**Editorial**

# Stem Cell Therapy in Urogynecology – Expanding Horizons in Regenerative Medicine

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Urogynecology, as a specialized field, continues to evolve in tandem with advancements in medical science.[1] In recent years, stem cell therapy has emerged as a highly promising and sophisticated area of scientific inquiry. The advancement of treatment methodologies has generated significant anticipation.[2] Stem cells, with their unique regenerative abilities, offer transformative potential for a wide range of urogynecological conditions, particularly those related to pelvic floor dysfunction, urinary incontinence, and organ prolapse.[3] This edition of the Indonesian Journal of Obstetrics and Gynecology (INAJOG) focuses on e xploring the integration of stem cell therapy in urogynecology, with a selection of cutting-edge research articles and case studies that underscore the current progress and challenges in this exciting area.

The pelvic floor's intricate structure plays a vital role in maintaining a woman's quality of life.[4] Yet, this complex system is vulnerable to damage due to childbirth, aging, or trauma, which can lead to conditions such as pelvic organ prolapse (POP), stress urinary incontinence (SUI), and fecal incontinence.[5] Traditional treatments like surgical repairs or conservative management, though effective, have their limitations, often leading to recurrent issues or incomplete recovery.[6] Stem cell therapy is an innovative treatment modality that leverages the distinctive characteristics of stem cells, such as self-renewal and differentiation, to regenerate damaged cells and tissues in the human body or to replace them with new, healthy, and fully functional cells through the administration of exogenous cells to a patient.[7]

One article reviews the latest clinical trials on stem cell injections for SUI, highlighting promising preliminary results in restoring sphincter function and strengthening the supportive pelvic tissues.[8] Another study presents findings on the use of stem cells in managing POP, where stem cell applications are investigated not only for tissue regeneration but also for their anti-inflammatory and immunomodulatory effects, reducing the likelihood of recurrent prolapse.[9]

As with any emerging technology, stem cell therapy in urogynecology is not without its challenges. This edition critically examines the barriers to widespread clinical adoption, including issues of cell sourcing, ethical considerations, regulatory approvals, and the cost-effectiveness of treatments. A key focus is on ensuring that these therapies are safe, standardized, and accessible to patients in diverse healthcare settings, particularly in developing regions. Several articles provide insights into the logistical and ethical frameworks needed to integrate stem cell therapies within the current urogynecological practice in Indonesia, laying the groundwork for future clinical protocols.

While much of the research presented in this issue reflects early-stage studies, the trajectory of stem cell therapy in urogynecology is clearly one of growth and potential.[10] As researchers and clinicians, we are on the cusp of a new era where regenerative medicine could revolutionize the treatment of conditions that have, for centuries, caused significant morbidity among women. This volume of INAJOG offers a comprehensive look at the future of urogynecology, positioning stem cell therapy as a key player in the next generation of medical innovations.

We hope that the readers of this issue find inspiration, knowledge, and motivation to continue pushing the boundaries of what is possible in urogynecological care. The integration of regenerative medicine, particularly stem cell therapy, holds the promise of not only repairing the body but also restoring dignity and quality of life for countless women.

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