

Physiotherapy for chronic prostatitis/chronic pelvic pain syndrome in men: a systematic review

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Abstract

The goal of this study is to conduct a systematic review of physiotherapeutic interventions used in management of chronic prostatitis/chronic pelvic pain syndrome (CP/CPPS). Following established guidelines for reporting a systematic review, the two authors conducted independently searches of medical databases for studies assessing the effectiveness of physiotherapy in cases of chronic prostatitis/chronic pelvic pain syndrome. This literature search was carried out from June to July 2022. After screening databases and applying eligibility criteria, the authors included 13 studies in the final analysis, covering a total of 600 patients suffering from chronic prostatitis/chronic pelvic pain syndrome. Acupuncture and physical therapy (shockwave therapy and magnetic field stimulation) were found to be the most common physiotherapeutic interventions used in the qualifying studies. Physiotherapy is an increasingly popular non-pharmacological mode of intervention for treatment of pelvic floor dysfunction, including among men. This is due to the increasing effectiveness and safety of the physiotherapeutic treatments used. However, there is at present a lack of studies of sufficiently high methodological quality to be used as a basis for specific recommendations and guidelines for physiotherapeutic management of chronic prostatitis/chronic pelvic pain syndrome.

Introduction

Chronic prostatitis/chronic pelvic pain syndrome (CP/CPPS) in men is defined as chronic pelvic region pain which has no apparent cause and which has persisted for at least 3 of the past 6 months. The prevalence of chronic pelvic pain syndrome in the adult male population is between 2% and 10%, although these figures appear to be underestimated. The highest incidence occurs after the age of 40 [1]. Chronic pain is among the most common symptoms, while patients may also report symptoms of dysuria and painful ejaculation [1, 2].

The treatment of CP/CPPS in men is a long and complicated process. This is because there is no single standard of management, and because the therapy itself needs to be selected on a case-by-case basis, taking into account the individual patient's clinical condition, dominant and concomitant symptoms. Therefore, management may often require a combination of pharmacotherapy, physiotherapy and psychotherapy, especially since it has been confirmed that polytherapy is more effective than monotherapy [3]. Surgical intervention may be used in certain cases but this is reserved for patients with specific indications such as urethral stricture or bladder neck obstruction [4]. As there are still no clarified guidelines and recommendations for CPPS therapy (including

physiotherapy), trying to synthesize the available knowledge seems crucial for offering comprehensive care to patients affected by CPPS.

Aim of the research

The aim of the present systematic review is therefore to systematically search and synthesize the results of available studies of physiotherapeutic interventions for the alleviation of symptoms of CP/CPPS and improvement of patients' overall quality of life. The main research question adopted by the paper's authors was: is the use of physiotherapeutic interventions effective in reducing the severity of CPPS symptoms in the affected male population?

Material and methods

In order to maintain high methodological standards when conducting the systematic literature review for this publication, the PRISMA protocol was used [5]. Thus independent literature searches were performed by each of the 2 authors of this paper, and any disagreements regarding the inclusion of individual articles in the analysis were resolved through discussions between the authors, with the final author having the final say. The literature search for this review was carried out from June to July 2022.

Table 1. Example search query

Database	Terms
PubMed/Medline	(1) "chronic prostatitis" OR "chronic pelvic pain syndrome" OR "CPPS" (2) "men" OR "man" OR "male" OR "men's" OR "masculine" (3) "physiotherapy" OR "rehabilitation" OR "manual therapy" OR "physical exercises" OR "physical activity" OR "physical therapy" OR "pelvic muscle floor exercise" OR "thermotherapy" OR "electrotherapy" OR "electrostimulation" OR "laser therapy" OR "ultrasound" OR "massage" OR "deep tissue massage" OR "muscle release" OR "muscle relaxation" OR "magnetic field therapy" OR "acupuncture" OR "acupressure" OR "shockwave therapy" OR "non-pharmacological management" OR "non-pharmacological treatment" OR "conservative treatment" OR "conservative management" (4) (1) AND (2) AND (3)

Search strategy

For the purpose of conducting a systematic literature review, it was decided to search the following medical literature databases: PubMed/Medline, Cochrane Library, and Polish Medical Library. Papers in English, French and Polish were sought using established keywords with language variations. A sample search query is shown in Table 1.

