

Velázquez-Sámamo, MD. *Servicio de Alergia e Inmunología Clínica, Hospital General de México, Mexico City, Mexico.*

**Background:** Giant papillary conjunctivitis is associated with soft and rigid contact lens wearing, ocular prostheses, exposed sutures, extruded scleral buckle, filtering blebs, band keratopathy, corneal foreign bodies, limbal dermoids, and cyanoacrylate tissue adhesives. Patients present decreased lens tolerance, increased lens movement and awareness, mucus, irritation, redness, burning, and itching. Is bilateral and 10% unilateral. The upper tarsal conjunctiva shows inflammation, papules >0.3 mm, bulbar conjunctival injection, superior corneal pannus or opacities. Fluorescein noted papillary reaction. Histopathology: Mast cells, basophils and eosinophils were found in the epithelium and substantia propria. Histamine, Ig, IgG, IgM, C3, Factor B, C3 anaphylatoxin, Eotaxin, Neutrophilic chemotactic factor elevated in tears. Lactoferrin is decreased. Pathophysiology: The cause is unknown, factors as immunologic disease, mechanical trauma or irritation influence. Contact lenses become coated that serves as an antigen so the increased proteins in the tear film result in further coating. Treatment: Nonsteroidal anti-inflammatory agents, topical mast cell stabilizers or mast cell stabilizer-antihistamines. Replacement lenses at 2 weeks to 3 months. Daily lens disinfection with hydrogen peroxide and unpreserved saline solution. Severe should stop wearing their contact lenses for >4 weeks or refit with rigid gas-permeable lenses.

**Methods:** A 7 year-old female presents 6 months ago redness, pruritus, foreign body sensation, eyelid inflammation without improvement with treatments. On examination with conjunctival hyperemia, hypertrophy of papillae and epiphora. A 22 year-old male presents at 7 years old conjunctival burning, foreign body sensation, conjunctival hyperemia, hyaline secretion treated with topical antibiotics and steroids with minimal and temporal improvement. On examination, conjunctival hyperemia, giant papillae on superior tarsal bilateral predominantly left. Stool negative.

**Results:** We found 2 patients affected without common triggers and early onset of severe clinical manifestations and refractory to usual treatment.

**Conclusions:** We present 2 clinical cases of unusual presentation since both of them were pediatric presentation and Giant papillary conjunctivitis has its peak of incidence in the adult population. Besides, both patients lacked an initial trigger such as contact lens wearing or ophthalmologic surgery. Both of them had a poor response to treatment. This disease should be considered in pediatric population and start treatment immediately to avoid complications such as loss of vision.

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#### Contact Allergy Due to Ophthalmic Drugs in Uruguay

Valeria Pomies, MD, and Iris Ale, MD. *Allergy Unit and Department of Dermatology, University Hospital, Republic University of Uruguay, Montevideo, Uruguay.*

**Background:** The external eye is exposed to a large number of environmental, cosmetic and pharmacological allergens and the frequency of external eye diseases related to the prolonged use of ophthalmic medications and contact lens wear is increasing. Predisposing factors for contact allergy are: high exposure to topical drugs (eyelids & eye), high percutaneous absorption in eyelids, high potential for concomitant irritation and hand transfer of allergens due to frequent rubbing.

**Methods:** Ninety three patients 56 women and 37 men, age range 10 to 81 years old, mean age 43 years old with a clinical picture compatible with ocular allergy were referred to our Allergy Unit by the Department of Ophthalmology at the University Hospital for allergological evaluation, including a thorough history, complete clinical examination as well as laboratory techniques and skin testing. Patch-testing was performed with the standard series, an ophthalmic series of allergens developed at our unit, as well as additional allergens according to the clinical situation.

