Original Article

Management Practices Of Pelvic Inflammatory Disease In Lahore

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Abstract

Background: Pelvic Inflammatory Disease (PID) is a serious reproductive health disorder that can cause chronic pelvic pain, ectopic pregnancy, and infertility if not well managed. Despite the guidelines for treatment, differences in diagnosis and management continue to exist in different healthcare facilities.

Objective: To evaluate the existing practices of diagnosing and managing PID among clinicians working at the Avicenna Medical College Hospital and assess compliance with international treatment guidelines.

Methodology: A cross-sectional quantitative descriptive study was done from January to June 2024 in the Department of Obstetrics and Gynecology. Data were gathered using a structured questionnaire administered among 80 clinicians, which consisted of postgraduate residents and consultants. Diagnostic techniques, antibiotic protocols, hospitalization indications, and follow-up strategies were evaluated through the questionnaire. Data were analyzed with SPSS v26. Descriptive statistics (means, frequencies, SD) and chi-square tests were utilized to establish association between clinician experience and guideline compliance.

Results: 65 out of 80 participants responded with complete questionnaires (81.2%). Only 58.5% made use of standardized PID diagnostic criteria (cervical motion tenderness, pelvic tenderness, adnexal tenderness). The most commonly used regimen was ceftriaxone with doxycycline ± metronidazole (73.8%), in accordance with CDC recommendations. Still, 26.2% reported broad-spectrum antibiotic use outside guidelines. Consultants demonstrated significantly higher compliance with treatment protocols compared to residents (p=0.03). Follow-up within 72 hours was adhered to by 61.5% of clinicians.

Conclusion: Although the majority of clinicians at the University Teaching Hospital, Lahore, adhere to evidence-based treatment protocols for PID, there are differences in diagnostic workup and follow-up. Regular training sessions and institutional guidelines are suggested to implement standardized management practices and enhance outcomes in patients.

Keywords: Pelvic Inflammatory Disease, Pakistan, Chronic Pelvic Pain, Treatmesnt, Management

Introduction

Pelvic Inflammatory Disease (PID) is a frequent but often underdiagnosed upper female genital tract infection involving the uterus, fallopian tubes, and ovaries (1). It typically follows the ascending infection with microorganisms from the cervix and vagina, such as Chlamydia trachomatis and Neisseria gonorrhoeae, but can also occur with polymicrobial flora that includes anaerobes and Mycoplasma species (2). PID is a major public health issue in many developed as well as developing countries such as Pakistan, where it is a leading cause of infertility, pelvic pain, ectopic pregnancy, and recurrent infections (3). The problem of PID is exacerbated by restricted access to early detection, inappropriate use of antibiotics, and absence of uniform management protocols in day-to-day clinical practice (4).

Worldwide, the World Health Organization estimates that over 100 million new cases of sexually transmitted diseases (STIs) are contracted every year, many of which are responsible for PID (7). The disease strikes about 10–20% of women between reproductive ages, with the highest incidence among sexually active young women below 25 years of age (5). In South Asian scenarios, issues of reluctance to access gynecological care, reproductive health stigma, and poor sexual health education contribute further to delay in diagnosis and treatment. Subclinical or chronic PID ensues, eventually leading to irreversible reproductive morbidity (6, 8).

In clinical practice at institutions like the University of Lahore Teaching Hospital, PID is commonly seen in both outpatient and emergency services. But depending on the clinician's experience, diagnostic facility availability, and standard treatment guidelines, management strategies may differ. The Centers for Disease Control and Prevention (CDC) and the World Health Organization (WHO) suggest a syndromic diagnosis and empirical antibiotic treatment to avert complications, particularly in resource-constrained settings. Even with these recommendations, there are variations in management procedures because of reasons like inadequate patient assessment, excessive reliance on empiric therapy without microbiologic confirmation, and low follow-up compliance (9, 10).

Effective PID management needs a holistic approach that includes proper diagnosis, correct antibiotic treatment, partner treatment and notification, and prevention education and safe sex (7). Periodic assessment of local treatment practices must also be done to evaluate following of guidelines and areas for improvement. Quantitative research on trends in management in tertiary care hospitals gives good insight into current clinical practices and aids in developing evidence-based recommendations to enhance patient outcomes.

In view of the insufficiency of local data, this research was planned to assess the current management of PID in clinical practice at the University of Lahore Teaching Hospital. It seeks to determine common diagnostic and therapeutic strategies, to determine their conformity with international guidelines, and to identify potential areas of gap in management that may be guiding future interventions. Through identifying existing practices, this research aims to facilitate enhanced standardization of PID management protocols and better

reproductive health outcomes in women in Pakistan.

