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Pelvic Organ Prolapse in a Developing Country: An Underestimated Public Health Challenge

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ABSTRACT

Pelvic Organ Prolapse (POP) is a complex and multifactorial gynecological pathology that significantly affects the quality of life of women. It is characterized by the descent of pelvic organs due to weakening of the pelvic floor and its clinical presentation includes a wide range of symptoms. In Mexico, this condition remains underdiagnosed and underestimated despite its high prevalence and its close association with factors such as multiparity, obesity, and population aging.

Globally, according to recent studies, the prevalence of POP is estimated at 28.8%, with alarming projections for the coming decades. However, in Mexico, the lack of specific epidemiological data, combined with limited resources and access to specialized health services, makes its proper identification and management difficult. Clinically, POP manifests with symptoms like a sensation of a foreign body in the vaginal canal, urinary, fecal, and sexual dysfunction but also compromising emotional well-being, highlighting its multidimensional impact on women's quality of life.

The diagnosis of POP requires a comprehensive approach based on detailed clinical history and physical examination and use of standardized tools like the application of the Pelvic Organ Prolapse-Quantification (POP-Q) system, which allows for precise classification of prolapse, aiding clinical decision-making. POP management should include both conservative strategies like pessaries and pelvic floor physiotherapy, as well as surgical interventions tailored to each patient's needs and context.

This article aims to highlight POP as a public health problem in Mexico, emphasizing the urgent need for local research to allow better epidemiological characterization. It also stresses the importance of effective medical treatment to improve the quality of life for Mexican women with POP, and set a foundation for more equitable care in other developing countries faringe similar challenges affected by this condition.

Keywords: Prolapse, Pelvic floor dysfunction, Pelvic prolapse, POP-Q, Women's health

INTRODUCTION

The pelvic floor is a complex system of muscles, ligaments, and fascia that work together to ensure multiple functions such as stability of the pelvic region, muscle tone, urinary and fecal continence, sexual function, among others. When there are alterations associated with it, a complex multifactorial pathophysiology develops, negatively impacting the woman's quality of life, health, physical and emotional [1]. Among these alterations is Pelvic Organ Prolapse (POP), characterized by the descent of structures like the anterior or posterior vaginal wall, uterus, rectum, or even the small intestine through the vagina. The most common symptom of POP is the sensation of a foreign body in the vagina [2].

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The prevalence and incidence of pelvic organ prolapse vary considerably between countries due to various factors like economic resources, educational level, ethnic characteristics, and the risk is strongly associated with increasing age [3]. According to a recent meta-analysis, the global prevalence of POP is estimated at 28.8% [4]. However, figures vary depending on the diagnostic methods used. In the United States, it is projected that by 2050, approximately 58.2 million women will have at least one pelvic floor disorder, with 9.2 million corresponding to cases of POP [5]. Moreover, another author estimates that women have a 12.6% lifetime risk of undergoing surgery by age 80 due to this condition [6].

In Mexico, although there are no specific or recent data on the total number of women affected by POP, indirect data suggest a high prevalence. For instance, the United Nations estimated in 2009 that there were approximately 11.4 million Mexican women aged 40 to 60, of which around 5.7 million could have a diagnosis of stress urinary incontinence, a condition frequently associated with POP [7].

This article aims to highlight pelvic organ prolapse as a disease characterized by its high prevalence and relevance in the Mexican context. It also underscores the lack of published research on the subject, partly attributable to the limitations of a developing country, emphasizing the urgent need for local research to allow better epidemiological characterization.

REVIEW

Definition

The pelvic floor consists of several muscles and connective tissues forming a dome-shaped diaphragm, extending from the pubis to the sacrum. The main muscle is the levator ani, including the puborectalis, pubococcygeus, and iliococcygeus, responsible for fecal continence and supporting pelvic organs. This system performs three main functions: supporting pelvic organs and intra-abdominal content, maintaining urinary and fecal continence, and participating in sexual functions [3].

Pelvic floor dysfunction encompasses symptoms and anatomical changes related to poor muscle function, including hypertonia, hypotonia, and alterations in muscle coordination, leading to organ descent by affecting their support. The clinical presentation depends on the affected area: anterior (urethra and bladder), middle (vagina and uterus), or posterior (anus and rectum), which are usually interrelated [8].

Etiology and Pathophysiology

The causes of pelvic floor dysfunction are not fully clear. No single event or factor has been identified as the primary cause, but multiple contributing factors have been noted, such as obesity, advanced age, parity, chronic elevated intra-abdominal pressure due to incorrect bowel habits or prolonged and excessive efforts to avoid urination or defecation [3]. Additionally, family history plays a significant role, as women with a family history of POP are more likely to develop it. Pelvic surgeries, particularly hysterectomy, can damage the endopelvic fascia and nerves, increasing the risk of vaginal prolapse [9].

Different collagen abnormalities, as in Marfan and Ehlers-Danlos syndromes, predispose women to develop cystocele due to altered vaginal tissue elasticity [10]. It has also been shown that collagen in vaginal walls changes with age, contributing to POP. Advanced age is associated with changes in pelvic anatomy, innervation, and vasculature, weakening the pelvic floor.

Vaginal delivery significantly increases the risk of pelvic floor weakness, especially with a higher number of deliveries, a history of obstetric trauma, and the use of forceps, which can cause avulsion of the levator ani muscles [8,9]. There are four main support sites, and damage to these leads to pelvic organ prolapse. Vaginal prolapse includes that of the bladder (cystocele), intestine (rectocele), or uterus and occurs when the levator ani muscle structures weaken and the pelvic fascia undergoes continuous elongation favoring organ descent [11].

