Abstract/Resumen: Objective: To improve prescriptive behavior in medical professionals of a Social Security Institute in Corrientes. A quasi-experimental study was conducted, without a control group. All application forms for extended treatment plans in a Social Service Institute of Corrientes were analyzed during a period of six months before and after an educational intervention during the year 2018-2019. The variables analyzed were: gender, age, diagnoses, prescribed medications, medication errors. To describe the types of errors the taxonomy of Otero Lopez was used. Were analyzed 600 application forms and 293 (49 %) prescription errors were observed during the prescription phase. Seventy seven percent (n= 150) of the patients were male, average age 52 years (range 5-91 years). The most frequent error detected before the intervention was prescription of erroneous medication (99 %) grouped as follows: a) inappropriate medications: meloxicam + glucosamine (5), ranitidine + domperidone (7), ergotamine + ibuprofen + caffeine (6), bromazepam + clebopride + simethicone (2), trimebutin + pancreatin + simethicone (7), denosumab (3), fexubostat (2); omega 3 (10), deproteinized extract of calf blood (2), donepecil (4), memantine (3); b) unnecessary medication: aspirin (15), rosuvastatin (9), omeprazole (8). Post-intervention results: only 4 errors were observed in the 600 application forms: inappropriate medications meloxicam + glucosamine (1), memantine (1), pancreatin + simethicone + trimebutin (1); unnecessary medication: aspirin (2). Through educational intervention an improvement in the prescriptive behavior was observed, especially those medications considered inappropriate, improving patient safety and quality of care.

0612 - CLASSIC HISTAMINE H1 RECEPTOR INVERSE AGONISTS ACTIVATE ERK1/2 PATHWAY AND MODULATE THE TRANSCRIPTION OF INFLAMMATORY GENES

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Abstract/Resumen: Recently, we showed that widely used histamine H1 receptor (H1R) ligands that exert therapeutic actions by blocking the effects of histamine (HA), display positive efficacy concerning receptor desensitization and/or internalization. Now we aimed to investigate whether these processes affect the modulation of pro-inflammatory genes and its relationship with the activation of other signaling pathways independent from G protein. While 3 h (long term) exposure to anihistamines decreased expression of pro-inflamatory genes, when we exposed A549 cells to HA, chlorpheniramine (CHLOR) or diphenhydramine (DIPH) for 10 min (short term) and ligands were removed, ciclooxigenase 2 (COX-2) and interleukin 8 (IL-8) mRNA levels were increased after 2h 50 min (among 40 and 100 % for all ligands, $p<0.05$). Consistently, ERK1/2 phosphorylation levels were increased by HA (373 ± 102 %), CHLOR (95 ± 30 %) and DIPH (56 ± 16 %), $p<0.05$, indicating that they display positive efficacy towards this signaling pathway that has been described to be involved in regulation of both genes. When A549 cells were pre-exposed for 3 h with these ligands and after 1 h recovery, were stimulated with HA for 10 min, we found lower COX-2 mRNA levels compared to those observed without pretreatment (HA 29.5 ± 0.5 %, CHLOR 40.5 ± 16.5 and DIPH 34 ± 8.8 % of reduction, $p<0.05$). We also found lower IL-8 mRNA levels in CHLOR and DIPH pretreated samples (both around 20 % of reduction, $p<0.05$) although no differences were observed in HA pretreated cells. Thus, although short term exposure to antihistamines increase pro-inflammatory genes expression, a prolonged exposure with these ligands diminished it and impaired the increase induced by HA indicating that their anti-inflammatory effects continue despite the ligands being removed. In all, these findings reinforce the biased nature of these ligands and claim for a correct classification, providing evidence for a more rational and safe use of antihistamines.

0630 - THE ANTIALLODYNIC EFFECTS OF INTRATHECALLY APPLIED IMT504 ARE RELATED TO MODULATION OF GLIAL/MICROGLIAL RESPONSES AND OF THE EXPRESSION OF INFLAMMATORY FACTORS IN RATS WITH HINDPAW INFLAMMATION

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Abstract/Resumen: Chronic immune diseases, pathogenic infection, or tissue injury are common medical conditions, often leading to the development of chronic inflammatory pain which is unfortunately difficult to treat and often unresponsive to conventional therapies. We recently showed that the oligodeoxynucleotide IMT504 has remarkable antiallodynic and anti-inflammatory effects upon systemic administration in rats undergoing unilateral hindpaw chronic inflammation. In this study, we addressed if IMT504 intrathecal (i.t.) delivery is capable of modulating mechanical allodynia and its underlying mechanisms of action in the spinal cord. Male Sprague-Dawley rats with complete Freund´s adjuvant (CFA)-induced unilateral hindpaw inflammation, received an acute i.t. injection of IMT504 (2 µg/µl; 10 µl). C-reflex, wind-up and mechanical hyperalgesia were recorded during 72 h after injection. Spinal cords were processed for immunofluorescence or western blot analysis for markers of activated glia and microglia such as fibrillary acidic protein (GFAP) and integrin αM (OX42), toll-like receptor 4 (TLR-4) and NF-B p65 subunit. Intrathecal IMT504 induced a clear reduction in mechanical hyperalgesia starting 1 h and lasting 48 h after administration, in association with parallel progressive reductions in C-reflex and wind-up responses. Furthermore, IMT504 significantly downregulated the expression of GFAP, OX42, TLR4 and NF-B. Altogether, we show that i.t. IMT504 efficiently eliminates inflammatory mechanical hyperalgesia for at least 24 h, in association with a depression in spinal sensitization and reductions in the activation of glia, microglia, and the NF-B and TLR-4 pathways. The exact mechanisms, by which these different events relate to explain the antihyperalgesic effects of IMT504, remain to be demonstrated. However, it could be hypothesized that the net effect of IMT504 are reductions in the synthesis of spinal pro-inflammatory mediators.

0670 - DUAL MODULATION OF GLUCOCORTICOID RECEPTOR ACTIVITY BY HISTAMINE H2 RECEPTOR SIGNALING. INVOLVEMENT OF RAP, ERK AND CAMP.

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Abstract/Resumen: There are reports describing the interaction between membrane G-protein coupled receptor signaling and glucocorticoid receptor (GR) transcriptional activity. We have already reported that the signaling of the G alpha s-coupled histamine H2 receptor (H2r) increased GR transcriptional activity. The aim of the present work was to study the molecular mechanisms of this effect. HEK293 cells were transfected with plasmids coding to H2r, GR and a GR-driven reporter gene TAT3-Luc. While pretreatment with 10 µM amthamine, an H2r agonist which augments cAMP levels, increased dexamethasone (dex)-induced GR activity in a 50 % ($p<0.05$), raising cAMP levels with