

INFLAMMATORY COMPLICATIONS ASSOCIATED WITH INTRAUTERINE DEVICE USE

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Abstract

Background: Intrauterine devices (IUDs) are among the most effective and widely used long-acting reversible contraceptive methods worldwide. Despite their high efficacy and overall safety, inflammatory complications may develop in certain clinical situations.

Objective: To analyze the etiology, risk factors, pathogenesis, and clinical features of inflammatory complications associated with intrauterine device use.

Materials and Methods: A narrative review of international scientific literature was conducted using data from PubMed, WHO guidelines, and peer-reviewed gynecological journals published between 2000 and 2024.

Results: The development of inflammatory complications is primarily associated with pre-existing genital tract infections, нарушение асептических техник during IUD insertion, multiple sexual partners, and early postpartum or post-abortion insertion. The highest risk period is within the first 20 days after insertion.

Conclusion: Intrauterine devices remain a safe and effective contraceptive method. Careful patient selection, screening for sexually transmitted infections, and strict adherence to international clinical guidelines significantly reduce the risk of inflammatory complications.

Keywords: Intrauterine device, pelvic inflammatory disease, endometritis, contraception, infection

Introduction

Intrauterine devices (IUDs) are widely used for contraception due to their long-term effectiveness, reversibility, and cost-effectiveness. According to the World Health Organization, more than 150 million women worldwide use IUDs as a primary method of contraception. Despite their advantages, concerns persist regarding the development of inflammatory complications, particularly pelvic inflammatory disease (PID) and endometritis, following IUD insertion.

Understanding the mechanisms and risk factors associated with these complications is essential for improving patient safety and reproductive health outcomes.

Materials and Methods

This article is based on a narrative review of international literature. Scientific publications were analyzed from databases including PubMed, Scopus-indexed journals, and WHO clinical guidelines. Studies focusing on inflammatory complications related to copper and hormonal intrauterine devices were included.

Results

Analysis of the literature indicates that the incidence of pelvic inflammatory disease is highest during the first 2–3 weeks following IUD insertion. This risk decreases significantly thereafter. Copper-containing IUDs induce a local inflammatory reaction within the endometrium, which contributes to their contraceptive effect but may facilitate infection if pathogenic microorganisms are present.

Identified risk factors include:

Pre-existing sexually transmitted infections (Chlamydia trachomatis, Neisseria gonorrhoeae)

Violation of aseptic and antiseptic rules during insertion

Multiple sexual partners

Insertion during the early postpartum or post-abortion period

Discussion

International studies confirm that inflammatory complications associated with IUD use are largely preventable. Screening for genital infections before insertion and timely treatment significantly reduce complication rates. Modern clinical guidelines do not recommend routine prophylactic antibiotics; however, high-risk patients require close monitoring.

Early diagnosis and management of inflammatory conditions are crucial to prevent long-term consequences such as infertility, chronic pelvic pain, and ectopic pregnancy.

Conclusion

Intrauterine devices are a reliable and effective method of contraception. When used in accordance with international clinical standards and after appropriate patient evaluation, the risk of inflammatory complications is minimal. Continuous education of healthcare providers and patients plays a key role in improving outcomes.

Conflict of Interest

The author declares no conflict of interest.

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