

Variable expression of IGF-1 mRNA isoforms in endometrioid endometrial cancer (EEC)

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ABSTRACT

Introduction: The diverse expression pattern of IGF-1 isoforms shown by in vitro models demonstrates that pro-peptides have a unique and distinct role in different types of cancer; however, their expression is not extensively reported in clinical studies. The study aimed to determine the mRNA expression patterns of IGF-1 and its isoforms in endometrioid endometrial carcinoma (EEC) patients. **Methods:** 75 participants were involved in a case-control study conducted at Universiti Kebangsaan Malaysia Medical Centre (UKMMC); endometrial biopsies were collected from 45 women diagnosed with EEC and 30 with non-cancerous endometrium (as the control group). The mRNA expression levels of IGF1 and its isoforms (IGF-1Ea, IGF-1Eb, and IGF-1Ec) in endometrial samples were analyzed using the quantitative polymerase chain reaction (qPCR) method. **Results:** IGF1, IGF-1Ea and IGF-1Ec mRNA expression were found to be significantly upregulated in EEC compared to the control group ($p < 0.05$). In contrast, IGF-1Ec mRNA was substantially downregulated in EEC ($p < 0.05$). In addition, the study reported that most clinicopathological characteristics (including EEC staging and grading) are linked with mRNA expression of IGF-1 isoforms ($P < 0.05$). Therefore, we postulate that variations in local IGF-1 isoforms mRNA expression could influence endometrial function and lead to adverse outcomes in EEC. **Conclusion:** The study indicated that IGF-1 isoforms are differentially expressed and may play distinct roles in the development of endometrial cancer. These findings warrant further in vitro studies to determine the roles and mechanisms of IGF-1 isoforms in EEC.

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The effectiveness of vaginal hygiene wash as an adjunct treatment in women with vulvovaginal candidiasis: A randomized double-blind controlled trial

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ABSTRACT

Introduction: Vulvovaginal candidiasis (VVC) remains the highest burden of all fungal infections. Dysbiosis has been proven to be the leading cause when opportunistic pathogens colonized the vagina against the Lactobacillus genus species. We aimed to compare the cure rate and maintenance effect in women with VVC treated with specially formulated vaginal hygiene wash which contains chemicals (Lactic Acid, Sodium Pyrrolidone Carboxylic Acid, Caproyl/Lauroyl Lactylate, Alpha-Glucan Oligosaccharide, and Lactococcus Ferment Lysate) that behave as probiotics and prebiotics. **Methods:** Women diagnosed with VVC were randomized into two groups. Participants were treated with a single dose of Clotrimazole pessary 500 mg and were asked to use vaginal hygiene wash for 14 days. Both microbiological and clinical evaluations were performed on visit 1 (day 0), visit 2 (day 14), and visit 3 (day 42) to observe the cure and maintenance rate. Both symptoms of the abnormal vaginal microbiota and adverse effects were also assessed throughout the study. **Results:** Eighty-eight participants were recruited with fifteen patients dropping out. The cure rate (76.4% versus 60.0%) was not statistically significant. However, the maintenance rate (66.7% versus 32.5%) was superior in the treatment group and was statistically significant. Women in the treatment group reported significant improvement in their symptoms compared to the placebo group. **Conclusions:** The administration of vaginal hygiene wash that behaves as a probiotic and prebiotic amplify the effectiveness of anti-fungal treatment of VVC.