



## OXYBUTYNIN IN THE MANAGEMENT OF OVERACTIVE BLADDER IN ADULT WOMEN: A SYSTEMATIC REVIEW

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### Abstract

Overactive bladder is a significant issue affecting many adult women, leading to considerable morbidity and a decrease in quality of life. In Ecuador, oxybutynin is frequently prescribed to address this syndrome. However, it is unclear whether its efficacy is consistent when administered individually or in combination with non-pharmacological approaches, and the lack of clinical guidelines exacerbates the situation. This study aims to analyze the efficacy of managing overactive bladder in adult women through the administration of oxybutynin by conducting a systematic review. To achieve this, a thorough search was conducted in electronic databases, such as Pubmed, Medline, Cochrane, Elsevier, and ScienceDirect, with the aim of identifying relevant scientific articles and management guidelines published in the last five years in English and Spanish. The selection of articles will be made by reviewing inclusion criteria, titles, and abstracts, and will be documented through a detailed flowchart. The selected articles will be examined in their entirety, and the relevant information will be included in the results. This detailed study will provide an updated review of the effectiveness of oxybutynin, whether used alone or in conjunction with non-medicinal methods, in adult women suffering from overactive bladder. In addition, appropriate management protocols will be highlighted. The results of this review will be of great interest to physicians, patients, and policymakers, providing key information for making informed decisions about the most effective management of this syndrome in the population most prone to experiencing it, namely, adult women.

**Keywords:** Oxybutynin, Overactive bladder, women.

### INTRODUCTION

The purpose of this systematic review is to critically evaluate the efficacy and tolerability of oxybutynin in the treatment of overactive bladder in adult women. This syndrome has a significant impact on the quality of life of adult women, and proper treatment of it is essential to reduce the associated morbidity.

In Ecuador, oxybutynin is frequently prescribed as a treatment option for overactive bladder. However, the medical literature does not provide clear evidence on its efficacy in various delivery modalities, either as a single treatment or in combination with non-pharmacological approaches. The absence of specific clinical guidelines for its application in this population adds complexity to therapeutic decisions. The aim of this systematic review is to analyze the efficacy of managing overactive bladder in adult women through the administration of oxybutynin. (1)

Overactive bladder represents a urological problem with a considerable impact on the lives of many adult women around the world, and its treatment is a matter of great relevance both in general medicine and in specialties. This analysis focuses on the use of oxybutynin to manage overactive bladder in adult women, exploring its implications for both clinical practice and public health. To fully understand the magnitude of this clinical problem and the importance of addressing it, it is essential to place it in the broader context of women's health. (2)

Overactive bladder refers to a medical condition characterized by urinary symptoms, including urinary urgency, increased frequency, and, occasionally, urinary incontinence. These symptoms can have a considerable impact on women's quality of life, limiting their participation in everyday activities, affecting their emotional well-being, and leading to a decrease in self-esteem. (3)

Overactive bladder is a prevalent condition, estimated to affect millions of women around the world. With the aging of the population, according to the results of a research, filling symptoms were more common in women than in men (59.2% compared to 51.3%). However, men experienced more frequent emptying symptoms (25.7%) and postvoiding symptoms (16.9%) compared to women (19.5% and 14.2%, respectively), meaning that the prevalence of this condition continues to increase, underscoring the need for effective and well-tolerated management strategies. (4)

To understand how widespread the health problem of overactive bladder is, it is crucial to examine its epidemiology. It is estimated that about 17% of adults experience symptoms of overactive bladder at some point in their lives, with a significantly higher proportion in women than men. The incidence of overactive bladder increases with age, affecting a considerable number of women in adulthood and advanced adulthood, where the prevalence of OAB in people over 18 years of age is 11.8%, with a similar distribution between men (10.8%) and women (12.8%). In Spain, the prevalence in the general population over 40 years of age is 21.5%, being higher in women (25.6%) than in men (17.4%). Only 28.4% of people with compatible symptoms had been diagnosed with OAB and only 16.7% were receiving treatment. (Castro et al., 2005) (5)

