

Complex Surgery of the Late Puerperium: "Prolapse Begins in the Delivery Room"

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Abstract

Background: Pelvic organ prolapse (POP) is one of the most prevalent and clinically significant conditions in gynecological practice, affecting 2.9–53% of women, with up to 47% of patients being of working age. In three quarters of cases, the condition manifests and progressively worsens during the reproductive years. Despite advances in surgical correction, recurrence rates reach 30%, and outcomes frequently fail to meet the expectations of both clinicians and patients – particularly given the heightened quality-of-life demands of younger women.

Objective: To analyze the pathogenetic mechanisms underlying the development of pelvic organ prolapse in the context of vaginal delivery, to identify preventable and non-preventable risk factors, and to substantiate evidence-based approaches to primary prevention through anatomically correct perineal repair.

Key Findings: Vaginal delivery constitutes the primary modifiable risk factor for POP. The pathogenetic cascade includes tissue stretching and fascial micro-tears, neurological trauma to the pudendal nerve, elevated intra-abdominal pressure during the second stage of labor, and obstetric lacerations. Two distinct categories of injury are identified: **(1) non-preventable** – subclinical fascial and muscular micro-tears occurring without disruption of the vaginal mucosa or perineal skin, independent of the clinician; and **(2) preventable** – complications arising from improper repair of perineal lacerations and episiotomies, suture dehiscence, vaginal hiatus gaping, and posterior fourchette strictures.

Episiotomy, when performed selectively and correctly, may prevent severe lacerations; however, with respect to prolapse, it represents either a neutral or aggravating factor, with complication rates reaching 13.2%. The cornerstone of postpartum POP prevention is not muscle approximation or cosmetic repair, but the anatomically correct, layer-by-layer restoration of fascial structures – particularly the perineal body and pubocervical fascia – using synthetic absorbable suture material with a resorption time of at least 4–6 weeks. The use of innovative barbed (knotless) suture materials, such as VitoSoft, offers enhanced wound integrity, superior tensile strength, and improved surgical efficiency. Thread-lifting techniques are contraindicated as a substitute for structural repair, being associated with vaginal dysbiosis (OR=4.8; 95% CI: 1.4–16.9), fibrous degeneration of the vaginal wall, and progression of prolapse.

Conclusion: Pelvic organ prolapse is a condition whose origins lie in the delivery room. Its prevention demands a paradigm shift: from reactive surgical correction to proactive, anatomically informed obstetric practice. Every correctly placed suture, every restored fascial layer, and every evidence-based intrapartum decision represents an investment in the long-term pelvic health and quality of life of the patient.

Keywords

Pelvic organ prolapse, vaginal delivery, perineal repair, fascial restoration, episiotomy, suture dehiscence, thread lifting, late puerperium, obstetric trauma.