

## The Effects of Topically-Applied Skin Moisturizer on Striae Gravidarum in East Indian Women

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**Abstract :** Background: Striae result from rapid expansion of the underlying tissue, e.g. during puberty, pregnancy or rapid weight gain. Prior data indicate that the incidence of stretch marks in Indian women is 77%. The hormonal and genetic factors are associated with their appearance. Recently that has been found skin extensibility, elasticity and rupture were strongly influenced by the water content of dermis and epidermis cells. Objective: The objectives were to assess the effects of topical treatments applied during pregnancy on the later development of stretch marks. Materials and methods: An open, prospective, randomized study was done on 120 pregnant women in whom skin elasticity and hydration as well as striae presence or apparition were measured at baseline and periodically until delivery. Patients were randomly assigned to application in wet skin cream, or in dry skin conditions. Results: The average basal hydration was  $42 \pm 13$  IU and the final was  $46 \pm 6$  IU ( $P = 0.0325$ ; 95% CI: -7.66 to -0.34), which difference was statistically significant. By measuring the moisture in the control region (forearm) a basal reading of  $40 \pm 9$  IU and end of study of  $38 \pm 6$ ; ( $p = 0.1547$ ; 95% CI: -0.77 to 4.77) and this difference was considered to be not statistically significant. It was observed that at the end of the study, 55% women without ridges; mild ridges 5%; 36% moderate, and 4%, severe ridges. The proportion of women without grooves was 54% when the cream was applied studied wet skin and 45% when the cream was applied on dry skin. Conclusion: It was shown that cream under study increased hydration and elasticity of abdominal skin consequently in all subjects. This effect is more significant (54%) when the cream is applied to damp skin.

**Keywords :** striae gravidarum, skin moisturizer, skin hydration, skin elasticity

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