That is why, specifically in the use of oxybutynin in the treatment of overactive bladder in adult women, a particular aspect of this clinical problem. Oxybutynin, as an antimuscarinic agent commonly employed to treat overactive bladder, has been the subject of research and discussion in the medical community regarding its efficacy and tolerability. The purpose of this review is to critically examine the existing evidence on oxybutynin and its role in the management of overactive bladder in adult women, with the aim of providing accurate and evidence-backed guidance to healthcare professionals facing this clinical challenge. (6)

Therefore, the main purpose of this analysis is to systematically examine the effectiveness of treating overactive bladder in adult women using oxybutynin. Through a detailed study of the existing information, the aim is to offer evidence-based suggestions for general medical practice and specialized in the management of this disorder, with the aim of increasing the quality of life of women who suffer from it and contributing to the progress of knowledge in this area.

That is why, in this context, the following question arises: How does the efficacy of oxybutynin vary in the treatment of overactive bladder when comparing single and combined administration with non-pharmacological treatments in adult women?, which serves as a route of study, since it aims to analyze through a systematic review the efficacy of management of overactive bladder in adult women through the administration of oxybutynin and thus as well as to determine the appropriate protocols for management with oxybutynin for overactive bladder in adult women.

## METHODS

According to the structure of the study, it is observational and descriptive in nature, conducting a systematic analysis from July to November 2023. In the Ecuadorian environment, the research topic in question has not been explored through systematic analysis, and the information available in Latin America is scarce. The research question focuses on the variation in the effectiveness of oxybutynin in the treatment of overactive bladder when compared to its individual use with non-pharmacological treatments, all in adult women. In the literature review process, specific inclusion and exclusion criteria will be applied, reflected as follows:

### Inclusion Criteria:

- Research published in the last 5 years, as it provides up-to-date and relevant information in relation to the topic of study.
- Research available in open access to the full text.
- Clinical trials and experimental studies aimed at evaluating the efficacy of oxybutynin in adult women.
- Clinical trials, case studies and case reports in Spanish and English.

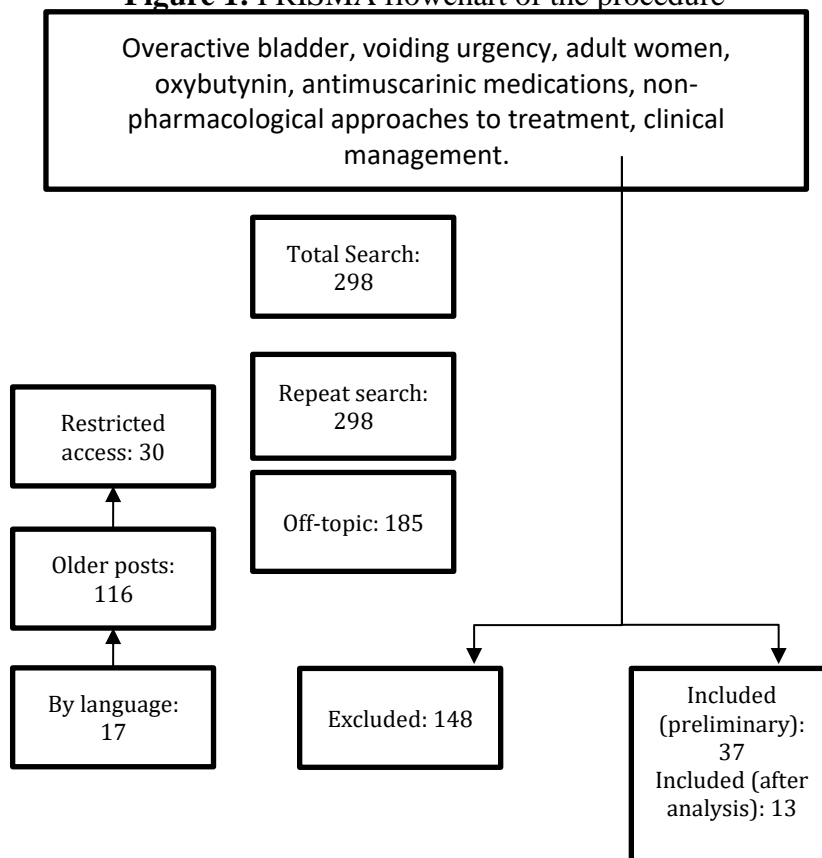
### Exclusion Criteria:

