

Changes in Plasma Prolactin in the Algerian Saharan Goat During Kidding and Early Lactation

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Abstract : Saharan goat is a traditional goat breed widely distributed in the South West of Algeria. This breed is famous for its fertility, prolificacy, meat, and fibers and is well adapted to the harsh environmental conditions of its biotope. In fact, it is characterized by resistance to long photoperiods, a low water turnover and reduced metabolic needs allowing the survival of its offspring by maintaining the lactation. Several studies have claimed that parturition and lactation are critical periods that require the involvement of galactopoietic's hormones. Among them, Prolactin (PRL). The purpose of this study was to determine the changes in plasma PRL levels of healthy female Saharan goats on the day of parturition and post-partum (PP). The study was conducted on 14 females kept at the research station of Béni-Abbès: 30°07' N, 2°10' W; 495m elevation). Blood samples were taken from the jugular vein on the day of parturition (D0) and then weekly of PP (W1 to W12). Results were statistically analyzed using Kruskal Wallis and Dunn's tests in GraphPad Prism. Plasma PRL increases gradually ($P>0.05$) with slight fluctuations from D0 to W2 and reaches two peaks at W3 and W9 (258.2 ± 36.4 and 229.4 ± 35.1 ng/mL, respectively); this increase remains stable until W12 of lactation. The results show important modifications in plasma PRL levels in the Saharan goats on the day of parturition and in early lactation, which is needed for milk synthesis to ensure the maintenance of lactation and the growth of kids. Moreover, this study deserves to be supplemented by the dosage of thyroid hormones and estrogens to better clarify the endogenous determinism of these variations.

Keywords : prolactin, parturition, lactation, Saharan goat

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