**Results:** Contact allergy was more frequently caused by topical antibiotics and preservatives and occasionally by mydriatic agents and topical drugs for glaucoma. The allergens more frequently implicated were Neomycin (10.7%), Bacitracin (9.6%) Thimerosal 8 (8.5%) Benzalconium chloride 5 (5.3%)

Phenylephrine hydrochloride 3 (3.2%), local anesthetics 3 (3.2%), Chloramphenicol (3.1%), Polymyxin (2.1%), Kanamycin (2.1%), Gentamicin (2.1%), Tobramycin (2.1%), Beta-blockers 1 (1.7%), and others (6.1%).

**Conclusions:** Patients with a clinical picture compatible with ocular allergy should be referred for allergologic evaluation. A comprehensive approach will often provide clues for a presumptive diagnosis and appropriate management. When a contact allergy is found it is mandatory to avoid contact with the precipitating substance. This may simply be a case of stopping or altering an ophthalmic medication. The proper use of ophthalmic preparations should decrease the incidence of allergic contact reactions.

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#### Increased Frequency of $\gamma\delta$ T Cells in Patients with Allergic Conjunctivitis

Miguel E Alonso-Sánchez, MD,<sup>1</sup> Jorge Galicia-Carreón, MD, MSc,<sup>1</sup> Raul Chávez, MD, PhD,<sup>2</sup> Atzin Robles-Contreras, MSc,<sup>1</sup> and Maria C Jiménez-Martínez, MD, PhD,<sup>1,2</sup>. <sup>1</sup>Research Unit and Department of Immunology, Institute of Ophthalmology, México D.F., Mexico; <sup>2</sup>Department of Biochemistry, Faculty of Medicine, UNAM, México D.F., Mexico.

**Background:** It is well known involvement of CD4+ T cells in the maintenance of allergic immune response at conjunctiva; recently, it was suggested in the mouse model that  $\gamma\delta$  T cells are needed for the ocular allergic response maintenance; however contribution of  $\gamma\delta$  T cells in human allergic conjunctivitis is still unknown. The aim of this study was to evaluate the frequency of  $\gamma\delta$  T cells in AC patients.

**Methods:** Patients with AC diagnosis were included. All participants gave their informed consent for blood sampling after written information was provided. Peripheral blood mononuclear cells (PBMC) were separated on a Ficoll density gradient, after that PBMC were stained with mAb against human CD3-PECy5 and  $\gamma\delta$ -PE. The cells were analysed for marker expression by collecting 10,000 events using a FACScan flow cytometer (Becton Dickinson, CA, USA) and CellQuest Pro software. To analyse cell surface marker staining, a gate was drawn around the lymphocyte population based on their physical properties (forward and side scatter). Data were analyzed with *t* test and differences were considered statistically significant with *P* < 0.05.

**Results:** We observed a higher frequency of  $\gamma\delta$  T cells in patients with AC,  $\gamma\delta$  T cells were increased 11.9 times in AC-patients ( $22.63 \pm 2.9\%$ ) than healthy donors ( $1.9 \pm 1.9\%$ ) (*P* = 0.002).

**Conclusions:**  $\gamma\delta$  T cells are increased in allergic conjunctivitis patients. These data suggest that lipids antigens could be involved in pathogenesis of allergic conjunctivitis in humans and possibly implicated in chronic responses at ocular level, as has been suggested in the mouse model of allergic conjunctivitis.

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#### Zero Itch in Eyes Treated With Olopatadine Hydrochloride Ophthalmic Solution, 0.2% in Bilateral Conjunctival Allergen Challenge Studies

Michael S. Blaiss, MD, and Maria Tort, PhD<sup>2</sup>. <sup>1</sup>University of Tennessee Health Science Center, Memphis, TN; <sup>2</sup>Global Medical Affairs, Alcon Research, Ltd, Fort Worth, TX.

**Purpose:** To further assess the prevention of ocular itching with olopatadine hydrochloride ophthalmic solution, 0.2% (OLO) in patients with allergic conjunctivitis.

**Methods:** This was a post-hoc analysis of 85 patients participating in 2 prospective, randomized, double-masked bilateral conjunctival allergen challenge (CAC) studies. Patients received OLO in one eye and placebo (vehicle) in the contralateral eye. Ocular itching was self-assessed by patients and rated on a scale of 0 (none) to 4 (severe). To assess onset of action,

eligible patients were challenged with antigen 27 minutes after dosing. To assess duration of action, patients were challenged with allergen 16 hours after dosing. The percentage of eyes with zero itching in both studies was assessed at 3 minutes post allergen challenge.