- Scientific documents that do not address the specific topic covered in this study.
- Grey literature, such as reports, proceedings and proceedings of conferences, or theses for obtaining academic degrees.
- Research with undefined results or unjustified methodologies.
- Studies that do not have access to the full text.
- Systematic and literature reviews of studies focused on pregnant women.
- Clinical trials or documents that have not been peer-reviewed.

## RESULTS

Taking into account the identification and selection processes of the study, the PRISMA flowchart of the procedure will be presented

**Figure 1: PRISMA flowchart of the procedure**



N°	Author	Year	Title	Objective	Methodology	Result
1	Boaretto, J; Mesquita, C; Lima, A; Prearo, L; Girão, M; Sartori, M. (7)	2019	Comparison of Oxybutynin, Posterior Tibial Nerve Stimulation and Perineal Exercises in the Treatment of Overactive Bladder Syndrome	To assess the efficacy of three treatment modalities for women with overactive bladder syndrome (SVH): perineal exercises, transcutaneous posterior tibial nerve stimulation (PTTE) and oxybutynin.	The study was prospective and randomized, carried out in the urogynecology sector of the Department of Gynecology at Unifesp. A total of 65 women participated, divided into three groups: perineal exercises, ETNTP and oxybutynin (control group). Virgin, pregnant, hormone therapy, neurological diseases, decompensated diabetes, urinary tract infection, contraindications to oxybutynin use, and other specific conditions were excluded.	The results revealed significant findings in the reduction of urge incontinence in the perineal exercises, transcutaneous posterior tibial nerve stimulation (PTTE) and oxybutynin groups. The perineal exercise group showed a 50% decrease, showing improvements in quality of life, although it did not reach statistical significance. In contrast, the group undergoing ETNTP experienced a 70.5% reduction, standing out as the most effective modality, supported by statistically significant results and notable lifestyle improvements. Although the oxybutynin collection showed a 41% reduction, it did not reach the same statistical significance observed in transcutaneous electrostimulation. Overall, all modalities were shown to be effective in improving quality of life in the short term, with PTTE standing out as the most effective option in reducing urge incontinence, underlining its relevance in the therapeutic management of SVH.
2	Arruda, R; Sousa, G; Castro, R; Sartori, M; Baracat, E; Girão, M. (8)	2020	Overactive Bladder Syndrome: Management and Treatment Options	To summarize step-by-step treatment for overactive bladder syndrome (OAB) in order to improve the patient's quality of life and reduce costs to the patient	Diagnosis began with a history and examination targeting the urogenital system to assess the burden of disease in the patient. First-line treatment includes conservative	The article comprehensively discusses the various treatment options for overactive bladder syndrome (OAB), from non-invasive and conservative approaches to more

