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Research Article

Chronic Pelvic Pain amongst Sudanese Ladies: Prevalence and Initial Management

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Abstract

Introduction: Chronic pelvic pain in females can be a disabling, persistent pain within the lower abdominal area (pelvis). It can result in either gynaecological, medical, surgical or psychological co-morbidities.

Objectives: The main targets of this study are to find out the prevalence of chronic pelvic pain in Sudanese ladies, evaluate the initial management, and assess the impact of chronic pelvic pain on the quality of life of those patients.

Methods: An observational, descriptive, cross-sectional study conducted in three health facilities in Khartoum, Sudan, from June 2021 to June 2022 and covered Sudanese women presented themselves with chronic pelvic pain. Data were entered, analysed using SPSS version (26.0), interpreted and presented in forms of statements, charts, figures and tables.

Results: This study covered 400 participants with chronic pelvic pain. It revealed that the prevalence of chronic pelvic pain was 7.7%. About half of the participants, 202 (50.5%), were in the age group (20 - 40) years old. Regarding management, the study found that the most common treatment was NSAIDs. Paracetamol, progestogens, oral contraceptive pills and psychological counselling follow it. The highest improvement rate was revealed among patients using neuro-modulation (66.7%), followed by NSAIDs (49.2%). Chronic pelvic pain affects the quality of life. In fact, (25%) of the participants reported that chronic pelvic pain causes a reduction in household activities, (22%) affects their work, and (18%) affects their sleep. Unfortunately, around (34.5%) of the participants thought that the cause of their chronic pelvic pain was not established.

Conclusion: Chronic pelvic pain affects the quality of life remarkably. The initial investigations and treatments have good improvement outcomes. However, most of the cases of chronic pelvic pain are incurable. Managing chronic pelvic requires an inter-professional team of healthcare professionals in line with the gynaecologist, which includes several clinicians in different specialities.

Keywords: *Prevalence; Initial Management; Chronic Pelvic Pain; Sudanese Ladies*

Introduction

Chronic pelvic pain (CPP) affects about one-quarter of the female population [1]. The definition of Chronic Pelvic Pain is an "intermittent or constant, non-cyclical pattern of pain in the lower abdominal area "pelvis" for more than six months" [2]. It should not occur exclusively with menstruation or intercourse and should not be associated with pregnancy. Usually, it has unknown aetiology, but it significantly

impacts women's quality of life [2]. It can occur due to organic reasons, for example: (Endometriosis, pelvic inflammatory disease (PID), painful bladder syndrome, adhesions, pelvic varicosities, ovarian retention syndrome, adenomyosis, uterine fibroids, hydrosalpinx, pelvic organ prolapse, nerve entrapment, or irritable bowel syndrome) or non-organic reasons such as: (Chronic fatigue syndrome, anxiety, depression or post-traumatic stress disorder), respectively [3].

Chronic pelvic pain patients usually go to primary care centre [4]. On history taking, careful listening to patients is critical and proved helpful for symptom relief [5,10,13]. Abdominal and pelvic examinations are essential to finding out/excluding organic causes [4,5,10]. Unfortunately, in most cases, chronic pelvic pain is incurable [6]. Nevertheless, investigations are essential to reach the diagnosis or at least differential diagnoses. One of the first laboratory tests to be done should be the pregnancy test to exclude pregnancy. Vaginal and endo-cervical swabs to rule out sexually transmitted infections (such as *Chlamydia trachomatis*) or pelvic inflammatory disease are usually needed. These swabs can be sent for polymerase chain reaction (PCR) [7]. In contrast, other blood Tests are of little help in diagnosing women with chronic pelvic pain; however, some biomarkers are understudy for diagnosing endometriosis [8]. Ultrasound scan is the most commonly used initial diagnostic imaging technique to identify the causes of chronic pelvic pain [9]. While other imaging modalities can also be used according to the suspicions. For instance, C.T. scan, MRI, venography and intravascular ultrasound [9]. Diagnostic laparoscopy is the gold standard investigation to reach the diagnosis [6]. Moreover, laparoscopy is not only diagnostic but can also be therapeutic. However, even if it is used therapeutically, 20 - 28% of ladies do not feel improvement after surgery [6].

