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Research Article

**PELVIC FLOOR MUSCLE TRAINING IN WOMEN WITH
PELVIC ORGAN PROLAPSE- A RANDOMIZED
CONTROLLED STUDY**¹Dr Muhammad Abrar, ²Dr Mazhar Nadeem, ³Dr Sheza Rauf^{1,2}MBBS, Sahiwal Medical College, Sahiwal.³MBBS, Quaid e Azam Medical College, Bahawalpur.**Article Received:** April 2020**Accepted:** May 2020**Published:** June 2020**Abstract:**

Approximately 50% women deprived of some supportive mechanism around pelvic floor muscles after the childbirth which leads to different degrees of pelvic organ prolapse (POP). It has estimated that there is 3-28% prevalence of pelvic organ prolapse, vaginal bulging and heaviness indicates the most specific symptoms of prolapse. The mentioned symptoms can influence a woman's quality of life and are the main sign of the surgery. In the major waiting lists of gynecological surgery, there is 20% present with complain of pelvic organ prolapse. 58% women reported reoccurrence of pelvic organ prolapse after surgery and one third have reported who underwent one more surgery for prolapse. It underlines the significant primary measures and prevention that could minimize the occurrence of pop. In supporting the pelvic organs, strength of pelvic floor muscles plays a critical role. In the PFMT group of the symptomatic group, 74% showed reduced frequency of vaginal bulging and/or heaviness at the 6-month posttest. Therefore the reduction in prolapse symptoms may be considered the most important treatment effect, because these subjective symptoms are the main indication for surgery.

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INTRODUCTION

Approximately 50% women deprived of some supportive mechanism around pelvic floor muscles after the childbirth which leads to different degrees of pelvic organ prolapse (POP). It has estimated that there is 3-28% prevalence of pelvic organ prolapse; vaginal bulging and heaviness indicates the most specific symptoms of prolapse. The mentioned symptoms can influence a woman's quality of life and are the main sign of the surgery. In the major waiting lists of gynecological surgery, there is 20% present with complain of pelvic organ prolapse. 58% women reported reoccurrence of pelvic organ prolapse after surgery and one third have reported who underwent one more surgery for prolapse. It underlines the significant primary measures and prevention that could minimize the occurrence of pop. In supporting the pelvic organs, strength of pelvic floor muscles plays a critical role.

Women who are suffering from pelvic organ prolapse have reported reduced pelvic floor muscle strength and the severity of pop is directly proportional with the dysfunction of pelvic floor muscle.⁵ Pelvic floor muscle training (PFMT) has no side effects, and anatomic comprehension of PFM function provides a theoretical basis for strength training of the PFM to be effective in prevention and treatment of POP. A survey conducted on women health professionals which demonstrates that assessed or treated women with POP, despite a poor evidence base and lack of clinical referral guidelines.

3 randomized controlled trials have conducted to investigate the effect of pelvic floor muscle training on pelvic organ prolapse. A recent Cochrane review concluded that available evidence is insufficient to understand the role PFMT may play in reducing POP and recommends RCTs with high methodological quality.

The aim of the current study was to evaluate PFMT can reduce symptoms related to POP group

METHODS:

It was a randomized controlled study. Women having pelvic floor organ prolapse atleast 1 year postpartum were enrolled in the study. The stage of pop was identified by Pelvic Organ Prolapse Quantification System (POP-Q). Exclusion criteria contains POP with initial or severe stage, diminished ability to contract the PFM, breastfeeding, previous POP surgery, back pain, psychiatric disorders, pelvic cancer, neurologic disorders, and untreated urinary tract infection. A written informed consent was signed after explaining the purpose of the study. Two groups

were made intervention and control group. Women in intervention group were taught pelvic floor muscle training exercise 3 sets of 8-12 reps of pelvic floor muscle contraction.

To evaluate urinary incontinence and its impact on quality of life Urinary Incontinence Short Form questionnaire (ICIQ-UI SF) was used.

RESULTS:

Total 120 participants were recruited into the study 60 in each group. Of the 120 participants, 60 were randomly allocated to intensive PFMT and 60 to the control group. The mean age of the 120 participants was 49.5 years. In which 18 were classified as POP stage I, 82 as stage II, and 20 as stage III.