				and the health system.	measures such as weight reduction, decreased exposure to bladder stimulants, fluid optimization, and pelvic floor exercises.	invasive surgical interventions. It highlights the importance of a step-by-step approach, starting with conservative measures, such as pelvic floor physical therapy and pharmacotherapy, before considering more invasive options, such as sacral nerve stimulation or bladder augmentation cystoplasty. The need to refer to a urologist in specific situations, such as the diagnosis of neurological diseases or urothelial carcinoma, lack of response to medical treatments, and the presence of urological complications, is emphasized.
3	Hu, J; Pierre, E (9)	2019	Urinary Incontinence in Women: Evaluation and Treatment	To address urinary incontinence in women, highlighting its prevalence, economic burden and decreased quality of life.	The methodology of the article involves an initial evaluation that includes the determination of the transience or chronicity of incontinence, the identification of the subtype, and the search for warning signs for referral to specialists. Useful tools for assessment, such as screening questionnaires, voiding diary, cough stress test, and post-void residual measurement, are described. The request for a urinalysis for all patients is highlighted.	In terms of results, the article advocates a step-by-step approach to treatment based on urinary incontinence subtype. It starts with conservative treatment, including pelvic floor strengthening and lifestyle modifications. Interventions are then escalated to physical devices, medications, and ultimately surgical interventions in refractory cases. It mentions that there are no FDA-approved medications for stress incontinence, and pharmacological options for urge incontinence are described.
4	Alvarez, L; Gutierrez, A; Garcia, D; Pérez, R; Guillen, A. (10)	2019	Kegel Exercise Efficiency Evaluated by Urodynamic Study in Patients With Urinary Incontinence	To assess the efficacy of Kegel exercises in a population with urinary incontinence, focusing on	The study was heuristically guided in the observational and prospective study of 38 patients with urinary incontinence. Demographic data were collected from	Of the 38 participants in the study, it was noted that only 52% managed to experience an increase in urethral pressure after performing the Kegel

				measuring urethral pressure response.	the patients, and they were provided with an explanation of Kegel exercises, followed by measurement of peak urethral closure pressure and urethral pressure up to the functional pressure point of the urethral sphincter. Patients were evaluated after performing the Kegel maneuver, focusing on any increase in peak urethral closure pressure.	exercises. This finding suggests that although Kegel exercises are a commonly recommended intervention to address urinary incontinence, not all patients respond positively to this specific therapy. An interesting aspect that stood out in the results was the lack of response to exercises in patients who were overweight. This finding was supported by a statistically significant analysis ( $p=0.015$ ). The association between the ineffectiveness of Kegel exercises and being overweight could have important implications for the design of personalized treatment plans and the identification of predictors of response to this specific intervention.
5	Carvajal, D; Navarro, A (11)	2020	Effectiveness of Kegel exercises in reducing urinary incontinence in menopausal women: an integrative review	To examine the strongest available scientific data on the efficacy of Kegel routines in menopausal women.	The data collection process involved the use of a searchable map in several databases, including the Consumer Health Database, Directory of Open Access Journals (DOAJ), Elsevier, MEDLINE, PUBMED, Scopus, Springer, and other sources such as indexed journals. Filtering criteria were defined, opting for articles published between 2015 and 2020, focusing on women in menopause. Observational studies, systematic reviews, randomised clinical trials, clinical practice guidelines, and brief literature reviews were	Initial scanning of all databases yielded a total of 27,986 articles, which were thoroughly screened by title and abstract. After this procedure, 32 relevant publications were chosen. However, during the critical review, 29 articles were eliminated due to their limited relevance to the research. The remaining 3 articles provided the answer to the clinical question, underlining that Kegel exercises are the first treatment option for urinary incontinence in menopausal women.

