

Pelvic organs prolapse characteristics in Saudi women

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The International Continence Society defines pelvic organ prolapse as any stage of prolapse greater than zero. If this definition is used, 27-98% of women will have pelvic organ prolapse at some point in their lives.¹ It is estimated that women have an 11% lifetime risk of reconstructive surgery for prolapse, urinary incontinence or both, and a 29% risk of repeat surgery for these conditions.² Although the problem is often unrecognized, when symptomatic the functional impact can limit women in their daily living activities. Parity, process of childbirth, and conditions leading to chronic increase in abdominal pressure are known to be the most significant risk factors for any form of pelvic organ prolapse. However, a normal physiologic vaginal delivery of a normal-sized baby may also result in potentially significant neuromuscular injury. The objective of this study was to examine the risk factors for development of pelvic organs prolapse among Saudi women and the anatomical disorders and complaints leading to surgical intervention. Furthermore, we evaluated the immediate and late operative complications following the procedure for a minimum of one year.

We carried out a retrospective study among patients admitted to King Abdulaziz Medical City, Riyadh, Kingdom of Saudi Arabia, for pelvic organs prolapse between January 1, 2003, and December 31, 2005. The approval was obtained from the Health Sciences Research Center of the National Guard Health Affairs. The patients who are diagnosed with any degree of pelvic organs prolapse and/or urinary incontinence that justifies surgical intervention are usually referred to the gynecological clinic for further assessment and surgical planning. The patients are usually assessed by a consultant-led team and treatments are planned according to this assessment. The medical records of the patients who were admitted and operated on during the study period due to one or more types of pelvic organ prolapse were reviewed. Patient risk factors, such as age, parity, body mass index (BMI), obstetric history, obesity, and medical history were recorded. Pre-operative complaints and post-operative complications were also explored.

The standard of measurement for pelvic organ prolapse was the pelvic organ prolapse quantification scale (POPQ), which describes the prolapse of the 3 vaginal compartments in relation to the vaginal hymen. Overall, prolapse was classified according to

the most dependent position of the leading edge of the prolapse.³ Five main types of pelvic organs prolapse were studied (cystocele, rectocele, enterocele, uterine prolapse, and urinary incontinence).

Data were entered and analyzed using the SPSS program (version 15). Calculating the number and the percent for summarized categorical variables, whereas the mean and standard deviations were calculated for continuous variables. The chi square test was used to assess the association between the different risk factors, patient complaints, operative complications, and each of the different types of pelvic organs prolapse components.

During the study period, 125 patients were admitted and operated on due to the diagnosis of various types of pelvic organs prolapse. A total of 118/125 (94.4%) patients were diagnosed and operated on for various degrees of rectocele; 62.1% were due to moderate to severe defects. Similarly, 118/125 (94.4%) patients were diagnosed with cystocele, with 70.9% being due to moderate to severe defects. Of the study sample, 11/125 (8.8%) patients were diagnosed with enterocele, with the majority having mild anatomical defects. Additionally, 30/125 (24%) had various degrees of uterine prolapse, and 21.6% had type I uterine prolapse. The majority of pelvic organs prolapse patients were in the age group 36-45 years. Only patients who were operated on for uterine prolapse were in the age group of >45 years (61.5%). High parity (>5) was represented strongly in our study, with frequency ranging between 70% for urinary incontinence and 81.8% for enterocele. The BMI was very high in the studied group with 44.6% of the patients being obese (BMI ≥ 24), and 56.5% with morbid obesity (BMI ≥ 32). The distribution of birth weight for previous deliveries for those who developed pelvic organs prolapse showed that 51.5% had previously delivered babies weighing ≤ 3.8 Kg and 45.5% had delivered babies weighing >3.8 Kg. History of breech delivery and epidural analgesia was higher in the group with uterine prolapse; the prevalence of breech delivery and epidural analgesia was 13% and 16.7%. The likelihood of delivering a baby in the occipital posterior position was higher in patients who developed enterocele (22.2%) and in those who had urinary incontinence (22.2%). Patients who had induction of labor, a prolonged second stage, and those who underwent instrumental delivery had higher frequencies of urinary incontinence (22.2%, 30%, and 33.3% of such patients). Diabetic patients and those with asthma were more likely to develop enterocele, while the presence of chronic constipation was less likely to lead to pelvic organs prolapse.

