

How Good are We at Recognizing and Treating Pelvic Inflammatory Disease?

Heather May* and Joan McDowell

Queen Elizabeth University Hospital, 1345 Govan Rd, Glasgow, G51 4TF, United Kingdom

School of Medicine, Dentistry & Nursing, Nursing & Health Care, University of Glasgow, Glasgow G12 8QQ, UK

Abstract

The aim of this discursive article is to highlight the challenges for clinicians when diagnosing and treating women with pelvic inflammatory disease, especially when the woman has an intrauterine device in-situ. The article will highlight key areas of the decision making process involved in this specific example and will include discussions on evidence based practice, clinician experience, knowledge base and patient preference. Current clinical guidelines are conflicting on whether an intra-uterine contraceptive device should be removed or not when pelvic inflammatory disease is suspected. Research on clinicians found that they appear to have a relatively low level of knowledge with regards to both pelvic inflammatory disease diagnosis, and general intra-uterine contraceptive device use. The importance of patient preference is another factor to consider, with particular focus on potential issues with clinician delivered patient education. Recommendations for future practice, policy and research also will be discussed.

Publication History:

Received: May 25, 2016

Accepted: August 17, 2016

Published: August 19, 2016

Keywords:

Pelvic inflammatory disease, Sexual Health, Intra-uterine contraceptive device, Clinical Decision Making, Evidence Based Practice, Decision Analysis

Introduction

Pelvic inflammatory disease (PID) is a complex condition which can present a number of challenges for clinicians, particularly around the diagnostic process. Defined as an infection of the upper genital tract in females, untreated PID can pose a real threat to future fertility [1] and so early recognition and treatment is paramount. However, treatment can be further complicated if a woman is using an intrauterine contraceptive device (IUCD). Current clinical guidance is not clear on whether or not removing IUCDs would be beneficial during PID treatment [2,3]. As many clinicians rely on this guidance, this discursive article will discuss how this combination of challenges requires clinicians to focus on other aspects of the decision making process, and how this will subsequently influence the outcome of clinical decisions.

Problems with Diagnosis

As PID can present with a range of potential signs and symptoms (Table 1), as well as often being asymptomatic [1], accurate diagnosis is a particularly challenging issue for clinicians. Symptoms can often vary in severity as well as being mistaken for other gynaecological or even gastrointestinal conditions.

Signs & symptoms associated with pelvic inflammatory disease

Pelvic or lower abdominal pain

Vaginal discharge

Abnormal vaginal bleeding

Deep dyspareunia

Fever

Adnexal, cervical and/or uterine tenderness

Right upper quadrant pain (caused by peri-hepatitis)

Table 1: Symptoms of Pelvic Inflammatory Disease [5].

PID can also be divided into two presentations; acute or chronic and each associated with a different presentation of symptoms [4]. Acute PID usually presents with sudden, more severe symptoms. In contrast, chronic PID usually has more subtle, or very few symptoms.

It is important to note that this does not suggest that acute PID does more damage to reproductive health than chronic PID. Chronic PID can often be mistaken for other conditions, such as irritable bowel syndrome, and so often has the opportunity to do more internal damage due to the time taken to reach the correct diagnosis [4].

As the inflammatory response involved in PID can potentially damage the internal reproductive organs over time, late diagnosis can have catastrophic consequences for future fertility and reproductive health [2]. It is therefore of vital importance that clinicians are able to quickly identify and assess the potential risk of PID when a woman seeks advice. As there is no single test that has been proven to be sensitive and specific for PID [5], the clinician must do a thorough history and examination to confirm, or rule out, the likelihood of PID, and make prompt treatment options based on this.

Using the SIGN [6] grading system, expert opinion is level 4 evidence and, it could be argued that experienced clinicians apply their own clinical judgement in the diagnostic process. One study [7] that investigated this area produced overall results that suggested that there is a difference in the diagnostic rates between the more and less experienced staff working in sexual health clinics. Although the study achieved a large sample size (n=21,784), the retrospective methodology of analysing case notes for symptoms and swab results presents limitations for this research. This is due to the currently unavoidable issue of diagnosing PID at a clinical level, where a diagnosis can be suspected, but not guaranteed. The study did highlight a potential issue that requires further investigation, that there are inconsistencies in the thresholds for diagnosing PID