Eligibility criteria

Retrieved articles were screened manually according to criteria previously adopted and accepted by all authors of this study. These criteria are shown in Table 2.

Data extraction

Two independent reviewers extracted data from articles which met the eligibility criteria using an MS Excel spreadsheet. The following data were extracted:

– concerning the study: first author, year of publication, country of study origin, study design;

– concerning study participants: sample size, age;
 – concerning the physiotherapeutic intervention: type, frequency, time of exposure, length of follow-up, outcome measures, main results.

Methodological quality assessment

Studies included in the final qualitative analysis were subjected to methodological quality assessment using Joanna Briggs Institute (JBS) questionnaires. We decided to use the JBS tools due to the wide range of study types for which the institute has developed its questionnaires [6]. Studies were assessed according to the JBS checklists and were classified as having high methodological quality when 100% of criteria were met, and as having a risk of low quality when no more than 25% of criteria were met.

Results

Selection of studies

Initially, more than 2000 studies were found in medical databases, and a further three relevant stud-

Table 2. Eligibility criteria

Variable	Criteria
Population	Inclusion: studies involving men diagnosed with chronic prostatitis/chronic pelvic pain syndrome, age of participants above 18 years old Exclusion: studies involving animal trials, men having acute bacterial prostatitis, prostate cancer, other prostate gland disorders
Physiotherapeutic intervention	Studies evaluating physiotherapeutic management as a primary intervention for chronic prostatitis/chronic pelvic pain syndrome were included. Examples of physiotherapeutic interventions are as follows: manual therapy, physical exercises (including pelvic muscle floor exercise), physical activity, physical therapy (including thermotherapy, electrotherapy, electrostimulation, laser therapy, ultrasound therapy, magnetic field therapy, shockwave therapy), massage, deep tissue massage, muscle relaxation techniques, acupuncture, acupressure
Comparison	Other interventions, placebos, sham therapies
Outcomes	Intensity of pain, muscle tension, quality of life, sexual functioning, subjective well-being
Study design	Due to limited literature resources containing physiotherapeutic approaches to chronic prostatitis/chronic pelvic pain syndrome, we have decided that clinical (randomized and nonrandomized), observational (prospective and retrospective) and case studies will be searched and included in the present review
Timing, setting	There were no restrictions
Languages	English, French, Polish

ies were identified through other sources (so-called grey literature). Subsequently, after removal of duplicate findings and full-text assessment using the eligibility criteria, 13 studies were selected for qualitative synthesis. Some of the most common reasons why the authors of this review excluded individual articles were: 1) lack of data separately for women and men for articles describing the physiotherapy process for both sexes, 2) lack of detailed description of the physiotherapy interventions undertaken when a comprehensive physiotherapy process was used, and 3) lack of re-evaluation of physiotherapy outcomes. Figure 1 presents a flow diagram of the study search process.

Description of studies included

We included 13 studies in the final analysis, with a total of 600 patients between the average ages of 34 and 64 suffering from chronic prostatitis/chronic pelvic pain syndrome. Of these studies, most were from Asia (five different countries) and Europe (four different countries), and one was from the USA. The majority of the studies used a randomized controlled trial design, while case studies were the least common type. The papers included in the final analysis came from the years 2009–2021. The most frequent physiotherapeutic interventions were acupuncture, shockwave therapy and magnetic stimulation. Participants in the studies were typically given one or two therapeutic sessions per week for a period of no more than 3 months. Follow-up periods varied widely, ranging from 6 weeks to 12 months. The NIH-CPSI (*National Institute of Health-Chronic Prostatitis Symptom Index*), IPSS (*International Prostate Symptom Score*), VAS (*Visual Analogue Scale*), and IIEF-5 (*International Index of Erectile Function 5 Items*) were most often used to assess outcomes. The characteristics of the studies included in the final analysis are presented in Table 3 [7–19].

Summary of main results

A statistically significant reduction in CP/CPPS symptoms as measured on the NIH-CPSI scale can be observed based on the results of the studies on the effect of acupuncture treatments. In the case of the studies by Qin *et al.* [7] and Sahin *et al.* [11], these therapeutic effects persisted for many weeks after the treatment cycle had been completed.