					considered. We searched and assessed the evidence during September and October 2019.	
6	Gonzalez, S (12)	2023	Management of Overactive Bladder with Transdermal Oxybutynin	To evaluate the efficacy of isolated Kegel exercises compared to their combination with other treatments for the management of symptoms and other aspects of UTI; as well as identifying the role of nurses in the process.	A systematic review was carried out, the bibliography of which was found in the Dialnet, Scielo, PubMed and Cochrane databases.	A total of 27 articles were used for the systematic review. We evaluated the efficacy of stand-alone Kegel exercises, supported Kegel exercises, and Kegel exercises combined with other treatments for women's symptoms and quality of life improvement.
7	Corado, C ; Sugeidi, M Merino, Sergio (13)	2021	Effectiveness of pelvic floor strengthening through Kegel exercises to treat stress urinary incontinence in women aged 20 to 24 years in the postpartum period, in the capital of Guatemala.	To evaluate the efficacy of pelvic floor muscle training using Kegel exercises as a treatment for stress urinary incontinence in postpartum women aged 20 to 24 years, specifically in the capital city of Guatemala.	An observational, prospective study was conducted that included women aged 20 to 24 years who experienced postpartum stress urinary incontinence. Demographic variables were collected from the participants and a detailed explanation of the Kegel exercises was provided for 5 minutes. The measurement focused on the maximum urethral closure pressure and the urethral pressure up to the functional pressure point of the urethral sphincter. After performing the Kegel maneuver, it was evaluated whether there was an increase in the maximum urethral closure pressure.	It was revealed that only 52% of the participants experienced an increase in urethral pressure with the practice of Kegel exercises. This finding suggests a limited response to this form of treatment in the population studied. In addition, a significant lack of response was identified in overweight women, evidencing a possible influence of weight on the effectiveness of the exercises. These results underscore the need to consider additional factors, such as body mass index, when implementing Kegel exercise programs as part of the treatment for stress urinary incontinence in postpartum women.
8	Rodríguez, A (14)	2018	The Use of Kegel Exercises for Pelvic Floor Strengthening in Female Patients With Pain-Related Urinary Incontinence and the Impact on Their	To assess urinary incontinence in relation to quality of life and pain in female women	The methodology used consisted of an in-depth search in databases such as Pubmed, Google Scholar, SciELO and Ebsco, with the purpose of finding articles that provided an overview of the topic, its physiotherapeutic	The study's findings indicated that the use of Kegel exercises as therapy for urinary incontinence was found to be considerably effective in increasing muscle tone and coordination of muscle contraction, helping to control the urethra during

			Quality of Life: A Literature Review		treatment and associated variables. 15 articles that met the established requirements were selected.	exertion that could cause involuntary urine leakage. It was noted that, according to the study, the effectiveness of Kegel exercises fluctuated depending on the body mass of the participants, being less effective in people with higher body mass. In addition, it was emphasized that urinary incontinence had significant impacts on the quality of life of affected women. This was reflected in feelings of low self-esteem, interference in intimate relationships, reduced social contact, and difficulties in daily, work, and social activities.
9	Lopez, L ; De la Torre, A ; Morales, C ; Diaz, A ; Peragón, M ; Almazán, A (15)	2019	Effects of a Kegel Exercise Program for Urinary Incontinence in Women Over 65 Years	To analyse the effects of a pelvic floor muscle strengthening programme based on Kegel exercises to treat urinary incontinence in women over 65 years of age.	A randomized controlled clinical trial was conducted with a total sample of 58 women, divided into two groups. The control group, made up of 29 women, did not engage in any type of exercise, but received recommendations about the benefits of physical exercise. The experimental group, also with 29 women, participated in a Kegel exercise program for 16 weeks. The ICIQ-SF (International Consultation on Incontinence Questionnaire) questionnaire was used as an evaluation instrument. This questionnaire is self- administered and helps identify the presence of urinary incontinence and its	After completion of the Kegel exercise program, significant improvements were observed in the experimental group compared to the control group. The group that participated in the exercise program showed improvements in pelvic floor muscle strength, which translated into a significant reduction in urinary incontinence. In contrast, the control group, which did not participate in the exercise program, showed no significant changes in the parameters studied. These results suggest that a Kegel exercise program may be effective in improving pelvic floor strength and reducing urinary