*Corresponding Author: Heather May, Queen Elizabeth University Hospital, 1345 Govan Rd, Glasgow, G51 4TF, United Kingdom, Tel: 07526751664; E-mail: Heather.may13@hotmail.co.uk

Citation: May H, McDowell J (2016) How Good are We at Recognizing and Treating Pelvic Inflammatory Disease?. Int J Nurs Clin Pract 3: 196. doi: <http://dx.doi.org/10.15344/2394-4978/2016/196>

Copyright: © 2016 May. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

among clinicians based on their level of experience. If these conclusions are valid, this is highly concerning as it suggests that some clinicians are more likely to over diagnose women, while others may be missing true cases of PID by under diagnosing women. If true cases are missed, this inevitably leads to a delay in treatment which, as previously mentioned, can cause serious issues for future health and fertility.

Problems with Treatment

Current clinical guidance documents [2,5] are united in recommending that treatment should be started as soon as PID is clinically suspected in order to reduce the risk of future problems caused by a delay in treatment. In many cases, this is a simple course of antibiotic therapy and a follow-up consultation to ensure that the condition is improving. Intrauterine contraceptive devices (IUCDs) are one of the least utilised methods of contraception in Scotland, although they have been proven to be one of the most reliable methods available for use [3]. There are few risks in using an IUCD. Infection persists as one such risk although the incidence is low [3]. As intrauterine contraception has gradually increased in popularity over recent years, clinicians must be aware that women using this method have an additional challenge associated with treatment of PID: to remove the IUCD, or leave it in-situ?

Research evidence on whether to remove the IUCD or not is limited and does not provide a consistent answer to this question [2]. The most recent Royal College of Obstetrics and Gynaecology (RCOG, 3) guidance recommends that, unless the woman requests removal, the IUCD should remain in-situ. Surprisingly, the British Association for Sexual Health and HIV [2] advise a different approach, that removal should be the preferred option, if the woman is in agreement. This conflict in recommendations from these two highly respected organisations questions whether there is enough high quality evidence to provide this evidence based advice. As both guidelines base their recommendations on limited research evidence, it can be concluded that this is an area that requires more attention from researchers. In practical terms, this means that clinicians must decide, primarily unaided by guidance and based on the individual clinical scenario, whether removal or retention of the IUCD would be beneficial for the woman or not.

Risk versus benefits of IUCD removal have not been clearly outlined in literature, so this decision must be guided primarily by clinician judgement and patient preference. One such risk of IUCD removal that does have sufficient evidence is the risk of pregnancy. It has therefore been recommended by RCOG (3) that removal should only be considered once it has been clarified that unprotected sexual intercourse has not occurred 7 days prior to removal, or else emergency contraception must be considered. The theoretical argument that retention of an IUCD may prevent antibiotics fully clearing the infection, or that there is an increased risk of repeat infections, has been discussed in a systematic review (8). Only four fair-quality articles were selected for inclusion, and different results and conclusions were provided from each of the studies. This further highlights the essential need for more high-quality research on this subject.

Clinical Decision Making

Clinical decision making is not a well-defined phenomenon as many definitions exist in literature. In general, it can be best considered as the ability to collect and assess information in order to build a clinical

picture from which conclusions can be drawn. This process, of course, will be influenced by numerous factors which can alter how accurate this information is, and so can have an impact on the accuracy of the clinical picture.

Centers for Disease Control & Prevention (9) highlighted three main domains that influence clinical decision making: research evidence, practitioner expertise and population preferences. Research evidence in this case can be found in clinical guidance, which has been already been highlighted as an issue due to a lack of robust research and conflicting recommendations. As PID diagnosis and decisions surrounding IUCDs have the major challenges of clinician subjectivity and limited research, research evidence is weak in this area. This places a larger focus on the practitioner knowledge, experience and patient preference.

As with any clinical specialty, without sufficient clinician knowledge, the assessment and subsequent decision outcomes are likely to be based on limited or weak information. In relation to PID and IUCD use, general knowledge on both these subjects is required, with particular emphasis on the diagnostic certainty of PID and the mechanism of action of IUCDs. As previously mentioned, the knowledge base of clinicians required for diagnosing PID may not be sufficient enough to identify the vast majority of true PID cases, while also not over-diagnosing a large proportion of women.