Analysis of studies evaluating the effectiveness of using different types of shockwaves in the conservative treatment of CP/CPPS also reveals promising results. Treatments using EWST, rEWST and LIST resulted in statistically significant improvements in parameters assessed by the NIH-CPSI [8, 10, 15], VAS [8, 10] and IIEF [10, 15] scales. However, it should be noted that observations of the subjects of these studies were limited to a maximum of several weeks.

The third most common intervention among the studies included in the analysis was magnetic field

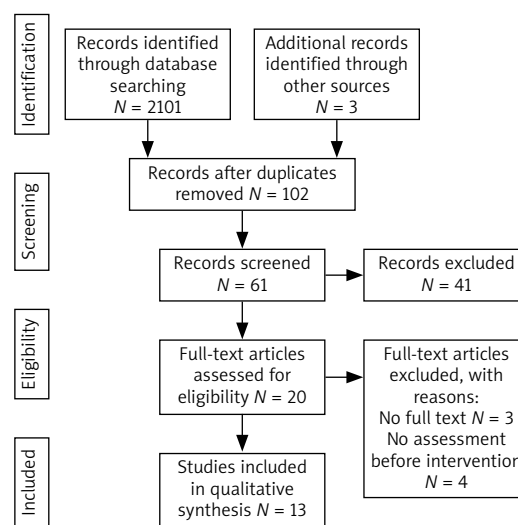


Figure 1. PRISMA flow diagram

stimulation, whose effectiveness is not as promising as that of the previously described acupuncture or shockwave therapies.

In one of the two studies evaluating the effects of magnetic field stimulation, improvements in scores as measured by the NIH-CPSI scale were observed, although the results are not statistically significant [14]. In the second study, by Kim *et al.* [18], statistically significant improvements in NIH-CPSI and IPSS scores were observed after both 6 and 24 weeks of follow-up. In addition, more than 75% of the study participants expressed the view that the intervention used had been helpful. It should be noted, however, that the study design did not involve recruiting and comparing results with a control group.

The last of the studies included in the final analysis was that of Schneider *et al.* [13], which measured the effectiveness of TENS electrotherapy. The results show a statistically significant reduction in pain on the VAS scale (a decrease of about three points), although again the data were not compared to a control group.

The effectiveness of manual therapy and myofascial techniques was evaluated in studies by Burzynski *et al.* [9] and Van Alstyne *et al.* [19]. Both articles (which are case reports) described improvements in patients' functioning and reductions in the severity of disease symptoms. It should be noted that in the case of the Burzynski *et al.* study [9], the only standardized tool to assess the effectiveness of therapy was a pain rating scale, which makes it significantly more difficult to assess the impact of the therapy used on the patient's quality of life.

From a clinician's point of view, based on the data in Table 3, the most optimal form of therapy in CPPS seems to be interventions based on treatments from the field of physical therapy (such as shockwave therapy and its variations, and electrotherapy treatments

Table 3. Summary of studies included

First author, year, country	Study design and quality	Population		Physiotherapeutic intervention		Main results	
		N	Age	Type	Methods	Outcome	Total follow-up period
Qin, 2018, China [7]	RCT, ****	68	$\bar{x} = 34.5$ SD = 8.3	AC	Participants were divided into study (N = 34) and placebo groups (N = 34). Both groups received 30-minute AC sessions 3 times per week for 8 weeks. The study group received AC on four zones bilaterally (lumbar spine, sacrum, tailbone, and distal part of tibia). The placebo group received needles with a blunt tip.	NIH-CPSI IPSS	6 months
Rayegani, 2020, Iran [8]	RCT, ***	31	$\bar{x} = 43.7$ SD = 12.6	EWST PH	Participants were divided into study (N = 16) and control groups (N = 15). The study group received 4 sessions (once a week) of EWST (3000 impulses, 3 Hz of frequency, and 0.25 ml/mm ²). For the control group, sham EWST (the probe was turned off) was applied. Both groups received pharmacotherapy based on muscle relaxants and antibiotics.	NIH-CPSI VAS IPSS IIEF-5 PVR Qmax	3 months
Burzynski, 2021, Poland [9]	CS, ***	1	46	MT	Patients received 10 40-minute sessions over 1 month, consisting of application of MT techniques to the lumbopelvic hip complex muscles and the pelvic floor muscles (per rectum). MT of the lumbopelvic hip complex used manual diaphragm release, trigger point massage, and friction massage. MT of the pelvic floor muscles consisted in trigger point therapy, friction massage, and post-isometric relaxation.	Pain NRS	3 months
Zhang, 2019, China [10]	Non RCT, ***	45	R = 22–64	rEWST	Participants were divided into 2 groups. The study group (N = 25) received 1 session weekly for 8 weeks of transperineal rEWST (3000 impulses, 10Hz of frequency, and 1.8–2.0 bar of pressure). The control group (N = 20) received drug therapy which consisted of a combination of α -blockers and anti-inflammatory medication for 8 weeks.	NIH-CPSI VAS IPSS IIEF-5	5 months

