Objective: To evaluate the influence of hyperprolactinemia on collagen fibers in the lacrimal gland of female mice during the proestrus phase and pregnancy. Design: 40 adult female mice were randomly divided into two groups: In experiment I (induced hyperprolactinemia), the female mice were randomized to two groups of 20 animals each as follows: control group (Ctr, 0.2 mL of saline solution), and experimental group (HPrl, 200 µg/day of metoclopramide). Drugs were subcutaneously administered during 50 consecutive days. After 50 days was performed examination of the vaginal smear on the 50th day and the animals were subsequently euthanized in proestrus phase (10 animals/group), their blood collected, and the lacrimal glands were removed. In experiment II, carried out to analyze the lacrimal glands in pregnancy, the estrus females were placed together with males for mating. Two groups of 10 animals each were formed control pregnant (Ctrl2) and experimental pregnant (Hprl2) and the treatments continued. From the 6th of gestation, the animals were euthanized, their blood collected, and the lacrimal glands removed. Plasma was isolated for prolactin (ELISA), estrogen, and progesterone (RIA) measurements. Afterwards, the lacrimal glands were removed and fixed in 10% formaldehyde. Then specimens were processed for paraffin inclusion and sections of 3µm were stained with hematoxylin and eosin (HE) and with Masson trichrome method (collagen staining). The photomicrographs were collected using Axion vision (Zeiss, Germany) and the semiquantification analysis from ImageLab® (Software Informatics Ltd., Brazil). Data were statistically analyzed by ANOVA (p<0.05). Results: morphological analysis evidenced greater structural tissue disorganization of the lacrimal glands in groups treated with metoclopramide. The total content of collagen fibers was significant higher (p<0.05) in the Hprl1 groups compared to the Ctrl1 group, while between the Ctrl2P and Hprl2P groups the difference was not significant. Conclusion: Our results suggest that the hyperprolactinemia increase the amount of collagen fibers only in not pregnant mice, but not in pregnant ones.