

## **QUALITY OF LIFE METRICS' CHANGES AFTER LAPAROSCOPIC SACROCOLPOPEXY IN COMPARATIVE ANALYSIS. ESTIMATING THE APPROPRIABILITY OF RELEVANCE THESE METRICS IN ORDER TO QUALIFY PATIENTS FOR SURGERY.**

### Hypothesis / aims of study

The objective of this study was postoperative quality of life (QOL) evaluation after laparoscopic sacrocolpopexy using validated questionnaires and performing the metrics' correlation aimed at discerning their efficacy.

### Study design, materials and methods

Inclusion criteria were contained within a prospective observational study. Twenty-three patients with pelvic organ prolapse (POP) undergoing laparoscopic sacrocolpopexy were qualified for the research.

In this series all women with symptomatic isolated apical compartment prolapse (uterine prolapse stage II and III) with or without posterior descent (POP-Q  $\geq$  stage II) were enrolled.

Exclusion criteria predominantly consisted of anterior vaginal compartment prolapse, isolated posterior vaginal compartment prolapse, prior prolapse surgery with nonabsorbable mesh or biological graft repair and multiple laparotomies.

Detailed urogynecological history, clinical examination, Quality of Life (QOL) Assessment were carried out in all of the women. The patients attended a research clinic where they first completed validated quality of life questionnaires and then were examined.

The female patients were all assessed first before and then a year after the surgery.

The focus of assessment done with validated QOL questionnaires was in vaginal, urinary and bowel symptoms, whereas another attested questionnaire was applied to the evaluation of sexual functions in patients.

Surgical outcomes were objectively assessed exploiting the Pelvic Organ Prolapse Quantification system (POP-Q), the validated Pelvic Floor Distress Inventory Questionnaire (PFDI-20), Pelvic Floor Impact Questionnaire (PFIQ-7) and Pelvic Organ Prolapse/Incontinence Sexual Questionnaire, IUGA-Revised (PISQ-IR). Filling up all metric measure forms listed above was compulsory for all the patients in the research group.

This is the first study in which Quality of Life (QOL) data were collected using a newly invented, innovative software called Elen that facilitates entering, storing and data processing.

Exported data is available to access by a great number of both popular as well as more scientific softwares being attainable worldwide.

The software Elen as an outcome of the research seems to be a quicker and simplified way to storing and entering the data within a reliable database, that also creates the opportunity to be processed via external applications. Calculating basic statistic values, like statistical significance, has never been easified in the field to such an extent.

### Results

All 23 women in this study had underwent laparoscopic sacrocolpopexy for the surgical management of pelvic organ prolapse (POP). Two of female patients required conversion to laparotomy due to adhesions after previous abdominal surgery. There were no serious

peri- or postoperative complications. Average age of the women was 60 years. After 12 months significant differences were found in POP-Q stages and in quality of life. The occurrence of de novo prolapse in anterior ( 69,56 %) and posterior compartment (13,04 %) was observed. Three apical failures were recorded. A successful anatomic outcome is defined by Stage 0 apical prolapse and it occurs in 86,95 % of women. Fifteen patients had sexual intercourses before the surgery. After the laparoscopic sacrocolpopexy two more patients from the research group undertook active sexual life. The increase from the 65% of sexually active patients before, to 74% of sexually active patients after the surgery was observed.

The cumulative values of PFDI-20 and PFIQ-7 have increased after a surgery. The average relative change is 402% for PFDI-20 and 889% for PFIQ-7.

PISQ-IR is usually negatively correlated with other factors, therefore the growth of other coefficients will cause the decrease of PISQ-IR. PISQ-IR seems to be less sensitive with average relative change about 2%. As the change of PISQ-IR is so small, that it can be easily affected by an error (e.g. data entering mistake).

### Interpretation of results

Although de novo prolapse was observed , 23 of patients experienced increased in the improvement of quality of life after surgery. PISQ-IR measurement should not be used to determine if a patient should be operated. Pearson's linear correlation factors between the measurements have been calculated to ensure they are independent (they are not in linear relation) and to check if they correlated at all. Pearson method has been chosen to calculate a correlation. It has been proven for the given population they are no obvious relations between the metrics.

### Concluding message

During the statistical analysis of the measurements used to evaluate a quality of life it has been noticed they have different sensitivities understood of extent of change of value before and after a surgery. According to that, only some of them can be

potentially used to determine if a surgery is needed. This analysis indicates the need of undertaking research on a much larger scale due to the fact that various coefficients reflect the change of quality of life in diverse ways. In the near future the plan to expand the software Elen for the benefit of patients will be implemented. The broader use of Elen, the application created together with the paper, can be a feature of automated surgery need assessment on the basis of the calculated metrics.

#### References

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#### Disclosures

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