Regarding NIH-CPSI total score, differences of –5.7, –6.7, and –7.4 points at 8, 20, and 32 weeks follow-up respectively were observed, which indicates a greater decrease in symptoms in the study group ($p < 0.001$). In turn, regarding IPSS questionnaire, differences of –2.4, –3.0, –3.4 at 8, 20, and 32 weeks respectively also indicates greater improvement in the severity of symptoms in the study group ($p < 0.001$).

Regarding the result between groups, after 4 and 12 weeks of treatment, a greater improvement was observed in the study group, where the NIH-CPSI total score was 15.25 compared to 21.93 in the control group ($p < 0.001$) at 4 weeks, and 13.38 compared to 21.53 ($p < 0.0001$) at 12 weeks. In the study group, the VAS score was 2.63 compared to 4.67 in the control group ($p < 0.001$) at 4 weeks, and 2.81 compared to 4.33 ($p < 0.004$) at 12 weeks.

After 10 sessions of physiotherapy, patients reported reduction in pain in the minor pelvic area. 12 weeks later, the pain symptoms were totally resolved.

Both study and control groups presented significant improvements in NIH-CPSI, VAS, IPSS, and IIEF-5 scales at 4, 8, and 20 weeks compared with baseline scores ($p \leq 0.001$). Regarding comparisons between groups, only NIH-CPSI and IIEF-5 scores demonstrated significant differences ($p = 0.006$, and $p = 0.02$, respectively) between the two groups and only at 8 weeks.

Table 3. Cont.

First author, year, country	Study design and qualitya	Population		Physiotherapeutic intervention		Main results	
		N	Age	Type	Methods	Outcome	Total follow-up period
Sahin, 2015, Turkey [11]	RCT, ***	100	R = 22–49	AC	Participants were divided into study (N = 50) and control groups (N = 50). The study group received 6 sessions of AC treatment (once a week). Treatment used 7 acupoints bilaterally (2 on sacrum, 2 on tibia, 1 each on buttock, lower abdomen and perineum). The control group received sham AC, which involved performing treatment 1 cm to the left of acupoints selected for the study group (type of needles, session duration and frequency were preserved).	NIH-CPSI	6 months
At each follow-up point, significant NIH-CPSI total score improvements were observed in both groups ($p < 0.001$). Moreover, the differences between groups were also significant ($p < 0.001$) and more prominent in the study group (+5.38, +6.02, +6.13, +7.36, at 6, 8, 16, 30 weeks, respectively).							
Lee, 2014, Malaysia [12]	RCT, **	12	$\bar{x}$ = 42.9 SD = 10.6	AC	Participants were divided into two groups. The study (N = 6) and control (N = 6) groups received 20 30-minute AC sessions (2 times weekly for 10 weeks). Treatment used 4 acupoints placed bilaterally (1 on lower abdomen, 1 on perineum, 2 on tibia). The control group received the same treatment protocol but without needle stimulation.	CI NIH-CPSI	2.5 months
The study group noted a 5.83% growth in the NKC level compared to the control group (−13.51%, $p < 0.05$). There were no NIH-CPSI results shown in the manuscript.							
Schneider, 2013, Switzerland [13]	Non RCT, **	60	46.9	TENS	The study consisted in one intervention group (N = 60). Participants underwent 30-minute electrotherapy sessions using TENS (2 times per day for 12 weeks). The parameters of TENS were: 80 Hz of frequency, 150 μ s time of impulse.	VAS NIH-CPSI	3 months
There was a significant improvement in VAS score from 6.6 at baseline to 3.9 after 12 weeks of treatment ($p < 0.001$). NIH-CPSI scores were not presented in the manuscript.							
Kessler, 2014, Switzerland [14]	RCT, ***	60	S: $\bar{x}$ = 49.0 SD = 14.2 C: $\bar{x}$ = 44.9 SD = 15.9	SEMS	Participants were divided into study and control groups (N = 30 for both). The study group received SEMS of the perineum using an ultrasound gel for 10 minutes twice a day for 12 weeks. The parameters for stimulation were as follows: < 100 mV/cm ² of ultrasound intensity; 12 mW of ultrasound power; 1.9 Hz of ultrasound frequency; < 3 V/m of electric field force; 0.4 A/m of magnetic field force. The same devices were applied to the control group but without stimulation of the perineal area.	NIH-CPSI	4 months
After 12 weeks of treatment and at 16 th week of follow-up, the study group presented a greater improvement in NIH-CPSI total score than the control group. However, the results were not statistically significant.							