**Results:** The percentage of eyes with zero itch at the 3 minutes timepoint after the onset of action allergen challenge was 60.0% for OLO-treated eyes compared with 5.9% for vehicle-treated eyes ( $P < .0001$ , OLO vs vehicle). The percentage of eyes with zero itch at 3 minutes post allergen challenge following the 16-hour dosing was 59.8% for OLO-treated eyes compared with 22.0% for vehicle-treated eyes ( $P < .0001$ , OLO vs vehicle).

**Conclusions:** In bilateral CAC studies, ocular itching was prevented in a higher percentage ( $P < .0001$ ) of eyes treated with 0.2% olopatadine hydrochloride ophthalmic solution when compared with vehicle as early as 30 minutes and for at least 16 hours post dosing.

## CONTACT DERMATITIS

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#### Patch Testing Results in Contact Dermatitis from the Allergist's Perspective

Marcella Aquino, MD,<sup>1</sup> Mary Ann Michelis, MD, FAAAAI,<sup>2</sup> Sebastian Lighvani, MD,<sup>3</sup> Mark Davis-Lorton,<sup>1</sup> and Luz Fonacier, MD, FAAAAI,<sup>1,4</sup>.  
<sup>1</sup>Rheumatology, Allergy & Immunology, Winthrop University Hospital, Mineola, NY; <sup>2</sup>Department of Allergy & Immunology, Hackensack University Medical Center, Hackensack, NJ; <sup>3</sup>New York Allergy and Asthma, Weill Cornell Medical College, New York, NY; <sup>4</sup>Medicine, Winthrop University Hospital, Mineola, NY.

**Background:** Contact Dermatitis (CD) is a frequently encountered skin disease by allergists and dermatologists that results from contact with external allergens. Patch Testing (PT) remains the gold standard in the diagnosis of allergic CD. Studies evaluating PT from allergy practices are lacking.

**Methods:** A multi-center, retrospective chart review of PT within the last 5 years at allergy practices in 3 institutions. We report PT results using allergens in the Thin-Layer Rapid-Use Epicutaneous Test (TT) and additional supplemental allergens [North American Contact Dermatitis (NACD) Panel, Dörmer Cosmetic Panel, hairdresser's panel, corticosteroid panel and personal products]. Additionally, patient characteristics including age, gender, occupation, dermatitis site, history of atopic disease and final diagnosis were also obtained.

**Results:** A total of 427 patients (mean age = 49.8 years) were patch tested, 82% were female, 54% reported an atopic history (history of asthma, atopic dermatitis, allergic rhinitis or food allergy), 30% were tested with TT, 60% with NACD panel, 30% with cosmetic series, 15% with corticosteroid series and 35% with personal products. The 5 most common positive PT allergens were nickel sulfate, fragrance mix I, P-phenylenediamine, thimerosal and cobalt chloride. The most common dermatitis sites were eyelid/periorbital (31%), facial (25%) and trunk (21%). 56.9% of patients were positive to at least one TT allergen. 25.6% of patients were positive to both a TT and a supplemental allergen (these patients would have been "partially evaluated" with TT allergens alone as they are positive to at least 1 TT allergen and 1 supplemental allergen). 12.5% of patients were negative to a TT allergen and positive to at least 1 supplemental allergen only (these patients would have been "missed" as they are negative to all TT allergens, but positive to at least 1 supplemental allergen).

**Conclusions:** Nickel remains the most common allergen. When evaluating patients with CD, testing with TT allergens alone would miss 12.5% of patients while 25.6% of patients would be only partially evaluated. As half of our patients were positive to at least 1 TT allergen, the TT remains an adequate screening tool but a more comprehensive panel may be needed to fully evaluate contact dermatitis.

