



EVALUATION OF PELVIC ORGAN PROLAPSE QUANTIFICATION IN PREOPERATIVE AND POSTOPERATIVE CONDITION IN PATIENTS WITH PELVIC ORGAN PROLAPSE.

Dr. Bhavna Trivedi Assistant Professor, Department of OBGY, HBTMC and Dr. RN Cooper Hospital, Mumbai.

Dr. Yash Bahuguna Senior Resident, Department of OBGY, HBTMC and Dr. RN Cooper Hospital, Mumbai

ABSTRACT **Aims And Objective-**To confirm anatomical correction and relief of symptoms after surgery for Pelvic Organ Prolapse by the Pelvic Organ Prolapse – Quantification (POP-Q) scoring system. **Material And Methods -** This study is nonrandomized single arm observational prospective study conducted in the department of obstetrics and gynaecology in our teaching hospital for a period of 1 year. Women coming to the outpatient department with chief complaint of something coming out per vagina any age group were carefully selected. All women were examined by a single observer to exclude bias. Prolapse was quantified by POP-Q in preoperative period and then again 6 weeks after surgery to assess the surgical correction. P value of significance was calculated using student T test. **Results-** In this work, POPQ System assessed the uterine prolapse preoperative and after 6 weeks of surgery. This enabled us to know the extent to which surgical repair could reduce the prolapse. After recording all measurements, they were converted into stages of prolapse according to POP-Q system. It was observed that majority of the cases had stage III prolapse (70%). It was also observed that majority of the cases had all compartment prolapse simultaneously. Six weeks after surgery, POPQ system measurements were taken. It enabled us to know how much correction was satisfactorily done during surgery. Majority of the points were reduced to its normal or near normal position after surgery as proven statistically (p value <0.01). **Conclusion –**Assessment of prolapse by POPQ system is easy to learn and practice. POP-Q provided accurate, precise and objective assessment of pelvic organ prolapse. POP-Q makes possible comparison of results of surgery in a quantitative way.[46] [47]

KEYWORDS : Pelvic organ prolapse, cystocele, rectocele, vault prolapse

INTRODUCTION

Pelvic organ prolapse (POP) characterized by the descent or protrusion of one or more pelvic organs into the vaginal canal. It poses significant physical discomfort, impaired quality of life, and psychological distress for affected individuals. As a result, accurate and reliable evaluation of POP severity is essential for effective management and treatment planning.

The POP-Q scoring system, developed by the International Continence Society (ICS) and introduced in 1996, incorporates anatomical landmarks and measurements to precisely assess the degree of prolapse and its specific compartments. By employing this scoring system, clinicians can classify and document POP objectively, facilitating preoperative planning, evaluating treatment outcomes, and enabling inter-study comparisons.

The primary objective of our research is to evaluate the effectiveness of the POP-Q scoring system in both preoperative and postoperative settings.

Ultimately, the findings of this research study aim to contribute to the existing body of knowledge surrounding the evaluation and management of pelvic organ prolapse.

MATERIALS AND METHODS

Study Design: Nonrandomized single arm observational prospective study. This study was conducted in the department of obstetrics and gynaecology in our teaching hospital for a period of 1 year from May 2014 to August 2015. Ethical clearance for this study was obtained from the hospital ethics committee. This is an observational study of pelvic organ prolapse in patients coming to the hospital. 60 Women coming to the outpatient department with chief complaint of something coming out per vagina any age group were selected. Informed consent was taken.

Detailed history including family and personal history was obtained in all cases and investigations were carried out in our pathology and Radiology department. Cases were selected carefully after an abdominal, speculum and vaginal examination. All women were examined by a single observer to exclude bias.

Inclusion Criteria

Patients with prolapsed uterus. Patients with rectocele Patent with cystocele Patients with vault prolapse post hysterectomy.

