

A STUDY ON TEAR FLUID SECRETION RATE IN DROMEDARY CAMEL (*Camelus dromedarius*)

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ABSTRACT

This study was aimed at determining the normal reference range for tear fluid secretion rate in different Indian breeds of dromedary camel (*Camelus dromedarius*). Tear fluid secretion was measured in 81 apparently healthy eyes (left eye) of 81 camels of Jaisalmeri (n= 19), Kachchi (n = 19), Bikaneri (n= 17) and Mewari (n= 26) breeds using the Schirmer Tear Test 1 (STT 1). Animals were divided into three groups on the basis of age, i.e. Gr. I: Less than 5 years (n = 29); Gr. II: 5 years to less than 10 years (n = 28) and Gr. III: 10 years and above (n = 24). Tear fluid secretion rate varied from 14.5 to 30.5 mm/ minute with overall mean (\pm S.E.) value of 21.89 \pm 1.01 mm/ min. The mean values in different breeds (Jaisalmeri, 22.39 \pm 1.06; Kachchi, 21.55 \pm 1.28; Bikaneri, 22.12 \pm 1.25 and Mewari, 21.63 \pm 1.01) were statistically comparable. The mean tear fluid secretion rate in different groups within a breed did not differ significantly. Likewise, values in male (20.81 \pm 0.74 mm/ min) and female (22.95 \pm 0.81 mm/ min) camel were also statistically comparable. From the present study, it can be concluded that breed, age and sex do not have significant effect on normal tear fluid secretion rate in dromedary camel. The results of the study may be used as normal reference range for STT 1 and may assist veterinarians in diagnosis of ocular diseases and syndromes affecting the tear film dynamics in dromedary camel.

Key words: Camel, dromedary, eye, reference-range, tear-fluid, tear-secretion