

INTERNATIONAL SUMMIT ON DIABETES, ENDOCRINOLOGY, AND METABOLIC DISORDERS



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**Clinical Evidence Regarding Spermidine-Hyaluronate Gel as a Novel
Therapeutic Strategy in Vestibulodynia Management**

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Abstract:

Research Question:

To evaluate the clinical evidence regarding the use of spermidine-hyaluronate gel as a novel treatment strategy for female vulvar health, focusing on vestibulodynia.

Background:

Vestibulodynia encompasses 80% of vulvodynia cases. It is characterized by thinning of the vestibular mucosa and a significant increase both in hyperactive local mast cells and in inflammatory molecules (cytokines, TNF α and Nerve Growth Factor (NGF)). This leads to inflammation and proliferation of pain fibers, contributing to vestibular hyperalgesia. When these fibers cross the basal membrane, along the tunnels excavated by tryptase and eparanase enzymes, produced by mast cells, they infiltrate the vestibular mucosa. This causes the shift from touch to burning pain, typical of vestibular allodynia. Further pain is caused by vestibular micro-abrasions during intercourse, when pelvic floor hyperactivity is present and pain causes a reflex block of vaginal lubrication. Spermidine, an endogenous polyamine, plays a crucial role in cellular maintenance, including regulating the cytoskeleton and cell resistance to microtrauma, local inflammation, and stability. Recent studies have highlighted spermidine's anti-inflammatory, anti-aging, and neuroprotective effects.

Purpose:

To assess the effectiveness of spermidine as a safe and novel therapeutic option for vulvar health, particularly in treating vestibulodynia and vulvodynia.

Methods:

A cohort of 154 women with vestibulodynia (VBD) received applications of the spermidine-hyaluronate complex for two months (4 + 4 weeks) in a multicentre prospective observational trial. Symptom evaluation included pain, dyspareunia, vestibular trophism, vulvoscopy, and pelvic floor hypertonicity.

Results:

Significant improvements were observed in all evaluated parameters. Pain and dyspareunia decreased by 46.5% and 33.5%, respectively, with improvements in other measures ($p < 0.0001$).

Conclusions:

The spermidine-hyaluronate complex effectively alleviates pain, dyspareunia, and vestibular hypersensitivity in VBD patients.

Keywords: spermidine hyaluronate; vestibulodynia; vulvodynia; dyspareunia

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Biography

Alessandra Graziottin, MD, SOGC (Hon), specialist in Gynecology-Obstetrics, Oncology, and Medical Sexology, is Director of the Center for Gynecology and Medical Sexology at San Raffaele Resnati Hospital, Milan. She is President and Founder of the Alessandra Graziottin Foundation for the Care of Women's Pain, NPO. She is consultant Professor at the University of Verona and professor at the Master of Sexual Medicine at University of Milano-Bicocca. She has authored over 490 scientific works and has given over 1900 invited lectures in national, international and world congresses. Her leading areas of expertise include menopause, chronic pain, and sexual medicine.