					impact on quality of life. The ICIQ-SF score is obtained by adding the scores of questions 1+2+3, with any score above zero being considered a diagnosis of urinary incontinence.	incontinence in postmenopausal women over 65 years of age.
10	Méndez, A (16)	2022	Analysis of the results of Kegel exercises in the treatment of urinary incontinence in female patients aged 40 to 75 years at the Zabdi clinic in the years 2018 to 2021	To examine the results derived from the application of Kegel exercises as a physiotherapy intervention in women aged 40 to 75 years suffering from urinary incontinence.	The methodology adopted for this study was qualitative and retrospective in nature. The sample consisted of 20 patients, selected according to specific criteria related to urinary incontinence and its suitability for treatment with Kegel exercises. Assessment of pelvic muscle strength was performed using the Modified Oxford scale. The process involved the collection of data from medical records, muscle assessments before and after treatment, and a comparative analysis of the results obtained.	The results showed that, after completing the Kegel exercise program, all patients saw a remarkable increase of 2 points in the strength indicator of the Modified Oxford scale. This progress was reflected in better control of urination, a clear strengthening of the pelvic muscles, and an overall improvement in the quality of life of the participants. These findings suggest that Kegel exercises have a beneficial impact on pelvic muscle strength and may contribute significantly to improved lifestyles in women suffering from urinary incontinence in the age range investigated.
11	Vozmediano R, Blanca M, Blasco P (17)	2018	Efficacy of Transdermal Oxybutynin in the Treatment of Overactive Bladder Syndrome: Does It Make Sense to Use It in 2017?	Evaluation of changes in symptoms among patients with overactive bladder syndrome treated with transdermal oxybutynin and tolerability after 12 months of follow-up.	This was a multicenter, retrospective, single-cohort observational study. Changes in symptoms were mainly assessed with a 3-day voiding diary. The results were compared with baseline values. Subgroup analyses were performed in patients previously treated for OAB or not and aged <65 years versus ≥65 years.	In this study, which examined the medical records of 105 patients, the vast majority of participants, 92.4%, were women. After 12 months of treatment with transdermal oxybutynin, changes in urinary symptoms were assessed in 47 patients who kept a voiding diary. The results showed significant improvements in symptoms from the start of treatment. There was a noticeable reduction in urinary frequency, with an average decrease of 2.6

						<p>urinations per day. In addition, the daily number of urgent episodes decreased by an average of 4.7 episodes per day, and urge incontinence experienced an average reduction of 1.9 episodes per day. These improvements indicate that treatment with transdermal oxybutynin was effective in reducing symptoms of overactive bladder. In terms of adverse events, it was found that 38.1% of patients experienced some type of side effect, most of them being adverse events at the site of application, which affected 27.6% of patients. No serious systemic adverse events were reported, suggesting that the treatment was generally well tolerated. Only a small percentage of patients, 5.7%, reported dry mouth as a side effect.</p>
12	Abu, A; Nasr, E (18)	2022	Kegel exercise training program for women with urinary incontinence	To assess the effects of a Kegel exercise training programme in women with urinary incontinence.	The methodology of the study involved a quasi-experimental intervention design, conducted in three government hospitals at the outpatient gynecological clinic in the city of Port Said, Egypt. The sample consisted of 292 women with urinary incontinence, recruited through convenience sampling. Inclusion and exclusion criteria were established, and data were collected using a structured interview questionnaire with two sections. Section I addressed sociodemographic	<p>The study revealed that after the implementation of the Kegel exercise program, there were statistically significant improvements in the urinary incontinence pattern and quality of life of the women studied. The importance of Kegel exercises in strengthening the pelvic floor muscles and improving urine storage was highlighted. It was also observed that urinary incontinence negatively affects women's quality of life, especially emotionally and</p>

					characteristics, medical, surgical, and obstetric history, and section II included the Urinary Incontinence Scale. The Kegel exercise training program was delivered in two sessions, using various didactic techniques.	socially, and their ability to participate in daily activities.
13	Grijalva, E; Zambrano, D (19)	2022	Analysis of the results of Kegel exercises in the treatment of urinary incontinence in female patients aged 40 to 75 years at the Zabdi clinic in the years 2018 to 2021	To analyze the outcome of Kegel exercises as a physiotherapeutic treatment in a UI population evaluating pelvic muscle strength using the Modified Oxford scale.	The research had a qualitative and quantitative approach and adopted a retrospective observational design. The sample consisted of 20 female patients who met the established selection criteria. The main objective was to analyze the results of Kegel exercises as a physiotherapeutic treatment, specifically assessing pelvic muscle strength using the Modified Oxford scale.	The results obtained were positive and encouraging. After treatment with Kegel exercises, all 20 patients experienced a 2-point increase in the Oxford scale strength indicator. This increase in muscle strength was associated with improvements in voiding control, pelvic muscle strengthening, and an overall better quality of life.