The main complaints of the patients prior to their surgical intervention were studied. Patients with

rectocele and/or cystocele did not have a specific complaint that characterized their group. Patients diagnosed with enterocele were more likely to have urinary incontinence ($p=0.07$), back pain ($p=0.04$) and heaviness ($p=0.07$). Flatus, incontinence ($p=0.05$), back pain ($p=0.003$) and sexual dysfunction ($p=0.04$) were the most significant complaints for patients who were diagnosed with various degrees of uterine prolapse. Operative procedures performed for the studied patients included cystocele repair (0.8%), rectocele repair (4.8%), cysto and rectocele repair (56.8%), rectocele repair and intravaginal sling (IVS) (0.8%), cystorectocele repair with IVS (10.6%), cystorectocele repair with Kelly's suture (20%) and vaginal hysterectomy (6.4%). The main 2 complications were bleeding with an average blood loss of 431.6 ml and post operative pain, particularly for those who had rectocele 29/118 (24.6%), cystocele repair 29/118 (24.6%) or both.

Through this retrospective cross sectional study, we found that the majority of patients who were operated on for pelvic organs prolapse were middle-aged (34-45 years) with high parity (>5), and were often obese. Labor events showed some effects on prolapse occurrence, with breech delivery, and epidural analgesia appearing to have the largest affect on the development of uterine prolapse. A history of instrumental delivery was more prominent in the incontinence group, and a prolonged second stage appeared to affect the risk of uterine prolapse. The most established risk factors for pelvic organ prolapse include vaginal childbirth, advancing age, and obesity.⁴ In our study, most patients had delivered more than 5 times and were obese; however advanced age was more prevalent in the group with uterine prolapse than in other types of vaginal prolapse. Various factors affect the occurrence of pelvic organs prolapse; this might explain the variation in the various types of prolapse in relation to pregnancy and labor events in the studied women. In agreement with similar studies in the literature,⁴ obesity and morbid obesity were associated with increased numbers of uterine prolapse operations. Patient age was not a prominent risk factor for the development of pelvic organs prolapse, with the exception of those who complained of short perineum. This was accompanied with increased complaint of sexual dysfunction in the same group of patients. It is well known that with increased age and estrogen deficiency status, sexual dysfunction is becoming a more common complaint.⁵ Therefore, we assume that this complaint could be related to the age factor, rather than directly related to the anatomical defect. The same argument could be used when discussing the increased complaint of cystocele for depressed patients. The variation in complaints and risk factors for developing pelvic organs prolapse based on differences in anatomical defects

may reflect the importance of psychological, social, and sexual history prior to the decision for surgical repair. Most complaints related to pelvic organs prolapse may be related to other pelvic or musculoskeletal pathologies. Therefore, screening for any other possible associated pathology is essential prior to diagnosis and surgical management. The high possibility of postoperative pain, dyspareunia, and bleeding should be included in patients' preoperative counseling.

The limitation of this study is mainly related to the lack of a control group. Therefore, we recommend performing a case-control study aiming to identify the most significant risk factors for pelvic organs prolapse in Saudi women. However, this study can be considered as baseline work for further qualitative questionnaires querying women on their primary complaint, social background, type of prolapse and operation performed with respect to success/complication rates.

Finally, we can conclude that a variety of risk factors leading to the development of pelvic organs prolapse were identified. Age, parity, and obesity appeared to be the most important, while bleeding and postoperative pain were the most prominent complications. The social, psychological, and sexual factors affecting symptomatic pelvic organs prolapse need to be studied.

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