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#### Contact Allergy to Medicaments in Consecutively Patch-tested Patients in Uruguay

Valeria Pomies, MD, and Iris Ale, MD. Allergy Unit and Department of Dermatology, University Hospital, Republic University of Uruguay, Montevideo, Uruguay.

**Background:** Allergic contact dermatitis (ACD) to topical medicaments is common. Medicaments are responsible for approximately 30% of all cases of ACD. The most common drugs associated with ACD include topically applied antibiotics, antiseptics, antihistamines, anesthetics, nonsteroidal antiinflammatory drugs, and corticosteroids. Certain body areas are particularly susceptible (ie, genital and perianal areas, ears, eyes, face and lower legs). Predisposing factors are: occlusion (skin folds, use of bandages), application in damaged skin (stasis dermatitis & leg ulcers, and other chronic dermatitis) and long-lasting use of multiple medicaments. The aim of our study was to study the prevalence of ACD to topical medicaments in patients with suspected ACD attending the Unit of Allergy at the University Hospital in Montevideo.

**Methods:** 1175 consecutive patients; 781 F (63%) 394 M (37%) with suspected ACD were patch tested with the standard series and the topical medicament series, as well as other allergens according to the clinical situation.

**Results:** The most frequent allergens were: Neomycin (7.1%), Thiomersal (3.8%), Benzocaine (1.9%), Bacitracin (1.9%), Propolis (1.5%), Gentamycin (1.2%), Tixocortol (1.1%) and Budesonide 24 (0.8%).

**Conclusions:** Contact allergy to topical medicaments is common in patients studied by a suspected ACD in Uruguay. In these cases the topical medicaments that the patient is using should be included when patch testing.

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#### Evaluation of Allergen Sensitivity in Patients with Contact Dermatitis in Antalya

Arzu Didem Yalcin, MD,<sup>1</sup> Cekin Ayhan Hilmi,<sup>2</sup> Saadet Gumuslu, PhD,<sup>3</sup> Hasan Hüseyin Polat,<sup>4</sup> Sukran Kose,<sup>5</sup> and Ramazan Cetinkay.<sup>6</sup> <sup>1</sup>Allergology and Clinical Immunology Unit, and; <sup>2</sup>Gastroenterology and Hepatology unit, Antalya Education and Training Hospital, Antalya, Turkey, Antalya, Turkey; <sup>3</sup>Department of Biochemistry, Faculty of Medicine, Akdeniz University, Antalya, Turkey; <sup>4</sup>Department of Public Health, Faculty of Medicine, Cumhuriyet University, Sivas, Turkey; <sup>5</sup>Infectious Diseases and Clinical Microbiology, Clinical Allergy and Immunology, Tepecik Educational and Research Hospital, Izmir, Turkey; <sup>6</sup>Division of Nephrology, Antalya Education and Training Hospital, Antalya, Turkey.

**Background:** Allergic contact dermatitis (ACD) is a delayed type of induced sensitivity (allergy) resulting from cutaneous contact with a specific allergen to which the patient has developed a specific sensitivity. This allergic reaction causes inflammation of the skin manifested by varying degrees of erythema, edema, and vesiculation. In this study, the socio-demographic characteristics, patch test were evaluated in treated patients diagnosed with Allergic contact dermatitis

**Methods:** The study was conducted in Antalya between 10th of November 2010 and 20th of July 2011. A questionnaire made by the investigators taking the latest literature data into consideration were used during the study. The total IgE levels were made by fluoroenzyme immunoassay method via use of ImmunoCAP kit for patch test was used. The statistical data derived were evaluated by using 14.00 SPSS software. Ki-Square test and percent ratios were used for data analysis. A  $P$  value less than 0.05 was assumed for statistical significance.

**Results:** During the study 457 patients (211 male, 246 female) were included. Among patients 52% belonged to 40 to 49 years age group, and 29% had University degree graduate. The total duration of the ACD was  $10.11 \pm 3.45$  years. The total Ig E level was  $112.6 \pm 10.2$  Ku/L. The most common