## DISCUSSION

The main objective of the research was to describe the results and efficacy of the treatment of overactive bladder in adult women using different methods of oxybutynin administration, as well as its association with Kegel exercises indicated in the aforementioned table.

In relation to treatment persistence, it was observed that 55.2% of patients continued to use OXY-TDS (transdermal patch oxybutynin) after 12 months, indicating that more than half of patients maintained treatment long-term. The results of the study on the importance of oxybutynin in the form of a transdermal patch for the treatment of Dmochowski's overactive bladder (20) demonstrated significant improvements in the symptoms of overactive bladder, with generally positive tolerability and most adverse events limited to the site of application. These findings support the efficacy and safety of this therapy in the management of overactive bladder in study participants.

In addition, the analysis showed an improvement in symptoms thanks to the use of OXY-TDS during the first 6 months, and this improvement remained constant until the end of the 12-month observation period. These results are consistent with the findings of Dmochowski's clinical trial (20) of the use of transdermal oxybutynin in the management of adults with overactive bladder: combined findings from two randomized clinical trials, in which they indicated a positive response in the first weeks of treatment, sustained throughout the subsequent period.

Comprehensive comparison of treatment alternatives for overactive bladder, including oxybutynin, other anticholinergic medications, and non-pharmacological methods, is a crucial component to the effective management of this condition. In their study, Arruda et al. (8) provide an in-depth examination of existing treatment options, underscoring the importance of oxybutynin as a feasible alternative. This point is significant in indicating that, although oxybutynin is shown to be a potent

therapeutic agent, its selection as a treatment should be based on rigorous evaluation in contrast to other available options.

The incorporation of oxybutynin into a wider range of therapeutic alternatives demonstrates the need for an individualized approach in the treatment of overactive bladder. Considering that patients may experience different levels of symptom severity and variations in responses to treatments, it is essential to consider a spectrum of options that encompasses both pharmacological and non-pharmacological interventions. This holistic approach allows treatment to be customized to the specific needs of each patient, thus improving clinical outcomes and quality of life. The existence of side effects, although controllable, highlights the need for constant monitoring and proactive strategies to manage these adverse events. This is especially relevant as side effects can have a significant impact on the patient's adherence to treatment.

Hu and Pierre (9) explore urinary incontinence in women, emphasizing its prevalence, economic impact and reduced quality of life. They take a stepwise approach to treating urinary incontinence, starting with conservative measures such as pelvic floor strengthening and lifestyle adjustments, followed by physical devices, medications, and, in more severe cases, surgical interventions. This approach reflects the need for personalized and adaptable treatment, recognizing that there is no one-size-fits-all solution for urinary incontinence.

In contrast, studies by Álvarez et al. (10), Corado and Merino (13) explore the efficacy of Kegel exercises in the treatment of urinary incontinence. The findings indicate that these exercises, although commonly recommended, do not benefit all patients equally. Only 52% of participants in the aforementioned authors' studies showed an increase in urethral pressure or significant improvements after performing these exercises, highlighting the importance of considering individual factors, such as body weight, in response to treatment.

On the other hand, Rodríguez's study (14) focused on the effect of Kegel exercises on quality of life and pain control in women with urinary incontinence. Although the exercises are often effective, their effectiveness fluctuates with body mass, indicating the need for more personalized treatment. This study also highlights how urinary incontinence impacts beyond physical symptoms, affecting patients' self-esteem and social lives. In summary, these studies underscore the need for more personalized treatment plans and highlight that urinary incontinence has a significant impact on patients' quality of life, beyond physical symptoms.