Medications to control chronic pelvic pain include simple analgesia like paracetamol, non-steroidal anti-inflammatory drugs, progestogens, botulinum toxin, neuro-modulation and gonadotropin-releasing hormone analogues (GnRH Analogues) [10]. The involvement of an interdisciplinary team can be helpful in most cases of severe endometriosis [11]. However, surgical adhesions removal or laparoscopic uterosacral nerve ablation (LUNA) can be considered in cases where laparoscopy confirms the presence of adhesions and there is uncertainty about the benefit of this [12]. Hysterectomy is usually considered on the failure of all other treatment options, and the success can reach between 74 - 95% in selected cases [12].

The involvement of an interdisciplinary team can be helpful in most cases of severe endometriosis [11]. However, surgical adhesions removal or laparoscopic uterosacral nerve ablation (LUNA) can be considered in cases where laparoscopy confirms the presence of adhesions although there is uncertainty about the benefit of this [12]. Hysterectomy is usually considered on the failure of all other treatment options. The success in eliminating pelvic pain can reach between 74 - 95% in selected cases [12].

Justification

According to some studies, chronic pelvic pain is estimated at 5.7 - 26.6%. [2] However, the prevalence is not known in Sudan. Similarly, the initial management of chronic pelvic pain amongst Sudanese ladies seems to be variable. In fact, we could not find a national guideline for chronic pelvic pain in Sudan.

Methods

This is an observational cross-sectional study (descriptive) about the prevalence and initial management of chronic pelvic pain amongst Sudanese ladies. This study was conducted in three health facilities: Alfarooq Primary Health Care Centre (APHCC), AlSaudi Maternity Teaching Hospital (AMTH), Omdurman and Khartoum North (Bahri) Teaching Hospital (KNTH), Khartoum, Sudan. The study period was from June 2021 to June 2022. The sample size was determined as 385 participants, but increased to 400 participants for more accuracy.

Data collection

Most of women were seen and reviewed with the authors and their colleagues.

Data analysis

Data analysis was performed using the google document application and statistical package for social sciences (SPSS version 26.0). Data were expressed as mean ± standard deviation.

Data interpretation and presentation

Data were interpreted and presented in forms of statements, charts, figures and tables.

Ethical consideration

All women consented verbally and written consent was obtained from the G.P. practice and hospital authorities involved in the study. Similarly, we have also received ethical clearance from the Ethical Committee at the Research Unit (EDC) of the Sudan Medical Specialization Board (SMSB). Data confidentiality was maintained in all patients.

Results

This study covered 400 participants suffer with chronic pelvic pain in Khartoum, Sudan, from June 2021 to June 2022. The study reported that the prevalence of pelvic pain was (7.7%). It showed that about half of the participants, 202 (50.5%), were in the 20th - 40th age group.

Age - years	Frequency	Percent
Less than 20	64	16.0
20 - 30	142	35.5
31 - 40	60	15.0
41 - 50	112	28.0
More than 50	22	5.5
Total	400	100.0

Table 1: *Shows the distribution of the participants according to their age when they presented themselves with chronic pelvic pain - years (n = 400).*

Concerning the effects of chronic pelvic pain on quality of life, (25%) of the participants reported that chronic pain causes a reduction in household activities, (and 22%) stated that it affects their work. In contrast, (18%) found that it disturbs their sleep.

Regarding to the investigations, the study reported that (37%) of the participants had vaginal swabs for microscopy, (32%) had Ultrasound and other imaging, (29%) had blood tests and (2%) performed diagnostic laparoscopy. The study clearly found that the most common treatment for chronic pelvic pain was NSAIDs. Paracetamol, progestogens, oral contraceptive pills and psychological counselling can be good alternatives. The most considerable improvement was reported amongst patients who use neuro-modulation (66.7%), followed by NSAIDs (49.2%).

On one hand, the study showed that (19.5%), (10%), (2%), (0.5%), (0.5%) and (0.5%) of participants were referred to a tertiary gynaecology clinic, secondary healthcare facility, musculoskeletal clinic, physiotherapist, psychologist and another primary health facility, respectively. On the other hand, (67%) were not referred to other health facility. Lastly, (34.5%) of the participants thought that the cause of their chronic pelvic pain was not established, (12.5%) were not compliant with their medications, (and 13%) were not seen in the right clinic/hospital by the right specialist/consultant.

