Medical Sciences of Unicamp (CEP-FCM-Unicamp), the National Ethics and Research Committee (CONEP). The selected patients underwent surgical treatment for apical prolapse. The objective was to restore the function of the damaged ligament by using a synthetic neoligament, we use kits "UP HOLD", "SPLENTS" e "CALISTAR".

The preoperative evaluation included anamnesis, complete urogenital exam, evaluating the pelvic organs prolapse using *Pelvic Organ Prolapse Quantification* (POP-Q), or the classical "eyeball" measurement^{7,8}; stress test to evaluate the presence of concomitant stress urinary incontinence (SUI) and application of the questionnaire: Prolapse and quality of life (P-QOL).

The anatomical objective cure was evaluated by quantifying the pelvic organs prolapse using the anatomical points of POP-Q at least three months after surgery. There is no standardized definition to characterize success after a surgery to correct POP, and depending on the definition used it can vary between 19.2% and 97.2%. The criteria for anatomical cure can be defined as POP-Q < 1¹⁰ or absence of recurrence. The improvement in quality of life should also be taken into consideration with a decrease in the symptoms score.

Statistical Methodology – Annex III: A data exploratory analysis was performed using the summary measures (average, standard deviation, minimum, median, maximum, frequency and percentage). Times were compared by using ANOVA for repeated measurements, adjusting for the post-operative time, the variable responses being transformed into points. The significance level adopted was 5% ($p<.005$).

The statistical analysis was performed by the Statistics Department of the School of Medical Sciences of Unicamp.

Computer Program: SAS System for Windows (Statistical Analysis System), version 9.4. SAS Institute Inc., Cary, NC, USA.

RESULTS

The study enrolled thirty-one women with apical prolapse, associated or not with anterior or posterior prolapse, stage III or higher, according to POP-Q¹¹. Four of them did not answer the second questionnaire, and 27 patients (87.10%) remained in the study as they came back for the follow-up and answered the questionnaire. As they were followed up to at least three months after surgery, they are the population of our study.

All domains showed an improved score (see Figure 1 below). It is important to stress that 100% of the women had an improvement in quality of life after the apical prolapse correction when considering the sum of all domains - p=.0002.

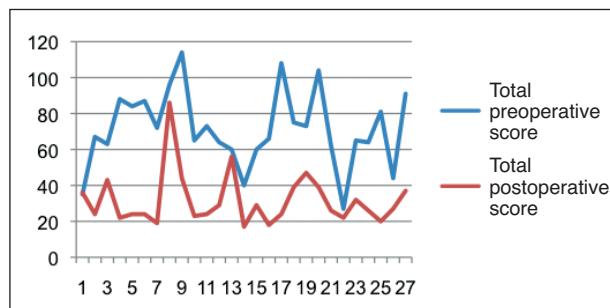


Figure 1. – Evolution of the pre- and post-op scores, sum of all domains.

According to the statistical analysis, there was no significant alteration in the temporal variation found in the interviews (from 3 to 12 months).

The improvement was non-significant ($p = 0.07$) only in the sleep and energy items and significant in all other items ($p \leq 0.05$).

Items related to sexuality had a significant improvement: item 4 ($p < 0.02$) and item 7 ($p < 0.05$). Four patients, 14.8%, did not meet the anatomical cure criteria and this percentage is in agreement with literature data^{7,9,12}.

DISCUSSION

The POP treatment should be mainly based on its impact on quality of life, the symptoms severity, and not only on the grade (Baden Walker) or do POP (POP-Q)⁶.

The vagina is held in place by ligaments on the upper part and by muscles on the lower part, in the same way as steel cables support bridges. If the structures do not provide the necessary stability due to laxity of the uterosacral ligament (USL) and/or cardinal ligament (CL), the posterior muscles strength is inactivated, stimulating the stretching receptors and leading to a wide array of symptoms and loss of *Quality of life*¹³.

The “posterior fornix syndrome” caused by apical prolapse is characterized by urgency and nocturia, abnormal bladder emptying sensation, chronic pelvic pain (uterosacral ligament), anal incontinence or constipation (rectovaginal fascia), and has a strong impact on women’s *Quality of life*¹³⁻¹⁵.

It is estimated that 25% of women with POP avoid sexual intercourse because of pelvic symptoms¹⁶, interfering with the interpersonal relationships and self-image that are often associated to depression that will further decrease sexual

motivation¹⁷. The hypoactive sexual desire disorder (HSDD) in female sexual activity is not related only to hormonal variables and in clinical evaluation it is important to have new approaches in analyzing sexuality, emphasizing the importance of taking these non-hormonal factors into account as well as other factors when indicating the treatment¹⁸. POP can be one of the factors that lead to HSDD as it triggers a poor self-image related to “sexual image”, altering the level of arousal, causing pain, altering orgasm as well as thickness of the vagina wall that is increased in women with POP^{17,19-21}. POP is also related to mood disorders and depression²².

The apical prolapse treatment aims to provide support at level I once more. As all ligaments are inserted in the vagina and/or uterus, they usually have a poor tissue quality when damaged and the repair with native tissue can result in recurrence. Thus, the integral theory recommends the use of artificial neoligaments using polypropylene synthetic ribbons²⁰.

Interestingly, Barber⁹ states that treating anatomy is not the most important factor for patients’ perception of success. Quite the opposite as the absence or presence of symptoms is what lead to this perception. It seems that relief of symptoms, improvement in activities conditions, improved self-image and general health and improvement in *Quality of life* are the criteria of cure^{12,23}.

Absence of the “vaginal ball” sensed by patients seems to more significant than the anatomical success. If point C is < -1 , it can be clinically considered as an anatomical success^{10,23}, but paradoxically 17% of patients with anatomical cure report the presence of “vaginal ball”⁹ and 58% of patients reporting cure remained with a 1 cm prolapse beyond the hymen¹².

Apical prolapse has a direct impact on all domains of the P-QOL questionnaire and its correction aims at improving symptoms and as a consequence to improve *Quality of life*. After analyzing the P-QOL questionnaires applied both pre- and post-operatively in our study it was found that 100% of patients with surgical correction of apical prolapse had improved quality of life ($p < 0.0002$), in agreement with published trials^{24,25}.

CONCLUSION

The present study demonstrated that subjective and objective improvements or cure were achieved at the follow-up after three months. These results were stable during a period equal to or longer than one year.

After analyzing the pre-op and post-op questionnaires it was possible to determine that surgical correction of apical prolapse resulted in an improved quality of life in 100% of the patients ($p < 0.0002$).

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