In their comprehensive study, Carvajal and Navarro (11) examine the effectiveness of Kegel exercises in reducing urinary incontinence in menopausal women. The analysis concludes that Kegel exercises are an effective initial treatment option for urinary incontinence in this segment of the population. This discovery is significant, as it highlights Kegel exercises as a non-invasive and accessible treatment option for all, which can be successfully implemented in menopausal women, thus improving their quality of life.

The study by López et al. (15) focuses on women over the age of 65, a group that often faces unique challenges in managing urinary incontinence, especially during postmenopause. The results suggest that Kegel exercises are an effective and accessible alternative to improve quality of life in this age group, providing a practical and inexpensive solution to a frequent and often stigmatized problem. In addition, Abu and Nasr (18) investigate how a Kegel exercise program can have a considerable positive effect on the quality of life of women suffering from urinary incontinence. The results of the study indicate that after the implementation of the Kegel exercise program, notable improvements were observed in urinary incontinence and quality of life of the participating women.

On the other hand, it is emphasized that urinary incontinence negatively affects women's quality of life, particularly in emotional and social aspects, as well as in their ability to perform daily activities. This finding supports the importance of treating urinary incontinence not only with the goal of reducing symptoms, but also taking into account the significant benefits it can bring to patients' optimal lifestyles. Finally, Grijalva and Zambrano (19) examine the results of Kegel exercises, highlighting the need for further research to better understand the response to treatment. This highlights the need for deeper and more detailed exploration in this field, in order to optimize treatment strategies and understand the diversity of responses in different populations.

The use of oxybutynin as the sole treatment for overactive bladder in adult women has been extensively studied, demonstrating its efficacy in managing symptoms related to this condition. However, the therapeutic strategy combining oxybutynin with Kegel exercises has emerged as a comprehensive approach to treating overactive bladder in adult women. Kegel exercises, which focus on strengthening the pelvic floor muscles, complement the action of oxybutynin by directly treating the underlying muscle dysfunction. The combination of oxybutynin and Kegel exercises could provide additional benefits, such as increased muscle tone and endurance, leading to a holistic approach to the treatment of overactive bladder. (15)

The incorporation of Kegel exercises into the therapeutic regimen brings a new dimension to the treatment of overactive bladder. By focusing on strengthening the pelvic floor muscles, Kegel exercises can positively influence muscle function, improving control and endurance. This dual approach, which includes both pharmacological and non-pharmacological intervention, reflects a complete understanding of the factors that contribute to overactive bladder, allowing for more comprehensive and personalized treatment.

The decision to opt for oxybutynin alone or in combination with Kegel exercises should take into account individual factors, such as tolerance to treatment, severity of symptoms, and patient preferences. Although oxybutynin offers quick and effective relief, the inclusion of Kegel exercises may provide long-term benefits, especially in preventing recurrences. The systematic review aims to address these considerations, evaluating existing evidence to guide healthcare professionals in making informed and personalized clinical decisions. On the other hand, combining with Kegel exercises could provide a more sustainable approach, with lower risks of adverse effects and the possibility of incorporating lifestyle changes that support ongoing management of overactive bladder. (14)

Another important factor in the choice of treatment is the economic feasibility and accessibility of treatments. Oxybutynin, being a pharmacological intervention, may have associated costs and access considerations. Comparing these aspects with the implementation of Kegel exercises, which are a non-pharmacological intervention with lower potential cost and greater accessibility, may be essential to understand the practical applicability of both strategies in different healthcare contexts.

Among the limitations we found in conducting this systematic review is that it depends largely on the quality and quantity of studies available on the subject. If there is a lack of high-quality studies or a limited amount of relevant research, this can make it difficult to conduct a thorough and rigorous review.

In addition, there is a possibility that studies with negative or non-significant results may be less likely to be published, which could skew the results of the review towards positive results. Studies on oxybutynin in the management of overactive bladder may vary in terms of their methods, study population, duration, and outcome measures. This variability can make it difficult to combine results and draw clear conclusions.

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