	Did you improve after any of the these treatments for chronic pelvic pain?		Total
	Yes	No	
Paracetamol	72	84	156
	46.2%	53.8%	100.0%
NSAID	128	132	260
	49.2%	50.8%	100.0%
Opioid	18	22	40
	45.0%	55.0%	100.0%
Progestogens or OCP	54	64	118
	45.8%	54.2%	100.0%
Neuro-modulation	16	8	24
	66.7%	33.3%	100.0%
Psychological counseling	22	26	48
	45.8%	54.2%	100.0%

Table 2: *Explores the effects of initial treatments received for patients with chronic pelvic pain (n = 400).*

Discussions

This study reported that the prevalence of pelvic pain was (7.7%). Similarly, Ahangari., *et al*. reported that the prevalence of chronic pelvic pain is approximately (5.7 - 26.6%) in women [2]. Only less than two-thirds of ladies suffering from chronic pelvic pain seek medical review [14]. Moreover, Zondervan., *et al*. reported a higher prevalence (approximately 24.0%) than our prevalence but it is still within the range of Ahangari., *et al* [15]. This study showed that more than half of the participants, 202 (50.5%) were in the age group of (20 - 40 years old). Similarly, a single study found a 3-month prevalence (pelvic pain of months duration or more) of (15%) in women aged (18 - 50 years) in the general US population [16].

Concerning the initial management of chronic pelvic pain, the current study found that the most common treatment was NSAIDs. The following options include paracetamol, progestogens, oral contraceptive pills, and psychological counselling. In addition, Brown., *et al*. reported that women taking NSAIDs (naproxen) for chronic pain were less likely to require additional analgesia [17]. Cheong., *et al*. stated that over-the-counter medications are the first step in treating a patient suffering from chronic pelvic pain. For instance, (acetaminophen and non-steroidal anti-inflammatory drugs) [18]. Brown., *et al*. also confirmed the efficacy of the initial management with oral contraceptives for chronic pelvic pain using associated with endometriosis [17].

Furthermore, Till SR., *et al*. agreed that discussing comorbid psychological disorders with the chronic pelvic pain patient requires careful presentation, and it has evidence of high effectiveness [13]. The effects of chronic pelvic pain on quality of life are confirmed in our study. For example, (25%) of the participants reported that chronic pain causes a reduction in household activities, (22%) stated that chronic pelvic pain affects work and (18%) found that chronic pain affects their sleep. A study in Brazil, Souza., *et al*. concluded that higher pain scores are correlated to a lower quality of life [19].

Indeed, studies added that optimal communication and understanding between patient and doctor is increasingly recognised as an essential aspect of the consultation. It may influence the outcome for various conditions, including chronic pelvic pain [20].

Conclusion

The study concluded that the women who complained of chronic pelvic pain were initially treated with NSAIDs, followed by paracetamol, progestogen and oral contraceptive pills and psychological counseling. The highest improvement rate of chronic pelvic pain was reported among patients who used neuro-modulation followed by NSAIDs.

In conclusion, we acknowledge that there are some limitations to our study. The data were collected from two leading teaching hospitals and one health centre in one state in Sudan. It may be appropriate to conduct a study in several states of Sudan to cover a substantial number of participants and obtain more accurate information and comprehensive results.

Recommendations

Managing chronic pelvic requires an inter-professional team of clinicians in different specialities. Without proper management, the morbidity from chronic pelvic pain is high. Careful consultation with the patient is essential to reach a diagnosis and is also helpful for the patient. We recommend that health and training authorities in Sudan develop a standard guideline for the initial management of chronic pelvic pain in Sudanese women.

Research Tasks

I.A: Conception, data collection, analysis, literature review, results, discussion, conclusion and recommendation.

S.M: Wrote the manuscript.

A.A: Data collection and analysis.

A.E: Supervised the original research and reviewed the original manuscript.

D.H: Reviewed the manuscript.

A.G: Wrote the proposal of the study, helped in data analysis, literature review, results, discussion, conclusion and recommendation and wrote the final manuscript.

Conflict of Interest

The authors declare no conflict of interest.

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