UNIVERSITATEA “OVIDIUS” DIN CONSTANTA
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ENGLISH ABSTRACT

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Doctorand : **Dragoș- Marian Brezeanu**

2025

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The Use of Lactic Acid Gel in the Healing of Episiotomy Wounds

-Abstract-

Conducător de doctorat : **Prof. Univ. Habil. Dr. Vlad Tica**

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The doctoral thesis entitled “The Use of Lactic Acid Gel in the Healing of Episiotomy Wounds” addresses a highly relevant and contemporary topic in obstetrics and gynecology, at the intersection of obstetric surgery, perineal recovery, and innovative topical therapies. The study originates from the need to identify effective and safe solutions to accelerate the healing of episiotomy wounds and to reduce the negative impact on women’s quality of life during the postpartum period.

Background and Theoretical Rationale

Episiotomy remains one of the most frequently performed surgical procedures during vaginal birth, carried out to facilitate fetal expulsion and prevent severe spontaneous perineal tears. However, contemporary literature highlights associated complications, ranging from persistent pain and inflammation to long-term functional disorders and sexual dysfunctions. Therefore, the correct management of the post-episiotomy wound represents an essential stage of postnatal care.

Perineal healing is a complex process, dependent on biological factors, surgical techniques, and adjuvant therapeutic interventions. In recent decades, researchers have focused on biologically active topical agents with regenerative and anti-inflammatory roles. Among them, lactic acid has been distinguished for its antimicrobial properties, its ability to maintain vaginal homeostasis, and its positive effects on tissue regeneration. Topical products based on lactic acid represent an innovative alternative, capable of supporting rapid epithelialization, reducing pain and inflammation, and improving the functional and psychosocial recovery of patients.

Research Objectives

The central aim of the thesis was to evaluate, through an integrated approach, the effectiveness of lactic acid gels in the healing of post-episiotomy wounds.

Specific objectives included:

- A systematic literature review to analyze existing evidence on the use of lactic acid in the treatment of perineal wounds.
- A comparative clinical study to evaluate the effects of lactic acid gels on healing parameters, pain, inflammation, and local complications.
- An analysis of the functional and psychosocial dimensions of postpartum recovery, including mobility, resumption of sexual life, self-esteem, and quality of life.
- The formulation of conclusions and practical recommendations with potential for immediate clinical application.

Methodology

The work includes two major stages:

- A systematic review of the international literature, according to the PICO methodology and PRISMA principles, focusing on randomized clinical trials and observational studies that evaluated the effect of lactic acid products on perineal healing.
- A prospective, comparative clinical study carried out on two groups of patients. The experimental group applied, daily after episiotomy, a lactic acid-based gel, while the control group benefited only from standard care. Inclusion and exclusion criteria were carefully defined, and the monitored parameters included: pain (evaluated with standardized scales), degree of inflammation, epithelialization time, local complications, as well as psychosocial scores regarding comfort, emotional

adaptation, and sexual function.

Results

The systematic literature review confirmed the promising role of lactic acid in accelerating healing and reducing local discomfort. Existing clinical studies reported pain relief, shorter healing times, and better recovery of sexual function in patients using lactic acid-based products.

The results of the author's own clinical study confirmed these findings:
- Patients in the experimental group showed faster healing, with significant reduction in pain and inflammation.
- Local complications (infections, dehiscence) were less frequent compared to the control group.
- Functional and psycho-emotional assessments highlighted an earlier resumption of sexual life, greater physical comfort, and an improved perception of body image.

The positive impact of the treatment was consistent both in the immediate postpartum period and at six-week evaluations.

Discussion

The study results were compared with international literature, confirming that the use of lactic acid represents a viable and effective adjuvant strategy in the management of episiotomy wounds. By reducing healing time and alleviating symptoms, these products contribute not only to physical recovery but also to the psycho-emotional reintegration of patients. The thesis emphasizes the importance of a multidimensional approach to postpartum care, where quality of life is as valuable as objective clinical parameters.

Conclusions and Perspectives

The thesis demonstrates that lactic acid gels may become an innovative therapeutic option for the healing of post-episiotomy wounds, providing major clinical and psychosocial benefits. Their introduction into standard care protocols could contribute to reducing the incidence of complications, accelerating recovery, and increasing patient satisfaction.

The originality of the work lies in integrating systematic analysis with an applied clinical study, generating solid evidence for the implementation of a modern and accessible therapy. The innovative contributions target both obstetric practice and the improvement of quality of life in the postpartum period.