Table 3. Cont.

First author, year, country	Study design and quality	Population		Physiotherapeutic intervention		Main results	
		N	Age	Type	Methods	Outcome	Total follow-up period
Mykoniatis, 2021, Greece [15]	RCT, **	50	$\bar{x} = 43.1$ SD = 9.8	LIST	Participants were divided into two groups. Group A ($N = 25$) received one session of LIST weekly. Group B ($N = 25$) received two sessions of LIST weekly. Each group was given 6 LIST sessions. Parameters of shockwave therapy for each session for both groups were as follows: 5000 impulses; 0.096 ml/mm ² of energy flux density; 5 Hz of frequency. Application of treatment was in the perineal area (targeting the prostate region).	NIH-CPSI IIEF-ED IPSS VAS	3 months
Lee, 2008, Malaysia [16]	RCT, ***	89	S: $\bar{x} = 40.9$ SD = 11.0 C: $\bar{x} = 42.8$ SD = 9.8	AC	Participants were divided into study ($N = 44$) and control groups ($N = 45$). The study group received 30-minute sessions of AC two times per week for 10 weeks (20 sessions). Treatment used 4 acupoints placed bilaterally (1 on lower abdomen, 1 on perineum, 2 on tibia). The control group received the same treatment protocol but needles were placed 15 mm to the left of the proper acupoint and placed more superficially.	NIH-CPSI IPSS BPI IIEF-5	2.5 months
Lee, 2009, South Korea [17]	RCT, ***	36	$\bar{x} = 38.1$	eAC	Participants were divided into three groups: eAC group ($N = 12$), sham eAC group ($N = 12$) and control group ($N = 12$). All groups received the advice and exercise protocols involving hot baths and 30-minute periods of fast-paced walking. The eAC group received 20-minute treatment sessions 2 times weekly for 6 weeks. Treatment used 3 acupoints placed bilaterally (on the second and third sacrum foramen, and on the middle of the buttock). The parameters for stimulation were as follows: 4 Hz of frequency and 5–10 mA of intensity. The sham eAC group received the same protocol as above but the needles were placed more superficially and 15 mm laterally to the proper acupoint. There was no electrical stimulation, but the sound of the generator was heard by the participants. The control group received the advice and exercise protocol alone.	NIH-CPSI IPSS	1.5 months

There were significant improvements ($p < 0.001$) at 4 and 12 weeks following treatment in both groups in NIH-CPSI total scores and on the IIEF-ED scale. There were no significant differences ($p > 0.05$) between groups at any point of assessment. Regarding IPSS score, there were no significant changes or differences in both groups. No data were found regarding VAS scale in the manuscript.

After 10 weeks of treatment there was a significant difference between groups in NIH-CPSI total score, indicating a greater improvement in the study group (4.5 point; $p < 0.05$). There were no significant differences between groups regarding IPSS, BPI, and IPSS-5 scores after 10 weeks of treatment ($p > 0.05$).

Results showed an improvement in NIH-CPSI total score for all groups at 3 and 6 weeks of treatment. However, there were no significant differences between groups at week 3 ($p > 0.05$). After 6 weeks of treatment, the eAC group showed a significant improvement in NIH-CPSI total score compared to the other groups ($p < 0.001$). Regarding the IPSS score, there were no significant differences between groups at 3 and 6 weeks of treatment.

Table 3. Cont.

