

Polyherbal formulation containing Saoropus androgynous, Trigonella foenum-graceum, and Moringa oleifera increased the expression of mRNA smooth muscle α -actin (ACTA2) and cytokeratin 14 (CK14) in lactating rats

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Abstract	<p>Polyherbal formulation (PHF) containing extracts of Saoropus androgynous, Trigonella foenum-graceum and Moringa oleifera has been proven can induce milk production in animal model. However, its molecular of action has not been elucidated, yet. This study aimed to investigate the effect of the PHF on the mRNA expressions of α-actin smooth muscle (ACTA2) and cytokeratin 14 (CK14) on the myoepithelial cells of the lactating rats mammary glands. Thirty female Wistar rats were divided into five groups with six of each. Group I was orally administered aquadest. Group II, III, and IV rats were orally administered the PHF at dose level of 26.25, 52.5, and 105 mg/kg once a day, for 15 days, respectively. Group V was orally administered 2.7 mg domperidone. On 16th day, rats were sacrificed. Mammary glands were isolated and processed for mRNA expression analysis using real-time polymerase chain reaction (qRT-PCR). The results demonstrated that the mRNA expression of ACTA2 and CK14 increased in dose-dependent manner in the groups of PHF. Significantly different between the Group III, IV, and V compared to Group I was observed ($p < 0.05$). However, there was no significantly different between Group IV and Group V ($p > 0.05$). In conclusion, the PHF increases the mRNA expression of ACTA2 and CK14 on myoepithelial cells of the mammary glands on lactating rats.</p>
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