

P5. Gene expression of small leucine-rich proteoglycans (SLRPs) in lacrimal gland non-pregnant and pregnant with hyperprolactinemia induced metoclopramide

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Context: Hyperprolactinemia is a constant concern in many areas of medicine, including eye health, a multidisciplinary interest. Researchers report that prolactin can act on various body systems, in particular in the ocular system, which influences the function of lacrimal gland.
Objective: This report aims to assess gene expression and immunolocalization of small leucine-rich proteoglycans, SLRPs, (class I: biglycan and decorin) and (class II: lumican and fibromodulin).
Methods: 20 female mice/groups: CONTROL GROUP (Non-pregnant Ctr) received 0.2 mL of saline (vehicle) and the EXPERIMENTAL GROUP (non pregnant HPrl): 200 µg/day of metoclopramide, dissolved in vehicle. After 50 days, 10 females of each group were placed for mating with males and continued to receive treatment. The females non-pregnant were euthanasia on 50th day (EXPERIMENTAL I) and the females pregnant were euthanized on 5.5th to 6.5th post-coital day (EXPERIMENTAL II).
Main Outcome Measure: The blood samples were collected for hormone measurements. The in lacrimal gland was processed for gene expression by RT-qPCR. The results were subjected to statistical test ($p < 0.05$).
Results: Serum prolactin levels were higher in all the groups, while the levels of estradiol and progesterone were lower only in non-pregnant group compared to non-pregnant group. Gene expression showed in the gene expression of the biglycan, decorin, lumican and fibromodulin showed decrease in non-pregnant/pregnant HPrl compared to non-pregnant/pregnant Ctr, $p < 0.05$.
Conclusion: Our data suggest that the state of hyperprolactinemia changed differently the gene expression of the small leucine-rich proteoglycans (SLRPs) in the extracellular matrix of the in lacrimal gland of pregnant and non-pregnant.

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