

Teles A<sup>1</sup>, Brasil C<sup>1,2,3</sup>, Lemos A<sup>1,2,3</sup>, Santana L<sup>1,2</sup>, Queiroz Vilas Boas A<sup>1,2</sup>, Gally M<sup>1,2</sup>, Sodré P<sup>1,4</sup>, Cerqueira M<sup>1</sup>, Vieira M<sup>1,2</sup>, Cardoso R<sup>1,5</sup>, Ferreira R<sup>1,2</sup>, Gomes T<sup>1,2</sup>, Quiberville A<sup>1</sup>, Bacelar J<sup>1</sup>, Peixoto J<sup>1</sup>, Alves I<sup>1</sup>, Rocha V<sup>1</sup>, Sodré D<sup>1</sup>, Lordelo P<sup>1,2</sup>

1-Instituto Patrícia Lordêlo (IPL), 2-Bahiana School of Medicine and Public Health (EBMSP), 3- UNIME, 4- Universidade do Estado da Bahia (UNEB), 5- UniDomPedro

## Introduction

Pelvic organ prolapses (POP) are highly prevalent and can have a major impact on women's quality of life, restricting their activities and bringing associated urinary, vaginal, sexual, and bowel complaints. Vaginal pessaries are orthoses that have been described in the literature for over a century and have the potential to improve symptoms associated with POP quickly, with some potential side effects and at low cost. Despite the scarcity of RCTs, combining pessaries with pelvic floor muscle training (PFMT) appears to be the best conservative treatment combination.[1] The aim of this study is to describe the evaluation and prescription protocol for vaginal pessaries for patients with POP, as well as the overall improvement in complaints, adverse outcomes and (dis)continuation of treatment.

## Methods

This is a retrospective longitudinal descriptive study with women of any age who present as their main complaint the feeling of vaginal heaviness, which may or may not be associated with urinary, vaginal, sexual, and/or fecal complaints, and who, on physical examination, the presence of POP was confirmed. The evaluation was carried out by a multidisciplinary team, formed by a pelvic physiotherapist, a nurse, a gynecologist, a urologist and a radiologist who evaluate each patient on the first day of the visit, on the day of definitive placement of the pessary, on the 30<sup>th</sup> day of use of the vaginal pessary and, soon, one year after the definitive placement. The patient data presented here are from evaluations carried out from August 2022 to February 2023.

The initial assessment consists of seven stages: 1) functional voiding assessment; 2) kinesiological imaging evaluation of pelvic floor muscles and pelvic organs; 3) Colposcopy with speculum; 4) digital palpation to measure the pessary; 5) placement of the pessary with condom for testing in the clinic; 6) new functional voiding assessment with the pessary, 7) prescription of the pessary and pelvic floor physiotherapy, in addition to vaginal hormone, if indicated.

During a month, in order to improve the integrity and elasticity of the vaginal tissue and adaptation of the pessary, the patient is submitted to three sessions of pelvic floor physiotherapy that include, according to her needs, intravaginal non-ablative radiofrequency, intravaginal photobiomodulation, PFMT, electrical stimulation, manual therapy, voiding and evacuation recommendation. The patient returns to the outpatient clinic for the final placement of her pessary and returns to the outpatient clinic again 30 days later so that she can report her personal perceptions of device use and for assessments 1 to 5 to be repeated to analyze how the pelvic organs and the vaginal canal have behaved with the presence of the pessary. If there is any adverse effect such as yellowish or greenish vaginal discharge, lesions on the vaginal walls, fissures in the vaginal introitus, voiding and/or evacuation difficulty, appropriate therapeutic measures will be taken. In this same session, the process of removing and inserting the pessary is trained with her, so that she can feel safe doing it alone at home. Our recommendation is to remove and clean it every 25 to 30 days.

The pessaries used in our service are the ring model without membrane, from CPL Medical's (São Paulo, São Paulo, Brazil) and are paid by the Unified Health System of the municipality for donation to patients. Ultrasound evaluations are performed with the Mindray device (Shenzhen, China) and uroflowmetry with the Alacer device (São Paulo, São Paulo, Brazil).

## Results

Data from 50 women complaining of vaginal heaviness and pelvic organ prolapse were analyzed. The mean age of the sample was 58.3±13.9 years, the median was 3(2-4) pregnancies, with 43(87.8%) women delivering vaginally and 15(30%) undergoing hysterectomy. Among the associated symptoms, vaginal and voiding were the most prevalent, affecting 58.3% of women. Just over half of the women (52.6%) were not sexually active. These data are described in table 1.

Table 1- Sociodemographic and clinical characteristics of women with pelvic organ prolapse.

