Archives of Asthma, Allergy and Immunology

Volume - 1, Issue - 1

Research Article **Published Date:-2017-10-30 00:00:00**

Cytokine Modulatory Effects of Sesamum Indicum Seeds Oil Ameliorate Mice with Experimental Autoimmune Encephalomyelitis

Background: Multiple sclerosis (MS) is an autoimmune disorder of the central nerve system (CNS), which affects the brain and spinal cord. Experimental autoimmune encephalomyelitis (EAE) is the most commonly applied experimental model for studying the MS. The aim of this study was to determine the effects of Sesamum indicum seeds oil on Experimental Autoimmune Encephalomyelitis (EAE) in mice.

Methods: Sesame oil was administrated intraperitoneally three days before immunization. IFN-?, IL-10, IL-17 and TGF-? levels and mRNA expression in supernatant of and within cultured mononuclear cells were assessed.

Results: According to our results, sesame oil treated mice demonstrated significant disease severity reduction (P=0.01 and 0.001, respectively). Treated EAE mice also represented statistically significant delay in the onset of symptoms in comparison with control group. The average IFN-? levels and mRNA of sesame oil treated EAE mice were less than untreated EAE group. IL-10 and TGF-? levels and mRNA did not differ significantly in sesame oil treated EAE mice in comparison to untreated EAE group. IL-17 levels and mRNA were also found to be decreased significantly in treated mice in comparison to untreated mice.

Conclusions: Even thoughTH1 and TH17 cells through secretion of IFN-? and IL-17, respectively, are involved in the pathogenesis of multiple sclerosis and EAE, but IL-10 has been shown to exhibit suppressive effects on these disorders. It can be concluded that sesame oil is able to induce TH2 and TH17-related immune responses and suppress TH1 type in EAE

Review Article **Published Date:-2017-10-23 00:00:00**

Lack of applicability of the Enterocyte Chloride ion secretion paradigm to the Pathology of Cystic Fibrosis

This review examines of the concept of a defective chloride channel in epithelial cells being a major cause of cystic fibrotic pathophysiology. The central concept of the defective chloride ion channel paradigm is that faulty CFTR protein or failed delivery of CFTR protein to the mucosal membrane of epithelial cells is the basis of cystic fibrosis. Defective placement or function of CFTR prevents hydration of bronchial mucus that is normally caused by epithelial cells; these are capable through chloride ion secretion of transporting fluid to the mucosal surface. This concept relies heavily on a paradigm taken from intestinal physiology-namely that the intestinal epithelial cell secretes chloride ion and fluid and that this has conferred heterozygote selective advantage in carriers of the cystic fibrosis gene. This present review examines the evidence for that hypothesis and assembles evidence from past studies that it is the smooth muscle cell that is of greater relevance. This review does not aim to provide an overview of current research into cystic fibrosis. The intention is to provide an overview of past research that led to the concept of a failure of epithelial cells to hydrate bronchial mucus because of compromised CFTR function. It is important to present all past evidence for aspects of the chloride secretion hypothesis and its associated heterozygote advantage concept so that the important evidential milestones can be re-assessed.

Mini Review **Published Date:-2017-09-20 00:00:00**

The use of Allergoids and Adjuvants in Allergen Immunotherapy

---

Allergen immunotherapy (AIT) is the unique curative treatment to help allergic patients to get over their allergies. With a personalized approach, AIT is the best example of precision medicine. After a century of intensive studies and innovative discoveries, allergists have in their hands many tools to orchestrate the best strategy to re-educate the hypersensitive immune systems that decrease the quality of life of their patients. This review describes both the historical and the promising acquisitions in this field, focusing the biochemical and Bioengineering tools that render an allergen more suitable for a secure, convenient and effective immunotherapy.

Case Report **Published Date:-2017-08-23 00:00:00**

Inducible Laryngeal Obstruction/Vocal Cord Dysfunction and the Role It Plays in Refractory Asthma

Chronic asthma accounts for a significant amount of unscheduled office and emergency department (ED) visits. According to the latest World Health Organization statistics, asthma worldwide affects 300 million individuals and creates a substantial health burden by restricting the patient's lifetime activities. Data estimate that asthma causes a loss of disability-adjusted life years over 150,000/year [1]. While most individuals with asthma can be controlled with current therapies, 5-10% of patients have difficult-to-control/refractory asthma. Severe or refractory asthma places a significant burden on the patient and often requires treatment with systemic glucocorticoids, which have significant side effects. The American Thoracic Society and the European Respiratory Society define refractory asthma as asthma that requires treatment with high-dose inhaled corticosteroids (ICS) plus a second controller and/or systemic corticosteroids to prevent it from becoming ''uncontrolled'' or asthma that remains ''uncontrolled'' despite this aggressive therapy. To fully meet this definition the diagnosis of asthma needs to be confirmed and comorbidities addressed as well. The above are considered major criteria for severe asthma and only one needs to be present for considering the diagnosis of refractory asthma [2]. For these reasons, clinicians must learn to identify and formulate additional diagnoses of "asthma imitators" [3]. One of the more common disorders associated with difficult-to-control asthma is vocal cord dysfunction (VCD) [4]. This disorder is known by many names, but current nomenclature endorsed by European and American societies correctly refers it as "Inducible Laryngeal Obstruction" (ILO) [5]. The following case demonstrates the importance of recognizing the clinical and spirometric features of ILO when asthma remains "refractory" to multiple therapies.

