SOUTHERN EUROPEAN ALLERGY SOCIETIES

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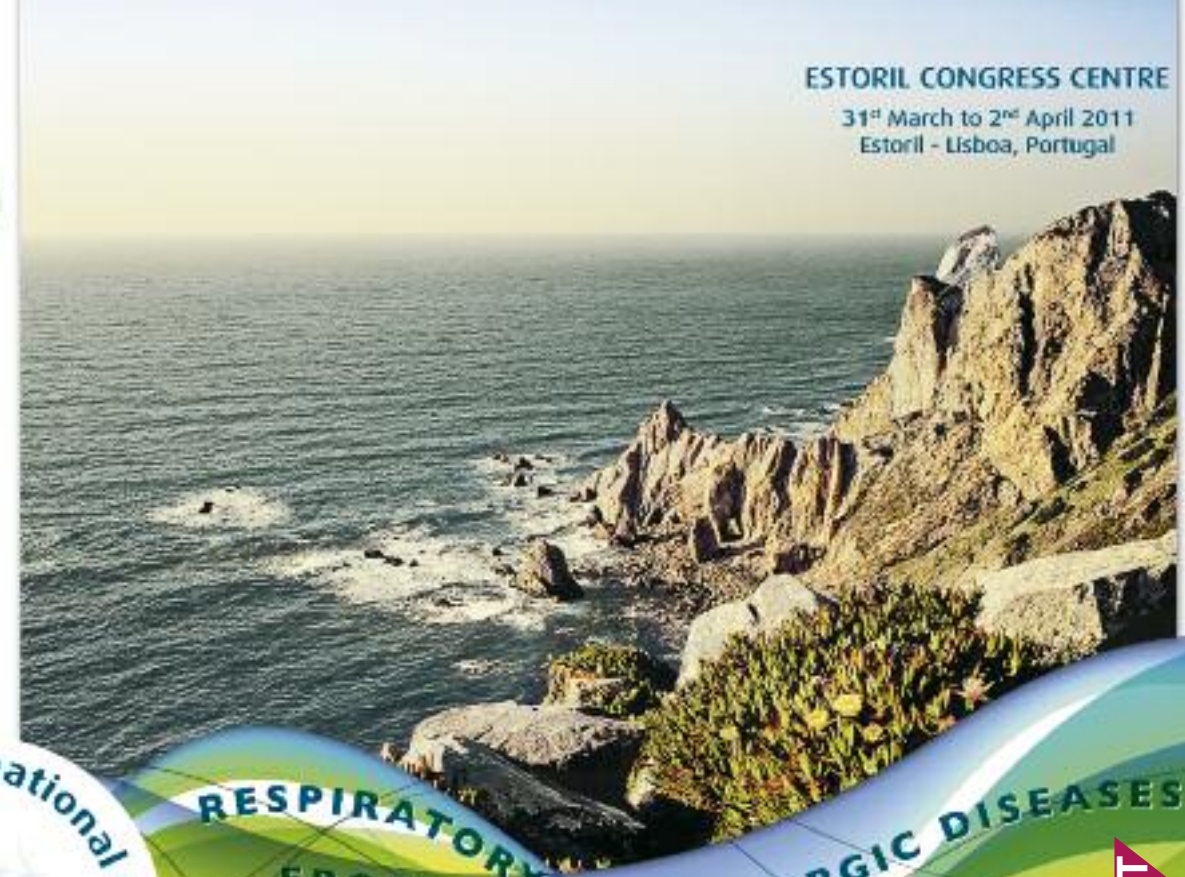
ESTORIL CONGRESS CENTRE

31st March to 2nd April 2011
Estoril - Lisboa, Portugal



2nd International Congress

RESPIRATORY AND ALLERGIC DISEASES FROM CHILDHOOD TO OLDNESS

Southern European
Allergy Societies

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ABSTRACT BOOK

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ABSTRACT BOOK

oral presentations

31st March, 2011

13:30 - 15:00 AUDITORIUM **Oral Presentations 1**

ANAPHYLAXIS, ASTHMA, DRUG ALLERGY

CHAIRS *Eustachio Nettis (Italy), João Fonseca (Portugal), Tomás Chivato Perez (Spain)*

Each presenting author has 10 minutes at disposal
(8' presentation; 2' discussion)

1• ***Learning with 'Guia de actuación en anafilaxia' (Galaxia)***
A. Montoro De Francisco, T. Chivato, B. Mateos, D. Garcia, A. Burgos, M. Fernandez
Hospital Central de la Defensa - Servicio de Alergia, Madrid, Spain

2• ***Omalizumab therapy in severe allergic asthma under 12-years-old: real-life clinical case practice***
H. Pite, A. Gaspar, M. Paiva, P. Leiria-Pinto
Immunoallergy Department, Dona Estefânia Hospital, Centro Hospitalar de Lisboa Central, Lisbon, Portugal

3• ***Dental caries in the primary dentition of Mexican children relationship with asthma***
V. Francisco, E.M. Vázquez R., Ma. Del C Barrientos G., José A. Cordova F., D. Lin O., F.J. Beltran G., C.F. Vázquez R.
Autonomous University Of Tamaulipas Madero Mexico

4• ***Role of haptoglobin and its polymorphism in bronchial asthma***
M. Cortez (1), J. Ferreira (2), M. Pereira-Barbosa(1), M. Bicho(2), C. Marinho(2)
(1)Allergy Department-Hospital Santa Maria – Chln, Lisbon, Portugal, (2)Genetic Department- Lisbon Medical School, Lisbon, Portugal

