

Management of Abnormal Uterine Bleeding in Etonogestrel Implant Users: Review of Evidence for Clinical Practice

Manejo do Sangramento Uterino Anormal em Usuárias de Implante de Etonogestrel: Revisão das Evidências para a Prática Clínica

Manejo del Sangrado Uterino Anormal en Usuarias de Implante de Etonogestrel: Revisión de la Evidencia para la Práctica Clínica

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Abstract:

The etonogestrel subdermal implant is one of the most effective long-acting reversible contraceptive methods currently available. Despite its high contraceptive effectiveness, abnormal uterine bleeding is the main factor associated with early discontinuation of the method. This study aimed to critically review the available evidence regarding bleeding patterns related to the etonogestrel implant and the main therapeutic strategies employed in the clinical management of this condition. This is a narrative literature review conducted in the PubMed, SciELO, and Google Scholar databases, using descriptors related to "etonogestrel", "implant", "abnormal uterine bleeding", "contraception", and "bleeding management". The search terms "etonogestrel", "implant", "abnormal uterine bleeding", "contraception", and "bleeding management" were used. Articles published between 2009 and 2025, as well as relevant international guidelines, were included. The results demonstrated that combined oral contraceptives are more effective in stopping irregular bleeding compared to nonsteroidal anti-inflammatory drugs. It is concluded that the management of abnormal uterine bleeding should integrate pharmacological strategies, health education, and systematic clinical follow-up.

Keywords:

Etonogestrel implant ; Abnormal uterine bleeding; LARC; Clinical management; Women's health.

Resumo:

O implante subdérmico de etonogestrel constitui um dos métodos contraceptivos reversíveis de longa duração mais eficazes disponíveis atualmente. Apesar da elevada efetividade contraceptiva, o sangramento uterino anormal representa o principal fator associado à descontinuação precoce do método. O presente estudo objetivou revisar criticamente as evidências disponíveis acerca dos padrões de sangramento relacionados ao implante de etonogestrel e das principais estratégias terapêuticas empregadas no manejo clínico dessa condição. Trata-se de uma revisão narrativa da literatura realizada nas bases PubMed, SciELO e Google Scholar, utilizando descritores relacionados a "etonogestrel implant", "abnormal uterine bleeding", "contraception" e "bleeding management". Foram incluídos artigos publicados entre 2009 e 2025, além de diretrizes internacionais relevantes. Os resultados demonstraram que os anticoncepcionais orais combinados apresentam maior eficácia na interrupção do sangramento irregular em comparação aos anti-inflamatórios não esteroidais. Conclui-se que o manejo do sangramento uterino anormal deve integrar estratégias farmacológicas, educação em saúde e acompanhamento clínico sistemático.

Palavras-chave:

Implante de etonogestrel; Sangramento uterino anormal; LARC; Manejo clínico; Saúde da mulher.

Resumen:

El implante subdérmico de etonogestrel constituye uno de los métodos anticonceptivos reversibles de larga duración más eficaces disponibles en la actualidad. A pesar de su elevada eficacia anticonceptiva, el sangrado uterino anormal representa el principal factor asociado a la discontinuación temprana del método. El presente estudio tuvo como objetivo revisar críticamente la evidencia disponible sobre los patrones de sangrado relacionados con el implante de etonogestrel y las principales estrategias terapéuticas empleadas en el manejo clínico de esta condición. Se trata de una revisión narrativa de la literatura realizada en las bases de datos PubMed, SciELO y Google Scholar, utilizando descriptores relacionados con "etonogestrel implant", "abnormal uterine bleeding", "contraception" y "bleeding management". Se incluyeron artículos publicados entre 2009 y 2025, además de directrices internacionales relevantes. Los resultados demostraron que los anticonceptivos orales combinados presentan mayor eficacia en la interrupción del sangrado irregular en comparación con los antiinflamatorios no esteroideos. Se concluye que el manejo del sangrado uterino anormal debe integrar estrategias farmacológicas, educación en salud y seguimiento clínico sistemático.

Palabras clave:

Implante de etonogestrel; Sangrado uterino anormal; LARC; Manejo clínico; Salud de la mujer.

1. Introduction

Long-acting reversible contraceptive methods Reversible Long-acting reversible contraceptives (LARCs) have assumed a central role in contemporary reproductive planning policies due to their high efficacy, practicality, and reduction in unplanned pregnancy rates. Among these methods, the etonogestrel subdermal implant stands out for its very low Pearl Index (ranging from 0.00 to 0.6), high continuation rate, and long duration of action. The implant has demonstrated exceptional effectiveness, carrying a contraceptive failure risk twenty times lower than that of short-acting methods (ORGANON, 2025).

etonogestrel -releasing subcutaneous implant represents a relevant alternative among LARCs. The release of this progestogen begins immediately after implantation, with peak values (813 pg / mL ; average 363–1020 pg / mL) reached after approximately 96 hours; a minimum plasma concentration of 90 pg / mL is required to inhibit ovulation, and a stable etonogestrel value of 200 pg / mL is achieved after four to six months, remaining stable for at least three years. After removal, plasma levels decline drastically, becoming undetectable within seven days (DÍAZ et al., 1990).