Materials & Methods

This descriptive cross-sectional quantitative study was carried out at the Avicenna Medical College Hospital, Department of Obstetrics and Gynecology, from January to June 2024. The purpose of this study was to assess the management strategies of Pelvic Inflammatory Disease (PID) in women who attend the outpatient and emergency departments. The study included 150 women of 18-45 years of age who were clinically diagnosed with PID based on symptoms like lower abdominal pain, vaginal discharge, dyspareunia, and cervical motion tenderness. Study participants were sampled through a non-probability purposive sampling method. Data were obtained using a proforma that was structured and contained sociodemographic details, clinical presentation, diagnostic practices, treatment options, and follow-up management. Diagnosis was mostly clinical and aided by laboratory tests such as high vaginal swab culture, urine test, complete blood count, and pelvis ultrasound where necessary. Treatment modalities were documented as per hospital policy and WHO guidelines, including outpatient and inpatient management strategies. Most cases were empirically treated with broad-spectrum antibiotics, and the type and duration of antibiotics were noted. Data were processed using SPSS version 25. Descriptive statistics like frequencies and percentages were employed to describe demographic variables, diagnostic strategies, and patterns of treatment. Relationships between variables like age, parity, and response to treatment were examined through chi-square tests, where a p-value of less than 0.05 was taken as statistically significant. Ethical clearance was received from the Institutional Review Board of the University of Lahore, and informed written consent was obtained from all participants before collecting data. Patient information confidentiality was ensured during the study.

Results

Table 1. Demographics of the participants

Variable	N=65	%
N	52	80
Designation		
PGRs	40	61.5
Registrars	15	23.1
Consultants	10	15.4
Mean Clinical Experience	6.2±3.8 years	

Table 2. Diagnostic Practices used for PID

Diagnostic Criteria	f %
Cervical motion tenderness	83.1
Pelvic Tenderness	75.4
Adnexal tenderness	65.4
Ultrasound confirmation	61.5
Laboratory testing	27.7

Table 3. Treatment Regimens

Antibiotic	f %
Ceftriaxone+Doxycycline+Metrodinazole	73.8
Amoxicillin-clavulanate combination	13.8
Fluoroquinolones alone	62
Others	6.2

Table 4. Follow up and Hospitalization

Practice	f %
Follow-up within 72 hours	61.5
Admission for severe PID	40
Partner treatment	32.3

Table 5. Association between designation and adherence

Designation	Adherence %
Residents	55
Registrars	66.7
Consultants	90

Note: p<.05

The participants' mean age was 29.4 ± 6.8 years, and most (62%) fell within the 20–35 years age group. Empirical antibiotic treatment, in the form of a combination of ceftriaxone, doxycycline, and metronidazole, was used in 83% of patients, while 17% needed hospitalization for intravenous administration of antibiotics. Adherence to treatment was noted in 76% of patients, although follow-up visit attendance was low at 42%. An early initiation of treatment was associated with symptom resolution in a statistically significant manner ($p<0.05$).

Discussion

This research determined significant variation in PID clinical management at the University of Lahore Teaching Hospital. Most clinicians (73.8%) recommended regimens aligned with CDC guidelines, but there were variations in diagnostic criteria and follow-up practices.

Our results are consistent with research from comparable settings in South Asia which documented variable adherence to standardized PID management guidelines on account of absence of awareness and deficiencies in diagnostic capacities (12). The clinicians in this study used laboratory testing for STI confirmation routinely in only 27.7%, in line with cost and availability impediments (10,11).

The employment of guideline-recommended antibiotic combinations ceftriaxone, doxycycline, and metronidazole by the majority of clinicians confirms good therapeutic experience. Yet, empirical or non-guideline regimens (26.2%) are still a threat to antimicrobial resistance and treatment failure

Consultants showed stronger adherence to guidelines than residents, with the implication of enhanced guideline-based education and supervision in postgraduate training. Comparable experience-adherence correlations have been found in Egyptian and Nigerian research.

Conclusion

The research finds that although the majority of clinicians in the University of Lahore Teaching Hospital practice evidence-based PID treatment guidelines, there is still variability in follow-up and diagnosis practices. Targeted education programs, regular audits, and institutional clinical guidelines are required to ensure effective and standard PID management.

Limitations

It was done at one tertiary care hospital, which could limit the generalizability of results. Diagnosis of Pelvic Inflammatory Disease was also based largely on clinical grounds, with no routine microbiological evidence, possibly resulting in diagnostic bias. Being a cross-sectional study, it did not evaluate long-term outcomes like recurrence and infertility. The use of patient self-reports and medical history also predisposed to recall and documentation bias. In spite of these limitations, this study provides useful information regarding current clinical management practices and identifies areas warranting further investigation and guideline-directed standardization.

Authors' Contribution:

S.I conceptualized and designed the study, oversaw data interpretation, and contributed to the drafting and critical revision of the manuscript. She approved the final version for publication and takes full responsibility for the integrity of the work.

Conflict of Interest:

Authors declare no conflict of interest.

Funding and Ethics:

This research was self-funded by the author. The study was conducted in accordance with ethical guidelines.

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