ATOPY

The chiropractic care of a pediatric patient with asthma, allergies, and chronic colds

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Objective: The purpose of this case report is to describe the chiropractic care of a pediatric patient with symptoms of asthma and allergies.

Clinical features: The patient was a 7-year-old male suffering from chronic colds, allergies, and asthma since the age of 5 months. At initial evaluation, the patient was on a once per day prescription of Alavert® and Ventolina®. The patient’s mother reported that his asthma symptoms were associated with “getting the cold.” The patient, since his first year of school, missed approximately 1–2 days of school per month due to “colds” and asthma and required monthly doctor’s visits due to illness.

Interventions and outcome: The patient was cared for using site-specific, low-force spinal manipulative therapy (SMT) using a manually assisted hand-held instrument (i.e., activator methods). The patient’s response to care was positive. Within two weeks of beginning SMT, the patient’s parents elected to undergo a trial of discontinued allergy and asthma medications. At two months of care, the patient’s treatment regimen was discontinued due to continued improvement in the patient’s allergy and asthma symptoms. However, the patient’s parents requested their child to be placed on “wellness visits.” The patient was scheduled at one visit every 3–4 weeks. In the 5 months since initiating chiropractic care, the patient had not missed any school days due to illness and had only wellness checkups with his family physician.

Conclusion: This case report provides supporting evidence on the effectiveness of alleviating the symptoms of asthma and allergies. We advocate for continued research on the role of chiropractic and other CAM therapies into these common disorders of childhood.

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Anti-inflammatory abilities of Imupret®: Inhibition of IL-8 and human β-defensin 2 induced by LPS and IL-1β in lung epithelial A549 cells

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Background: The respiratory epithelium is a major portal of entry for pathogens and applies various defense mechanisms. Recruitment of neutrophils in airway inflammation may account for the generation of interleukin 8 (IL-8), which is also generated by tissue cells after stimulation by endotoxin (LPS) or proinflammatory cytokines. This study was designed to evaluate the effectiveness of the commercial herbal medicinal product (Imupret®), Bionorica AG in the modulation of airway inflammation. For the production of IL-8 and human β-defensin 2 (hBD-2), LPS and interleukin-1β (IL-1β) activated A549 bronchial epithelial cells were analyzed.

Materials and methods: A549 cells, which express toll-like receptor 4 (TLR4), were used. The cytotoxicity and anti-proliferative effect of Imupret® (50–2000 µg/ml) were investigated (propidium iodide uptake, WST-1 assay). LPS from Pseudomonas aeruginosa (100 µg/ml) or IL-1β (50 ng/ml) were used as stimulating agents. Dexamethasone (10^{-7} M) served as positive anti-inflammatory control. IL-8 and hBD-2 production were detected in the supernatants of A549 cells after 18 h with commercially available ELISA test kits (Bender MedSystems, CA; Phoenix Pharmaceuticals, CA). Imupret® dissolved in single solvents (bidest H2O, cell culture medium, 70% (v/v) ethanol and DMSO) was investigated at nontoxic concentrations in the range between 0.01 and 100 µg/ml.

Results: Imupret® (50–2000 µg/ml) in different solvents showed dose-dependent growth inhibitory effect on A549 cells. Comparative studies indicate quantitative differences concerning 50% growth inhibitory (GI50) concentrations ranging between 122–823 µg/ml. Viability of cells was not affected. The growth inhibitory effect of water and DMSO extracts was significantly diminished in LPS-primed cells at concentrations above 100 µg/ml in contrast to medium and ethanol preparations. Production of IL-8 after stimulation by LPS or IL-1β in A549 cells was significantly inhibited by pre-treatment with Imupret®, IL-8 level of LPS-primed cells was decreased about 20–40% by Imupret® (1–100 µg/ml) treatment; however in IL-1β-primed cells 30% (100 µg/ml) and 20% (10 µg/ml) decreases were detected. IL-1β up-regulated level of hBD-2 was inhibited by Imupret® at concentrations between 0.1 and 100 µg/ml.

Conclusion: Imupret® may help to suppress airway inflammation by inhibiting IL-8 production and down-regulation of hBD-2 (increased level in chronic inflammatory diseases) in epithelial cells.

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Anti-microbial potential of medical plant extracts (Sinupret®) regarding sinusitis

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Introduction: Sinusitis is a common disease in public. About 85–90% of anti-microbial drugs are used in the community; up to 80% are used to treat respiratory tract infections. Antibiotics are getting limited in the case of bacterial resistance. Plants are known to be active against many infectious microbials and are widely used, with high evidence of safety and efficacy due to clinical day-to-day experience. Therefore it seems very interesting to study