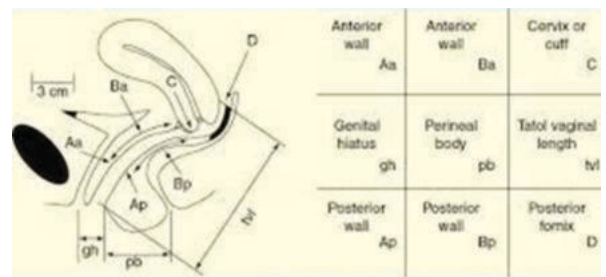


Figure 1 – Diagrammatic Representation Of All The 9 Points On Pop-q Grid

OBSERVATION AND RESULTS

Table 1 – Mean Pop-q Value Of All The 9 Points In Preoperative And Postoperative Status And Their P Value

	Mean POP-Q (SD)								
	Aa	Ba	Ap	Bp	C	D	TVL	gh	pb
Pre-op	-0.38 ± 1.84	-0.08 ± 2.74	-1.24 ± 2.23	-1.28 ± 2.68	2.22 ± 3.13	-4.75 ± 1.75	-7.99 ± 1.26	-7.99 ± 1.26	-7.99 ± 1.26
Post-op	-2.68 ± 0.47	-2.58 ± 0.56	-2.87 ± 0.39	-2.87 ± 0.34	-6.43 ± 1.32	-7.25 ± 0.96	-7.40 ± 1.32	-7.40 ± 1.32	-7.40 ± 1.32
Difference (Pre – Post) (p value)	*2.30 ± 1.89 (0.001)	*2.50 ± 2.64 (0.001)	-2.87 ± 0.39 (0.001)	*1.58 ± 2.63 (0.001)	*-8.65 ± 3.42 (0.001)	*2.25 ± 3.30 (0.006)	*-0.59 ± 0.86 (0.001)	*-0.59 ± 0.86 (0.001)	*-0.59 ± 0.86 (0.001)

DISCUSSION

In 1996 Pelvic Organ Prolapse Quantification system (POPQ) system was introduced by Richard Bump [2], this quantification system could identify minor differences in degree of prolapse between two cases as it quantified genital tract prolapse, in centimetres. Before the introduction of this system by Richard Bump there was no consistent and standardized system to describe prolapse. POP-Q enabled clinicians to compare the extent of prolapse at two observations, made on the same case or on different cases, at same centre or different centres and by same clinician or different clinicians.

Studies done by Hall et al and Kobak WH et al [3] made clear the advantage of POP-Q system to overcome interobserver and intraobserver variation. Our research used POPQ system preoperative

and six weeks after operation with chief purpose of quantifying prolapse before surgery and the correction of prolapse after surgery. This has also enabled to get varied observation about this condition of female genital tract prolapse. In this study 60 % of the cases were postmenopausal and though menopause is considered important precipitating factor for genital tract prolapse, faulty methods of conducting labour and lack of puerperal rehabilitations are important precipitating factor for preponing the age incidence of prolapse. In this study 40% case were premenopausal.

In traditional systems like Baden Walker, cervix is the main marker point for assessing the stage of prolapse. But in POP-Q system there are nine marker points used for the assessing the extent of prolapse which helps in assessing the exact compartmental prolapse.

In this work, POPQ System assessed the uterine prolapse preoperative and after 6 weeks of surgery. This enabled us to know the extent to which surgical repair could reduce the prolapse. After recording all measurements, they were converted into stages of prolapse according to POP-Q system. It was observed that majority of the cases had stage III prolapse (70%). It was also observed that majority of the cases had all compartment prolapse simultaneously. Six weeks after surgery, POPQ system measurements were taken. It enabled us to know how much correction was satisfactorily done during surgery. Majority of the points were reduced to its normal or near normal position after surgery as proven statistically. In this study the mean of stage of prolapse preoperatively was 2.75 with SD 0.63 and postoperatively was 0.58 with SD 0.56 and $P = 0.001$ which was significant. 5% cases had stage 4 prolapse, 70% cases had stage 3 prolapse, 20% cases had stage 2 prolapse and 5% cases had stage 1 prolapse preoperatively. 45% cases had stage 0 prolapse postoperatively, 51.66% cases had stage 1 prolapse postoperatively and 3.33% cases had stage 2 prolapse postoperatively.