First author, year, country	Study design and quality ^a	Population		Physiotherapeutic intervention			Main results	
		N	Age	Type	Methods	Outcome	Total follow-up period	
Kim, 2013, South Korea [18]	CT, **	46	$\bar{X}$ = 48.5 SD = 11.5	EMS	The study consisted in one intervention group (N = 46). Treatment involved 30-minute sessions twice a week for 6 weeks (12 sessions total) of EMS. The frequency of EMS was 10 Hz for the first 15 min and 50 Hz for the second 15 min.	NIH-CPSI IPSS BSW PPSI	7.5 months	Total NIH-CPSI score significantly decreased after 6 weeks of treatment and at 24 weeks after the end of treatment (25.0 vs. 15.9 and 15.6, respectively; $p < 0.05$). Similarly, the IPSS results showed a significant improvement (versus baseline) at the end of 6 weeks' treatment (-5.2 ; $p < 0.05$), and following 24 weeks (-6.0 ; $p < 0.05$). According to voiding diary analysis, a significant decrease in urgency episodes was observed at the end of treatment (3.5 at baseline versus 1.3 after treatment; $p < 0.05$). Regarding the BSW questionnaire results, 75.7% of patients indicated that EMS treatment was helpful. There were no significant changes regarding the PPSI results (45.0 at baseline versus 46.0 at 24 weeks following treatment; $p > 0.05$).
Van Alstyne, 2010, USA [19]	CR, ***	2	45; 53	MFT Ext EduT	Patient 1 received 11 therapeutic visits (2 times per week) including trigger point release, education in relaxation, exercises of the pelvic floor muscles, aerobic exercises, stretching exercises and posture improvement exercises. Patient 2 obtained 7 therapeutic sessions but only 2 sessions contained direct trigger point therapy. The rest of the physiotherapy management was performed by the patient's wife and a massage therapist. He also obtained instruction in therapeutic exercises for hip joint range of motion, posture correction and muscle relaxation, and a walking program of 30-minute sessions 5 days per week.	NIH-CPSI NPRS PPSS	12 months	Both patients reported the improvement in CPPS symptoms following treatment. Patient 1 showed no pain symptoms after treatment, but Patient 2 reported only a reduction in NPRS (from 8 to 4). Regarding NIH-CPSI total score, Patient 1 presented a significant reduction from 25 at baseline to 0 points after 11 sessions, while Patient 2 reported an improvement from 29 points at the beginning of therapy to 21 at the end of 7 sessions. Analysis of the PPSS scores indicated a total improvement of symptoms in Patient 1 (from 3 to 0), and no improvement in Patient 2 (from 3 to 3). At 12 months following therapy, both patients reported no pain during long sitting and sexual intercourse, and Patient 2 also reported improvement in urinary symptoms.

^aCritical assessment of the quality of the studies was graded accordingly with various design specific Joanna Briggs Institute critical appraisal tools: ****=100% of criteria met, ***=75% of criteria met, **=50% of criteria met, *25% of criteria met

AC – acupuncture, BPI – Brief Pain Inventory, BSW – Benefit Satisfaction and Willingness Questionnaire, C – control group, CI – cellular immunity, CR – case reports, CS – case study, eAC – electroacupuncture, EduT – education-based therapy, EMS – extracorporeal magnetic stimulation, EWST – extracorporeal shock wave therapy, ExT – exercise-based therapy, IIEF-5 – International Index of Erectile Function 5 Items, IIEF-ED – International Index of Erectile Function – Erectile Dysfunction Score, LIST – low-intensity shockwave therapy, MFT – myofascial therapy, MT – manual therapy, NIH-CPSI – National Institute of Health-Chronic Prostatitis Symptom Index, NKC – natural killer cells, NPRS – Numeric Pain Rating Scale, PH – pharmacotherapy, PPSI – patient perception symptom improvement, PPSS – Pelvic Pain Symptom Survey, PVR – post void residual urine, Qmax – maximum flow rate, R – range, RCT – randomized controlled trial, rEWST – radial extracorporeal shock wave therapy, S – study group, SD – standard deviation, SEMS – sono-electro-magnetic stimulation, TENS – transcutaneous electrical nerve stimulation, VAS – Visual Analogue Scale, $\bar{x}$ – average.

like TENS – *Transcutaneous Electrical Nerve Stimulation*) and acupuncture treatments. Based on the studies cited, even a few physiotherapy sessions can significantly reduce pain and improve the quality of life of patients.

