

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

A S Araujo (BR) [1], M J Simoes (BR) [2], J M Soares-Jr (BR) [3], O P Araujo Júnior (BR) [4], E C Baracat (BR) [5], R C Gomes (BR) [6]

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 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 lacrimal gland of pregnant and non-pregnant.

[1] Federal University of São Paulo, [2] Federal University of São Paulo, [3] University of São Paulo, [4] Federal University of São Paulo, [5] University of São Paulo, [6] Federal University of São Paulo