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RESEARCH ARTICLE

LEVONORGESTREL INTRAUTERINE SYSTEM (MIRENA): INITIAL EXPERIENCE IN THE MANAGEMENT OF ABNORMAL UTERINE BLEEDING

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Key words:-

Abnormal uterine bleeding, Mirena, LNG-IUS, Levonorgestrel intrauterine system, Contraception

Abstract

Background: Abnormal uterine bleeding (AUB) is a common gynecological condition requiring medical or surgical management. The levonorgestrel intrauterine system (LNG-IUS, Mirena) is a long-acting, reversible, hormone-releasing device that offers an effective non-surgical option for women with AUB.

Aim: To assess the effectiveness of Mirena in reducing abnormal uterine bleeding and avoiding hysterectomy.

Methods: A cross-sectional hospital-based study was conducted at SMS Medical College, Jaipur, from December 2021 to December 2023. A total of 42 women aged 30–60 years with AUB were enrolled. Patients underwent evaluation, and Mirena was inserted using the no-touch technique. Follow-up was done at 1 month, 4 months, and 1 year to assess bleeding patterns, compliance, and device outcomes.

Results: The majority of patients (50%) were in the 30–40 age group, and 78.6% were multiparous. The most common pathology was dysfunctional uterine bleeding (54.8%), followed by fibroid (23.8%), adenomyosis (11.9%), and endometriosis (9.5%). At 1 year, 83.3% had Mirena in situ, 9.5% had expulsion, and 7.1% required surgery. By 1 year, 47.6% achieved amenorrhoea, with a marked reduction in heavy bleeding.

Conclusion: Mirena is a safe, effective, and reversible treatment for AUB, significantly reducing menstrual blood loss and preventing hysterectomy in most patients.

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Introduction:-

Abnormal uterine bleeding (AUB) is a frequent gynecological complaint in women of reproductive and perimenopausal age groups. It can significantly impair quality of life and often leads to hysterectomy as a definitive treatment. The levonorgestrel intrauterine system (LNG-IUS, Mirena) provides an effective, minimally invasive, reversible alternative. Mirena reduces menstrual blood loss by up to 86% within 3 months and induces amenorrhoea in up to 35% of women within 2 years. Given its dual role as a contraceptive and therapeutic device for AUB, Mirena offers a conservative option for women wishing to avoid hysterectomy.

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METHODOLOGY:-

This hospital-based cross-sectional study was conducted at the Department of Obstetrics and Gynecology, SMS Medical College, Jaipur, from December 2021 to December 2023. Forty-two women aged 30–60 years presenting with AUB, with uterine size <12 weeks and no distortion of the uterine cavity, were included. Patients with malignancy, contraindications to IUD insertion, or unwillingness for follow up were excluded. Detailed history, physical and systemic examination, ultrasonography, Pap smear, and endometrial biopsy were performed before inclusion. Mirena was inserted under aseptic conditions with no-touch technique. Follow-up was done at 1 month, 4 months, and 1 year to assess bleeding pattern and compliance.

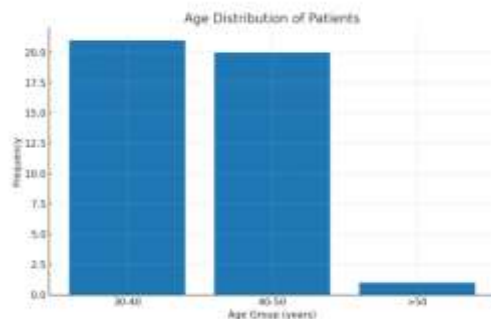
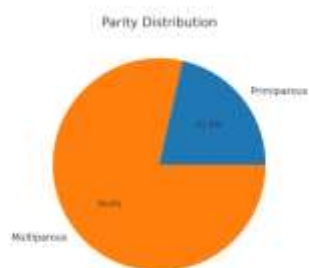
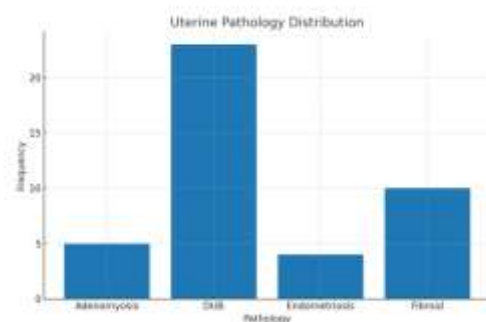
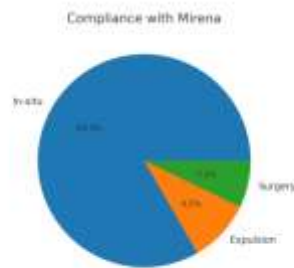
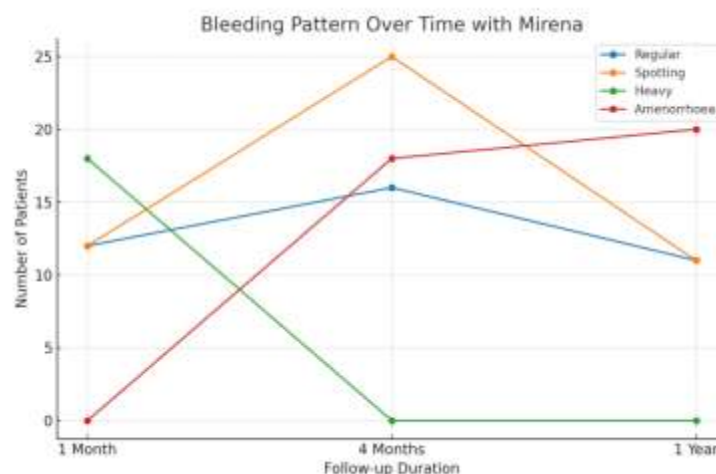
RESULTS:-**Figure 1: Age distribution of patients****Figure 2: Parity distribution of patients****Figure 3: Distribution of uterine pathology**

Figure 4: Compliance with Mirena use**Figure 5: Bleeding pattern trends after Mirena use****Discussion:-**

Mirena demonstrated significant efficacy in controlling AUB in our study, with 83.3% patients continuing the device at 1 year. Nearly half of the patients achieved amenorrhoea by 1 year, and heavy bleeding was eliminated in all. Our findings align with studies by Dhamangaonkar et al., who reported an 80–95% reduction in menstrual blood loss within 1 year, and Milsom et al., who also demonstrated sustained reduction in menorrhagia. The expulsion rate in our study (9.5%) is comparable to international reports (8–12%). Dysfunctional uterine bleeding was the most common pathology in our cohort, similar to Desai et al. and Kriplani et al. Mirena thus proves to be an effective, conservative alternative to hysterectomy, especially in women wishing to preserve fertility or avoid surgery.

LIMITATIONS:-

The study was limited by its small sample size and reliance on patient follow-up. A larger, multi-center trial with longer follow-up would provide stronger evidence for widespread adoption of Mirena as first-line therapy for AUB.

CONCLUSION:-

The levonorgestrel intrauterine system (Mirena) is a safe, effective, and reversible treatment option for abnormal uterine bleeding. It provides a substantial reduction in bleeding, induces amenorrhoea in a significant proportion of patients, and reduces the need for hysterectomy. Given its efficacy, reversibility, and high patient compliance, Mirena may be considered a medical alternative to surgical management of AUB.

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