Discussion

The treatment of CP/CPPS is challenging and requires the attention of a multispecialty team of health care professionals as with most chronic pain conditions, such as chronic low back pain [20]. The process of treating the symptoms of the disease is often lengthy and requires patience and commitment from both patients and medical professionals [1]. Analysis of the studies included in this literature review confirms the growing popularity of physiotherapy as an integral part of conservative treatment for pelvic floor dysfunction in men [21, 22]. Physiotherapeutic management of chronic pelvic pain is becoming an integral part of therapy [1, 23]. This literature review focuses on an attempt to synthesize the knowledge of physiotherapy (expanded to include interventions incorporating acupuncture and patient education) that is integral to chronic pain therapy. It delves only into those interventions used by practicing physiotherapists, which distinguishes this review from studies that capture CPPS therapy in general and point to physiotherapy as one possible component of therapy [1, 3, 4].

However, in the modern approach to chronic pain management, one of the most essential elements of therapy is patient education. Such education, consisting in proper information about what pain is and what factors may influence its onset and severity, can be of significant help in the treatment of chronic pain [24]. Unfortunately, when searching for articles in medical databases, we did not come across any studies evaluating the impact of patient education on the effectiveness of the treatment undertaken and the results of therapy (quality of life, pain level).

Limitations and strengths

This systematic review of the literature provides a wealth of information regarding both the type of physiotherapeutic interventions used in the treatment of CP/CPPS and the methodology and therapeutic effects achieved. One of the main advantages of this article is the use of the PRISMA protocol ensuring that the literature survey is conducted accurately and the use of JBS tools to assess the methodological quality of each type of study. However, it is worth noting the limitations of this review.

The first is the fact that, as a consequence of limited translation capabilities, studies had to be written in English, Polish or French in order to qualify. This resulted in the arbitrary exclusion of Spanish- and Asian-language articles from the qualitative analysis.

A further major shortcoming is the generally low methodological quality of the studies included in

the analysis. This fact, coupled with the inclusion of studies without control groups or descriptions of individual cases, makes it impossible to conduct a meta-analysis of the results of the studies, and thus makes it impossible to draw general conclusions.

Implications for further research

One of the main advantages of this article is the use of the PRISMA protocol ensuring that the literature survey is conducted accurately and the use of JBS tools to assess the methodological quality of each type of study. Based on our search of medical article databases and qualitative analysis of the individual studies included in our systematic review, it is possible to point out some aspects worth considering when planning similar studies in the future.

Most of the studies included in this analysis evaluated the effectiveness of physiotherapeutic interventions based on physical therapy and acupuncture treatments, while only one study related to patient education and physical activity programming in the context of self-management of symptoms. However, the fact that CP/CPPS is a chronic disease with a significant psychosocial component means that physiotherapy programming that engages the patient in building a solid foundation in self-management of the effects of symptoms should be a key element of treatment. In addition, few researchers have assessed patient satisfaction with the treatment provided, thereby overlooking the importance of viewing the disease and treatment from the patient's point of view.

An assessment of the methodological quality of the studies included in this literature review indicates that for randomized clinical trials, the most common factors that reduce quality are a deficiency or absence of information on the method of randomization and incomplete or absent description regarding situations in which subjects did not complete planned treatments or dropped out of studies.

Conclusions

Physiotherapy is an increasingly popular non-pharmacological mode of intervention for treating pelvic floor dysfunction, including among men. This is due to the increasing effectiveness and safety of the physiotherapeutic treatments used.

Studies in the field of the use of physiotherapy measures (especially those related to physical therapy) provide information on the effectiveness of their use in reducing symptoms of CPPS severity. The multiplicity and availability of many physiotherapy techniques (physical therapy, acupuncture, manual therapy and others) enables the creation of individualized treatment processes for CP/CPPS symptoms, improving quality of life for patients.

This review of the literature does not fully exhaust the question contained in the objectives of the paper,

but it does point in the direction of the search for optimal physiotherapeutic management among men with CPPS. Conducting research of high methodological quality is crucial for building reliable recommendations and guidelines for physiotherapeutic management of chronic prostatitis/chronic pelvic pain syndrome.

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Conflict of interest

The authors declare no conflict of interest.

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