However there were no statistical differences between groups regarding age, parity, stage of POP, proportion of women with positive values for any POP-Q measure, or outcome measures at baseline. Women with stage 2 POP had shown change in POP stages between groups. Women with PFMT demonstrated improved results as compared to control group. Participants who were having higher score of POP-Q reported increase degree of POP. Also, after adjusting for baseline values, women in the PFMT group had significantly reduced frequency and bother of prolapse symptoms compared with women in the control group. Urinary symptoms based on the ICIQ-UI-SF gave an effect size of 0.62 in favor of the PFMT group. Subgroup analyses of the 60 women with prolapse below the hymen demonstrated a reduction in frequency of prolapse symptoms in 56% (14/25) of the PFMT group compared with 15% in the control group. PFM function The PFMT group had significantly greater improvement than the control group in PFM strength and endurance. The effect size for muscle strength and endurance was 1.23 and 0.69, respectively. No remarkable changes were observed of vaginal resting pressure between groups. There were positive correlations between increased PFM strength and a cranial elevation of the bladder and rectum. Increase in PFM strength and change in POP-Q values or prolapse symptoms were not significantly related.

DISCUSSION:

The study has demonstrate that PFMT can improve severity of prolapse and reduce prolapse (vaginal bulging and/or heaviness), bladder (SUI, urge urinary incontinence), and bowel symptoms (flatus, loose fecal incontinence). There was no remarkable difference between the groups with the problem of emptying bowel and solid fecal incontinence. A very positive feedback got by this study was all the primary outcomes remain consistent in favor of PFMT. Other strengths are inclusion of women

with all types of POP; stages I, II, and III prolapse; randomization; blinding of primary outcome assessors; use of POP-Q; validated questionnaires; ultrasound imaging and standardized training protocol; low dropout rate; and high adherence to the training protocol.

A randomized controlled study was conducted to evaluate the effect of back massage in pelvic organ prolapse women, there was no significant effect were measured. whereas a study conducted in 2011 has demonstrated that women with PFMT has improved symptoms of POP

In which only 22% of the participants had POP stage III. Therefore the result could not be generalized to whole population of women with more severe POP. Research in the area of POP has suffered from the lack of a standardized definition of POP, and POP can be defined as stage I or stage II. In the definition of POP, some studies recommend that both physical findings and bothersome symptoms should be added. The reasons for including POP stage I and asymptomatic women were that they, per definition, had POP and the wish to assess the effect of PFMT as a secondary prevention strategy (treat asymptomatic women with POP).

The current study data supports a study that found greater improvement in prolapse after PFMT in elderly Thai women with severe vaginal wall prolapse compared with milder anterior vaginal wall prolapse. However, large population size had affected the methodological criteria and POP-Q was not used. Moreover in improving pelvic floor support the current study has revealed that PFMT reduced the frequency and bother of vaginal bulging and heaviness. Literature reports that an anterior wall prolapse also demonstrated improvement in prolapse symptoms after PFMT. Although women in current study had improvement in all of the bladder symptoms and some of the bowel symptoms, the simultaneously occurring bladder and bowel symptoms should be noted which can happen without POP and are considered by most research groups as coexisting symptoms, rather than symptoms of POP. To assess the severity of prolapse POP-Q, ultrasound was used. For assessing severity of POP, POP-Q is the gold standard recommendation.

POP-Q contains strenuous valsalva maneuver which is not a part of daily living activity in contrast increased abdominal pressure in contrast increased abdominal pressure leads to pelvic organ prolapse and women are generally recommended to avoid straining.

Therefore ultrasound measurement of the resting position of the bladder and rectum in standing position may be a better way of assessing the effect of PFMT on POP. 19% of the PFMT and 8% of the control group improved 1 POP stage in the current study. Those women who were in the PFMT group had reported significantly elevated the bladder and rectum whereas participant in the control group did not. The prevalence of pelvic organ prolapse tends to increase with age but it is not known how many millimeters per year the pelvic organs normally descend, and we do not know the long-term effect of this program. Elevation of the pelvic organs after PFMT has demonstrated in the current study,, and it is likely to assume that PFMT can be used in prevention of POP.

A research carried out by Americans has reported that 90,000 of American women suffering from pelvic floor dysfunction could be saved with a 25% prevention rate. The most discriminatory symptoms in women with POP was vaginal bulging and heaviness.

In the PFMT group of the symptomatic group, 74% showed reduced frequency of vaginal bulging and/or heaviness at the 6-month posttest. Therefore the reduction in prolapse symptoms may be considered the most important treatment effect, because these subjective symptoms are the main indication for surgery.

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