Another issue is the apparent lack of clinician knowledge surrounding general IUCD use. A quantitative survey [10] investigated how competent clinician's knowledge base was on the use of IUCDs. The questionnaire was aimed at gynaecology clinical fellows (n=1050) in Australia and managed to achieve a 67% response rate. The questions included in the survey were not overly challenging; however only 33.5% (n=232) and 63.2% (n=438) were able to identify the failure rate of the copper and mirena IUCDs respectively. Overall the understanding of the mirena IUCD was stronger than that of the copper IUCD, as 89.3% (n=616) were able to identify the correct mechanism of action of the mirena compared to an extremely low result of 30% (n=206) for the copper IUCD. These results are highly concerning due to the fact that the participants should have a higher knowledge base on IUCDs compared to less specialised clinicians. It would be fair to expect that the results would be close to 100% competence in such a specialist group of clinicians. This combination of variation of PID diagnostic rates, and apparent gaps in IUCD knowledge, will inevitably lead to further issues when planning patient care in this clinical scenario.

The final major contributing factor in decision making is patient preference [9]. In general, the patient should always have an active say in any treatment or procedure that is suggested to them [1]. It is the clinician's responsibility to fully educate and inform the patient of the risks and benefits of these options, in order for the patient to make an informed decision [9]. In this particular case, this is an area that clinicians may struggle. The combination of lack of clinical guidance and poor knowledge base creates a weak basis for correctly informing patients of options and expected outcomes. This may then create a situation which the woman is not necessarily in a position to be an active participant in shared decision making.

Conclusion and Recommendations

The overall aim of this article was to highlight the challenges and potential knowledge deficits associated with PID recognition and

treatment, especially when IUCDs are in-situ. Any clinician consulting with a woman who may have suspected or probable PID must have a sound knowledge base on this disease process and how to recognise and treat it in a prompt and efficient manner. As the diagnostic threshold can vary among clinicians, it is concerning that some women may be misdiagnosed with PID, or even worse, true cases are missed due to clinicians having a high threshold for diagnosis. It is therefore one of the recommendations of this article that further research and education on diagnostic criteria is provided to medical and nursing staff working in high risk areas for PID, such as sexual health, gynaecology and primary care settings.

Once it has been decided that PID is a likely possibility, a further challenge may present itself when the woman has an IUCD in-situ. Ideally, evidence based clinical guidelines would offer high quality recommendations on whether to remove an IUCD or not during treatment for PID. However, this is not the case as current guidelines offer conflicting advice for clinicians. Further randomised controlled trials investigating clinical outcomes in PID and IUCD use are therefore recommended in order to provide national recommendations for best practice.

Competing Interests

The author (s) declare that they have no competing interests.

References

1. Mazza D (2010) *Women's Health in General Practice*. Melbourne: Elsevier Health Sciences.
2. British Association of Sexual Health & HIV (2011) *UK National Guidance for the Management of Pelvic Inflammatory Disease*.
3. Royal College of Obstetricians and Gynaecologists (2007) *Faculty of Sexual & Reproductive Healthcare Clinical Guidance - Intrauterine Contraception*.
4. Royal College of Obstetricians and Gynaecologists (2010) *Information for you - Acute pelvic inflammatory disease: tests and treatment*.
5. National Institute of Health and Care Excellence (2013) *Pelvic Inflammatory Disease*.
6. Scottish Intercollegiate Guideline Network (2015) *SIGN Grading System*.
7. Doxanakos A, Hayes RD, Chen MY, Gurrin LC, Hocking J, et al. (2008) Missing pelvic inflammatory disease? Substantial differences in the rate at which doctors diagnose PID. *Sex Transm Infect* 84: 518-523.
8. Tepper N, Steenland M, Gaffield M, Marchbanks P, Curtis KM (2013) Retention of intrauterine devices in women who acquire pelvic inflammatory disease: a systematic review. *Contraception* 87: 655-660.
9. Jacobs JA, Jones E, Gabella BA, Spring B, Brownson RC (2012) Tools for implementing an Evidence-Based Approach in Public Health Practice. *Prev Chronic Dis* 9: 110324.
10. Black K, Sakhaei T, Garland GA (2010) study investigating obstetricians and gynaecologists' management of women requesting an intrauterine device. *Aust N Z J Obstet Gynaecol* 50: 184-188.