Although it presents an excellent contraceptive profile, menstrual irregularity remains the main factor associated with dissatisfaction and early removal of the device. Such changes have a significant impact on quality of life, sexuality, self-esteem, and adherence to the method.

Among other adverse effects, users report acne, weight gain, and decreased libido (COCHRANE, 2021).

Literature shows that many users do not discontinue the method solely due to the intensity of bleeding, but also due to the unpredictability of the menstrual pattern and insufficient prior counseling (DICKSON et al., 2014). Therefore, an appropriate clinical approach requires not only pharmacological intervention, but also support, health education, and individualized therapy.

Furthermore, this review seeks to fill a practical gap frequently observed in daily care, synthesizing therapeutic strategies applicable to the clinical reality of professionals who monitor users of contraceptive implants at different levels of healthcare. Starting from the premise that there is still no consensus on the management of irregular bleeding in implant users, this research aimed to summarize the appropriate management, according to existing guidelines.

2 Methodology

This is a narrative literature review conducted using searches in the PubMed, SciELO, and Google Scholar databases. The descriptors used were "etonogestrel", "implant", "abnormal uterine bleeding", "bleeding management", "LARC" and "contraceptive implant", combined by the Boolean operators AND and OR.

Articles published between 2009 and 2025, available in full in English, Portuguese, and Spanish, were included, including randomized clinical trials, systematic reviews, observational studies, pharmacokinetic studies, and international guidelines.

After reading the titles, abstracts, and full texts, the data were organized thematically, prioritizing evidence with the greatest clinical relevance. Because this was a literature review without direct involvement of human subjects, the study was not submitted to a Research Ethics Committee.

3. Results and Discussion

Menstrual irregularity related to the etonogestrel implant is mainly due to the continuous action of the progestogen on the endometrium. Clinical studies demonstrate wide variability in bleeding patterns, including amenorrhea, frequent spotting, and prolonged bleeding.

Lazorwitz et al. (2019) identified an association between higher serum concentrations of etonogestrel and a greater occurrence of irregular bleeding, suggesting an individual pharmacokinetic influence on the tolerability of the method.

Literature shows that pre -insertion counseling plays a decisive role in user satisfaction. Patients who are previously informed about the possibility of menstrual irregularities demonstrate greater tolerance to bleeding episodes and lower discontinuation rates (ACOG, 2017).

In a therapeutic context, combined oral contraceptives constitute the pharmacological intervention with the best evidence for controlling persistent bleeding. Randomized clinical trials have demonstrated a higher rate of bleeding cessation in users treated with ethinylestradiol combined with desogestrel when compared to the use of non-steroidal anti-inflammatory drugs (WHO, 2022).

Other strategies described in the literature include temporary use of estrogen alone, tamoxifen, tranexamic acid, and mifepristone (UPAWI et al., 2020). However, the evidence remains limited and heterogeneous, making universal recommendation of these therapies impossible (CDC, 2024).

From a psychosocial point of view, irregular bleeding often has repercussions on affective relationships, sexual activity, work productivity, and mental health, reinforcing the need for a comprehensive and individualized approach (DARNEY et al., 2009).

Table 1 – Comparison of the main therapeutic strategies

Therapy	Mechanism	Duration	Benefits	Limitations
AOC	Endometrial stabilization	14–42 days	Greater effectiveness clinic	Contraindicated in risk thrombotic
NSAIDs	Reduction of prostaglandins	5–7 days	Useful without estrogen	Lower effectiveness
Acid tranexamic	Antifibrinolytic	Short term	Reducing bleeding	Little evidence
Tamoxifen	Modulation estrogenic	Short term	Possible benefit	Limited data

Source: author's own elaboration, based on ORGANON, 2025.

4 Clinical Considerations

The clinical management of abnormal uterine bleeding in users of etonogestrel implants should be individualized and patient-centered. Initially, it is recommended to rule out organic causes and assess risk factors for combined hormonal use (FSRH, 2021).

In patients without contraindications to estrogen, combined oral contraceptives may be considered for short-term use. In situations where estrogen is contraindicated, nonsteroidal anti-inflammatory drugs represent a reasonable alternative.

Implant removal should only be considered after conservative strategies have failed or when bleeding significantly compromises the user's quality of life and autonomy.

5 Limitations of the Study

This review has limitations inherent to the narrative design, including potential selection bias and the absence of a systematic methodology for formally assessing the quality of the included studies. The methodological heterogeneity of the studies limits direct comparisons between therapeutic interventions.

6 Conclusion

Abnormal uterine bleeding represents the main clinical challenge related to the etonogestrel implant and an important cause of early discontinuation of the method. Available evidence suggests greater efficacy of combined oral contraceptives for controlling persistent bleeding.

However, proper management goes beyond the pharmacological dimension, requiring qualified counseling, addressing subjective needs, and individualized clinical follow-up.

Conflict of interest

The author declares no conflicts of interest related to this study.

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This study was developed using our own resources.

Authors' Contribution

Luis Paulo Zica Silva contributed to the conception of the study, collection and analysis of the literature, interpretation of the data, and final drafting of the manuscript.



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