In our study, 60 cases were included and POP-Q assessment were done preoperatively and postoperatively 6 weeks later. The results obtained were preoperative mean status of Aa was -0.38, the status of Ba was -0.08, C was +2.22, gh was 4.05, pb was 3.08, tvl was -7.99, the status of Ap was -1.24, Bp was -1.28, D was +4.75.

The postoperative mean of Aa -2.68, Ba -2.58, C -6.4erior colpora3, gh +3.7, pb +3.5, tvl-7.94, Ap -2.87, Bp -2.87, D -7.25. The P value obtained was statistically significant in all the nine points. Similar study was done in 2014 by Thakare.P. Y et al to study assessment of POP by POP-Q in Preoperative & Postoperative cases. They studied fifty cases of prolapse, who were assessed by POP-Q system preoperatively, immediately postoperatively and after 3 months. The Results obtained were, the average preoperative scoring was (Aa+1.7, Ba+3.5, C+4, GH 5.1, PB 2, TVL 8.9, Ap+0.5, Bp+2.2, D+4.1). The average postoperative scoring was (Aa-2.94, B -3.2, C-6, GH 3.1, PB 4.2, TVL 6.9, Ap -2.9, Bp -3.2, D-6(6)). The average postoperative scoring at 3 months (Aa-2.7, B-2.7, C-5.7, GH 3.7, PB 3.76, TVL 6, Ap -2.9, Bp-2.9, D-7(6)). They Concluded that

1. Assessment of prolapse by POPQ system is easy to learn and practice.
2. POP-Q provided accurate, precise and objective assessment of pelvic organ prolapse.
3. POP-Q makes possible comparison of results of surgery in a quantitative way.[46] [47]

In our study out of the 60 cases 18 cases had stage II to stage III rectocele by POP-Q which required surgical correction. All of them underwent rectocele repair by placion of rectovaginal fascia and perineoplasty. The mean on points Ap and Bp were -1.24 and -1.28 preoperatively. After surgical correction the means of point Ap and Bp were -2.8 and -2.87 and the p values were 0.001 which was significant. Similar study with some variation was done by Cudiff GW et al [3] to describe the anatomic and functional results of the discrete fascial defect rectocele repair without perineorrhaphy. In their study 69 cases underwent rectocele repair without perineorrhaphy. Outcome measures included Pelvic Organ Prolapse Quantitation measurements, prolapse stage. The median preoperative posterior Pelvic Organ Prolapse Quantitation stage was 2 (1-4). Mean values for the points describing the posterior vaginal wall improved >2 cm ($P < .0001$) in postoperative state. 18 had recurrent rectocele. The conclusion of this study was discrete defect rectocele repair provides anatomic correction of rectoceles in most women.

The present study titled "evaluation of pelvic organ prolapse quantification in preoperative and postoperative conditions in patients with pelvic organ prolapse. This observational study was performed on 60 patients attending OBGY OPD in our institution after approval of ethics committee of the institution. The objective of the study was to quantify both prolapse of pelvic organ and anatomical correction after surgery of prolapse using POP-Q.

The study population consisted of all the patients who underwent prolapse repair surgery with included VH, cystocele repair, rectocele repair, vault prolapse repair and sling surgeries.

Patients who fulfilled the inclusion criteria were enrolled and examined preoperatively and all the nine measurement points of POP-Q were noted.

Majority of the cases had stage 3 prolapse with prolapse of all the three; anterior, posterior and apical compartment prolapse.

Patients were followed postoperatively at 6week period and then postoperative POP-Q measurements were noted. After surgical correction majority of patients had stage 0 i.e., no prolapse or stage 1 prolapse

Statistical analysis was done, the mean value of all the nine points in 60 cases were calculated preoperatively and postoperatively. Comparison of the preoperative and postoperative values was done and P value was calculated.

P value was found to be significant in all the nine points [Aa, Ap, C, gh, pb, tvl, Ba, Bp, D]

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SUMMARY