

Use of Myo-Inositol Vaginal Pessary in the Treatment of Subfertility

Sir,

Subfertility is defined as not being able to conceive after one year of unprotected intercourse. Every seventh couple is affected by subfertility.¹ Due to social pressure and desire to experience motherhood, subfertile women are very eager and highly motivated to try different adjunctive therapies for having a baby. Subfertility is associated with depression and low self-esteem; therefore, appropriate and timely management of subfertility is required.

Different treatments of subfertility are available in clinical practice that are tailored to individual patient's needs. Several molecules that promote fertility have been investigated by researchers in the past years. Among all these molecules, myo-inositol is a safe compound and is proven to be useful in fertility and pregnancy-related issues.²

We are familiar with the oral usage of myo-inositol for the treatment of subfertility but new research shows beneficial effects of myo-inositol when used vaginally. One such study, published in 2020, shows that myo-inositol improves the motility of the sperms and also the quality of cervical mucus, which increases the conception probability.³ Moreover, no adverse events both for the mother and the foetus were observed. This confirms the safety of this molecule in pregnancy and also supports its use for subfertile couples.³ Another study published in 2021 studied the performance of sperms in patients with low sperm count and motility, which was induced by nutraceuticals mix, which mainly contained myo-inositol.⁴ The study concluded that these substances containing myo-inositol act both in direct and indirect ways on sperms and their synthesis, which improves the performance of oligoasthenoteratozoospermic sperms *in vitro* as well as *in vivo*.⁴ A study done in 2016 showed that the treatment of women with myo-inositol vaginal suppositories improved the sperm motility of their partner and also fertility, but warranted further studies for a better understanding of the biochemical interactions between spermatozoa and cervical mucus.⁵ Thus, the results of the recent studies have validated the findings of previous studies. The beneficial effects of the myo-inositol vaginal pessary can greatly help subfertile couples to conceive in a natural way.

COMPETING INTEREST:

The authors declared no conflict of interest.

AUTHORS' CONTRIBUTION:

SA: Conceived and designed the analysis, collected the data, and wrote the manuscript.

QMZ: Collected the data, clinically revised the manuscript, and provided technical or material support.

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REFERENCES

1. Thurston L, Abbara A, Dhillon WS. Investigation and management of subfertility. *J Clin Pathol* 2019; **72(9)**: 579-87. doi: 10.1136/jclinpath-2018-205579.
2. Gambioli R, Forte G, Buzzaccarini G, Unfer V, Lagana AS. Myo-inositol as a key supporter of fertility and physiological gestation. *Pharmaceuticals (Basel)* 2021; **14(6)**: 504. doi: 10.3390/ph14060504.
3. Montanino Oliva M, Buonomo G, Carra MC, Lippa A, Lisi F. Myo-inositol impact on sperm motility in vagina and evaluation of its effects on foetal development. *Eur Rev Med Pharmacol Sci* 2020; **24(5)**:2704-9. doi: 10.26355/eurev_202003_20540.
4. Santoro M, Aquila S, Russo G. Sperm performance in oligoasthenoteratozoospermic patients is induced by a nutraceuticals mix, containing mainly myo-inositol. *Syst Biol Reprod Med* 2021; **67(1)**:50-63. doi: 10.1080/19396368.2020.1826067.
5. Montanino Oliva M, Poverini R, Lisi R, Carra MC, Lisi F. Treating woman with myo-inositol vaginal suppositories improves partner's sperm motility and fertility. *Int J Endocrinol* 2016; **2016**:7621942. doi: 10.1155/2016/7621942.

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