Research Article **Published Date:-2017-08-22 00:00:00**

Prevalence of reported drug allergy and its impact on Beta lactam use with financial and health implications

---

Background:While recognition and documentation of true drug allergy is critically important, most physicians acknowledge that its prevalence is likely overestimated, often on the basis of historical, sometimes anecdotal evidence. Correct or not, once applied, drug allergy labels may result in altered, potentially inferior therapy, increased costs and prolonged hospitalisation.

Objective:Estimate the point prevalence, accuracy and symptomatology of self-reported drug allergy in a typical, large NHS Acute Trust adult inpatient population. In the subset with penicillin allergy (PA), estimate additional management costs from the use of alternative antibiotics and readmission rates in the previous 5 years.

Methods:Data on self-reported drug allergies were extracted from 440 adult inpatient prescription charts over a 4 month period. Where penicillin allergy (PA) was reported, alternative antibiotic regimens were recorded and their additional costs calculated. Hospital electronic records were used to assess readmission rates of PA patients.

Results:194/440 inpatients (44.5%) reported at least one drug allergy. Antibiotic allergy was most commonly reported (51%), followed by analgesic (23%) and antiemetic (12%) allergy. PA accounted for 76% of reported antibiotic allergy. The commonest reported symptoms were cutaneous (42%) and gastrointestinal (18%). Where antibiotic therapy was required for patients with PA to manage acute infections, Ciprofloxacin, Clarithromycin, Teicoplanin, Clindamycin and Cefuroxime were the most commonly employed alternatives. Extrapolation of these figures to include the entire Trust inpatient population suggested that the use of alternative antibiotics in PA patients incurred additional annual expenditure of £268,000. Further, 87% of PA patients had been admitted more than once in the preceding 5 years, with 74% requiring further courses of antibiotics during these admissions.

Conclusion:Self-reported drug allergy, and in particular PA, is common in hospital inpatient populations and, in addition to the potentially unnecessary hazards to individual patients resulting from the use of alternative antibiotics, results in a considerable additional financial burden to the healthcare system. This problem could be eliminated by the provision of a nationwide and equitable tertiary Allergy service.

Review Article **Published Date:-2017-07-10 00:00:00**

[The effects of early low dose exposures to the Environmental Estrogen Bisphenol A on the Development of Childhood Asthma]

Exposure to environmental chemicals is a potential cause for the rapid increase in the prevalence of allergic asthma over the last few decades. The production of the environmental estrogen bisphenol A, the monomer of polycarbonate plastics, has increased rapidly over the last 50 years, such that bisphenol A is one of the most highly produced chemicals. It is detectable in the urine of the vast majority of the human population. While the relationship between the increase of bisphenol A in our environment and the prevalence of asthma does not prove a cause and effect relationship, it provides a strong rationale for experiments that have tested the hypothesis. Because of its small molecular size and hydrophobicity, bisphenol A is easily transferred from the mother to the fetus, via the placenta and in breast milk.

We have reviewed all the publications available on medline on the human epidemiological studies of the early bisphenol A exposure on the development of allergic asthma and experimental studies using mouse model of the effects of early bisphenol A exposure on the development of asthma. There are eight human epidemiological studies and five mouse model studies currently published.

The human studies suggest that bisphenol A exposure in early life enhances the likelihood of developing asthma on at least one of the study groups. The effects of early bisphenol A exposure were observed as an enhanced development of asthma before adolescent in the animal model.

Research Article **Published Date:-2017-05-29 00:00:00**

[Features of Interferon and Cytokine Status in Atopic Dermatitis]

The insufficiency of interferon production and the cytokine imbalance in patients with atopic dermatitis, especially in combination with persistent herpes virus infection, has been identified. The expediency of the use of interferon inducer Cycloferon in the treatment of chronic atopic dermatitis has been shown.

Case Report **Published Date:-2017-01-31 00:00:00**

Atopic Conjunctivitis in Children: Influence of Treatment with Topical Cyclosporin 0.05% in the Quality of Life

Introduction: Forty-six per cent children have allergic rhinoconjunctivitis (Allergologica 2005).

Working hypothesis: Ocular topical cyclosporine improves the quality of life for these patients.

Material, methods, design: 2-year prospective study (2015-16), 40 patients with topical corticosteroids without improvement, followed 20 and 20 switched to corticosteroids cyclosporine 0.05%. Interview with Quality of Life Questionnaire in Children with rhinoconjunctivitis (PRQLQ) before and at the end of treatment. Mean age of 10.3 years with 60% male-40% female. Treatments were applied from January to March. There were 15 questions divided into two blocks. Children responded using a card with responses rated from zero (not bothered at all) to 6 (quite upset).

Results: Before the 100% reported that, the itching was very bothersome. In the group of 40 children, 80% showed symptoms of epiphora and 60% showed symptoms of ocular inflammation. 100% complained of significant discomfort in rubbing their eyes, 30% did not like to take medications. Headaches affected 20%. 100% stated that they cannot play normally. 80% showed decreased concentration in class.

Continuing with corticosteroids did not show statistically significant changes.

Patients with cyclosporine improved the results by 3 points, with decreased itching, tearing, swelling, pain, eye rubbing, medication and headaches. In the 2nd questionnaire there was limited variation in the results related to fatigue, malaise, and irritability but with substantially improved balance of sleep, insomnia and concentration at school.

Conclusion: Cyclosporine A is a cyclic polypeptide calcineurin inhibitor developed from the fungus Tolypocladium inflatum. The first dilution was 2% but it is currently used at a dilution of 0.05% and recent publications suggest nanosuspensions. Our study showed improvement in parameters related to symptoms, especially itching and lower improvement of psychological aspects, this achieves a better quality of life for children and more willingness to adhere to the treatment.