Clinical Manifestations

Pelvic Organ Prolapse (POP) presents clinically with a variety of symptoms that significantly affect patients' quality of life. Among the most frequent symptoms is the sensation of a vaginal bulge or protrusion, which is the most specific and commonly reported by patients [12,13]. In addition to this sensation, women might experience pelvic pressure or discomfort, often described as a "dragging" feeling [14].

This condition is also associated with urinary dysfunctions, affecting over 50% of women with POP, such as urinary incontinence, urgency, increased urination frequency, nocturia, difficulty urinating, and a sensation of incomplete bladder emptying [15,16].

Regarding bowel function, patients might present symptoms like constipation, fecal urgency, straining during defecation, sensation of incomplete evacuation, and anal or fecal incontinence [15,16,17]. POP also impacts sexual function, with more than half of affected women reporting sexual dysfunction, including dyspareunia and obstruction during intercourse. Additionally, pelvic or lower back pain is another common symptom, observed in approximately 45% of women with POP [15,18].

In gynecological examination, signs include descent of the uterine cervix or vaginal walls (anterior, lateral, posterior, or superior) behind which the prolapsed organs are found: behind the anterior vaginal wall might be the urethra or bladder, behind the posterior wall the rectum and part of the intestine, and behind the superior wall the uterus or part of the intestine [19].

Diagnosis

The diagnosis of Pelvic Organ Prolapse is based on a comprehensive evaluation including a detailed clinical history, standardized physical examination, additional imaging tests when necessary, and consideration of associated comorbidities [20]. It is essential to obtain a complete clinical history exploring symptoms like pelvic pressure, vaginal bulge, urinary or bowel dysfunction, and sexual dysfunction. Risk factors should also be considered, such as parity, menopause, obesity, strenuous physical activity, and surgical history [21]. The use of the POP-Q system or its simplified version (S-POP) for classifying the degree of prolapse is recommended due to its high reproducibility and precision. The physical examination should be performed with an empty bladder, and in some cases, in both supine and standing positions to adequately reproduce the prolapse. Additional tests are recommended to evaluate pelvic floor muscle tone and perform stress tests in cases of stress urinary incontinence [22]. While physical examination is fundamental, imaging tests like transperineal ultrasound or MRI can be useful in cases of severe or recurrent prolapse, or when clinical findings do not match the patient's symptoms. These tests provide additional information about the anatomy and function of the pelvic floor, especially in complex cases [13,23].

Treatment

The management of Pelvic Organ Prolapse (POP) in Mexico follows general trends observed in Latin America and internationally, focusing on both conservative and surgical treatments. According to medical literature, treatment options for POP include observation, pelvic floor physiotherapy, pessary use, and surgery [14,24].

For asymptomatic cases or in patients who do not wish or are not medically fit for surgery, pessaries are an effective, non-surgical option, is a device, made of plastic or silicone, which is inserted into the vagina to hold a prolapsed uterus or vaginal wall in place. [25,26,27,14]. Pelvic floor physiotherapy is also recommended as an initial conservative treatment, as it can improve symptoms of incontinence and prolapse [27,28].

In terms of surgical interventions, they can be performed through transvaginal, laparoscopic, robotic, or open approaches, using the patient's own tissue or with the aid of meshes [14]. In Latin America, including Mexico, mesh repairs are common, but according to recent studies, in a cohort of Mexican Latina women on the border with the United States, it was found that a large proportion of patients indicated an aversion to the use of mesh in pelvic surgery [29]. It is important to mention their use of meshes has decreased due to warnings from the United States (U.S.) Food and Drug Administration (FDA), influencing perceptions and gynecological practices [25].

Laparoscopic sacrocolpopexy, with or without robotic assistance, is popular for its efficacy and low complication risk [30]. Obliterative procedures like colpocleisis are effective for women with advanced prolapse who do not wish to preserve vaginal sexual function, showing high efficacy and low morbidity [19]. For apical prolapse, colposacropexy can be performed, often including mesh use to improve cure rates [28,31,32]. A quality of life improvement has been reported in 7 out of 10 patients undergoing prolapse surgery during a 2-year follow-up [33].

It's crucial to note that treatment choice depends on various factors, including the compartments involved, the extent of the prolapse, medical and surgical comorbidities, and shared decision-making with the patient [14,25,32,33]. Moreover, Latin American professionals' preferences do not significantly differ from international trends, though local context and regulations may influence specific practices [24].

CONCLUSION

Pelvic Organ Prolapse represents one of the most relevant pathologies in the field of gynecology and obstetrics, due to its multifactorial nature and significant impact on women's quality of life. This condition ranges from mild symptoms to severe cases that limit daily activities, underscoring its importance as a public health issue. Despite its high prevalence, especially in older women, POP remains underdiagnosed and often underestimated, particularly in Latin American. In Mexico, where epidemiological data and research are limited and scarce and research remains limited, POP leaving many women without tímely intervention and adequate care.

It is essential to address pelvic floor pathologies comprehensively and to promote new research in the field, this involves fostering research initiatives to generate context-specific data that can inform clinical practices and public health policies, aiming to establish foundations for effective diagnostics and treatments, as one of the major limitations of this work was the lack of updated literature and robust and studies conducted in this country, emphasizing the urgent need for interdisciplinary collaboration to bridge this knowledge gap. In a resource-limited region like Mexico, the impact of these conditions on women's health can be even more significant.

In Mexico, recognizing the significant burden of POP is not only a clinical imperative but also a public health priority.

Finally, the integral management of POP requires an effective therapeutic approach. In this regard, early identification of risk factors like multiparity, obesity, and advanced age is crucial to reduce the incidence and severity of this disease, alongside optimizing conservative and surgical treatment options to improve clinical outcomes.

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