Variables	N=50
<b>Age</b>	58.3 ±13.9
<b>Pregnancies</b>	3 (2-4)
<b>Parturition</b>	2 (1-3)
<b>Abortion</b>	1(0-1)
<b>Delivery type n=49</b>	<b>N(%)</b>
Never delivered	2 (4.1)
Vaginal	30 (61.2)
Vaginal with forceps	4 (8.2)
Cesarean section	4 (8.2)
Vaginal and Cesarean section	9 (18.4)
<b>Hysterectomy (n=50)</b>	15 (30.0)
<b>Sling (n=50)</b>	5 (10.0)
<b>Vaginal Symptoms (n=48)</b>	28 (58.3)
<b>Voiding symptoms (n=47)</b>	42 (89.4)
<b>Evacuatory symptoms (n=48)</b>	28 (58.3)
<b>Sexual Symptoms (n=38)</b>	15 (39.5)
Inactive sex life	20 (52.6)
No sexual symptoms	3 (7.9)

## Results

Regarding the type of prolapse, almost everyone (96%) had anterior wall prolapse and, regarding the degree of prolapse, 37 (75.5%) had grades I or II. Of the evaluated patients, 44 (88%) had an indication for the use of pessaries. The other 06 (12%) were referred for surgery and/or pelvic physiotherapy. The mean size of the pessary indicated was 68 ±12.6mm and the meantime taken between the patient assessment with the pessary test and the placement of the definitive pessary was 51(30-65) days. In this interval, all performed at least three sessions of pelvic physiotherapy. In the functional voiding evaluation by imaging, it was possible to observe that most patients had a bell-shaped flow before the pessary was placed (54.3%) and, with the pessary, this number increased, becoming present in 88.6% of the sample. Regarding the post-void residual, before the placement of the pessary the median was 5(0-38)ml and with the pessary it became 0(0-26)ml. Complete data can be found in table 2. One patient had a vaginal mucosa lesion in the 30<sup>th</sup>-day reassessment, after replacing the pessary alone at home. To treat the lesion, the pessary was removed, red LED photobiomodulation sessions and daily vaginal hormone were performed.

Table 2 – Characteristics related to prolapses of pelvic organs and vaginal pessaries of the women from the study.

Variables	N=50
<b>Prolapse Type</b>	
Anterior Vaginal Wall (n=50)	48 (96.0)
Posterior Vaginal Wall (n=48)	19 (39.5)
Apical (n=48)	7 (14.6)
<b>POP Grade (n=49)</b>	
Grade I and II	37 (75.5)
Grade III and IV	12 (24.5)
<b>Therapeutic indication of the pessary</b>	44(88)
<b>Average time between evaluation and definitive placement (days) (n=37)</b>	51 (30-65)
<b>Pessary size</b>	6 (4-8)
<b>Pessary size (milimeters)</b>	68 ±12.6
<b>Vaginal mucosa lesion</b>	1 (2.0)
<b>Voiding flow type</b>	
<b>Before Pessary</b>	
Bell-shaped	19 (54.3)
Tower-shaped	3 (8.6)
Staccato-shaped	6 (17.1)
Interrupted-shaped	7 (20.0)
<b>With Pessary</b>	
Bell-shaped	31 (88.6)
Stacatto-shaped	3 (8.6)
Plateau-shaped	1 (2.9)

## Interpretation of Results

The data presented are from a new service, multi and interprofessional, which has a broad conservative approach for women who have POP with complaints of vaginal heaviness. Because it is already clear in the literature about the adverse effects that pessaries can cause, we decided to include prior preparation of the vaginal mucosa and pelvic floor muscles, using intravaginal photobiomodulation and non-ablative radiofrequency and PFMT associated with urotherapy and behavioral therapy.

Our expectation is that this therapeutic association will increase adherence and improve the clinical results of these patients. It is believed that the cost of conservative treatment will be potentially lower than the surgical indication and with fewer side effects. [2]

Changes in bladder positioning can lead to changes in the bladder emptying phase, represented by changes in voiding flow and the post-void residue. As almost all patients had prolapse of the anterior wall, with the presence of the pessary and the bladder repositioning, no patient had interrupted flow anymore and the staccato flow was reduced by half. There was also a reduction in post-voiding residue, although the median without the pessary was already within the normal range (5ml).

Of the six patients who had no indication for pessary use, two were referred for surgery due to the weight of the organs combined with the width of the vaginal introitus, not allowing the pessary to remain inside the vaginal canal; one patient had a very short vaginal canal and scarring adhesions due to a total hysterectomy; and three had a reduced vaginal introitus, due to previous perineoplasty, not allowing the pessary positioning. The four patients without surgical indication were referred to physical therapy to continue with the conservative treatment without the pessary.

## Conclusions

The multiprofessional and multitherapeutic approach has the potential to offer a more complete and safer treatment for patients with pelvic organ prolapse. Data analysis should be continued, it is fundamental that the follow-up of the patients is carried out, so that it can be observed whether the short-term responses will be maintained in the long term, even with the limitations of a descriptive and retrospective study. It is noteworthy that a prospective clinical study was initiated.

## References

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