31st March, 2011

5• ***Aspirin desensitization in cardiovascular diseases – Portuguese experience***
J. Caiado(1), E. Pedro(1), P. Canas Da Silva(2), M. Barbosa(1)
(1)Immunoallergology Department, Centro Hospitalar Lisboa Norte/Hospital Santa Maria, Lisboa, Portugal, (2)Cardiology Department, Centro Hospitalar Lisboa Norte/Hospital Santa Maria, Lisboa, Portugal

6• ***Analysis of 5-year hospital admissions due to angiotensin converting enzyme inhibitors-induced angioedema***
L. Viegas, J. Soares, S. Luz, S. Silva, A. Santos, A. Lopes, M. Ferreira, M. Barbosa
Hospital Santa Maria – Chln, Lisboa, Portugal

7• ***Delayed cutaneous hypersensitivity vasculitis to iodinated contrast media***
L. Viegas(1), A. Sá(2), M. Gomes(2), M. Ferreira(1), M. Pedro(1), M. Barbosa(1)
(1)Immunoallergology Department, Hospital Santa Maria – Chln, Lisboa, Portugal, (2)Department of Medicine 1, Hospital Santa Maria – Chln, Lisboa, Portugal

8• ***Hypersensitivity to non B-Lactam Antibiotics – 6 years of experience***
F. Ribeiro, E. Faria, E. Almeida, D. Machado, I. Carrapatoso, A. Segorbe Luís
Coimbra University Hospital, Coimbra, Portugal

9• ***Plantago L. Pollen: airborne and immunological profiles***
R. Teixeira De Sousa(1), A. Cruz(2), H. Ribeiro(1), I. Abreu(1,3)
(1)Grupo de Ambiente e Sociedade do Centro de Geologia da Universidade do Porto, Porto, Portugal, (2)Serviço de Patologia Clínica, Laboratório de Imunologia do Centro Hospitalar, Vila Nova de Gaia Portugal, (3)Departmento de Biologia da Faculdade de Ciências da Universidade do Porto, Porto, Portugal

oral presentations

2nd April, 2011

13:30 - 15:00 AUDITORIUM **Oral Presentations 2**

FOOD ALLERGY, IMMUNOTHERAPY, SKIN ALLERGY

CHAIRS *Oliviero Rossi (Italy), Manuel Branco Ferreira (Portugal), Ignacio Javier Ansotegui Zubeldia (Spain)*

Each presenting author has 10 minutes at disposal (8' presentation; 2' discussion)

1• *Purified natural and recombinant molecular allergens in kiwi fruit allergy*

H. Pite(1), M. Gavrovic-Jankulovic(2), M. Popovic(2), M. Grozdanovic(2), A. Gaspar(1), G. Pires(1), P. Martins(1), V. Matos(3), V. Loureiro(3), P. Leiria-Pinto(1)

(1)Immunoallergy Department, Dona Estefânia Hospital, Centro Hospitalar de Lisboa Central, Lisbon, Portugal, (2)Biochemistry Department, Faculty of Chemistry, University of Belgrade Belgrade, Serbia, (3)Clinical Pathology Department, Dona Estefânia Hospital, Centro Hospitalar de Lisboa Central, Lisbon, Portugal

2• *Cow's milk allergy – dose-dependent after all*

J. Antunes, M. Chambel, H. Pité, S. Rosa, P. Leiria-Pinto

Immunoalergy Department - Hospital Dona Estefânia Lisboa Portugal

3• *Innovation in specific oral tolerance induction in severe cow's milk allergy*

G. Sampaio, S. Piedade, C. Santa-Marta, A. Gaspar, M. Morais-Almeida

Immunoallergy Department - Cuf Descobertas Hospital Lisboa Portugal

4• *Severe latex-fruit syndrome in children*

C. Ribeiro(1), A. M. Romeira(2), P. Leiria Pinto(2)

(1)Immunoallergy Department, University Coimbra Hospital, Coimbra, Portugal, (2)Immunoallergy Department, Dona Estefânia Hospital, Lisbon, Portugal, (3)Immunoallergy Department, Dona Estefânia Hospital, Lisbon, Portugal

5• *Low dose oral administration of cytokines a new hope in the treatment of allergic asthma*

G. Nagy(1), S. Gariboldi(2), M. Palazzo(2), L. Zanobbio(2), G.F. Dusio(2), V. Mauro(2), U. Solimene(2), D. Cardani(2), M. Mantovani(2), C. Rumio(2)

(1)Gunas.Ro, Tecuci, Romania, (2)Mucosal Immunity Laboratory, Department of Human Morphology "Citta` Studi", Universita` degli Studi di Milano, Milan, Italy

6• *Advantages and disavantages of subcutaneous immunotherapy*

L. Viegas, M. Ferreira, M. Santos, M. Barbosa

Hsm - Chln - Immunoallergology Department, Lisboa, Portugal

7• *Icatibant in emergency department, one year experience*

L. Viegas, A. Costa, M. Ferreira, A. Santos, M. Barbosa

Immunoallergology Department, Hospital Santa Maria – Chln, Lisboa, Portugal

8• *Omalizumab effectiveness in severe refractory chronic urticaria*

A. Moreno Ancillo(1), C. Dominguez Noche(2), A. Alonso Gomez(3), A. C. Gil Adrados(4), R. M. Blanco(2), J. Jurado Palomo(1)

(1)Servicio de Alergia Talavera de la Reina Spain, (2)Servicio de Alergia, Plasencia, Spain, (3)Consulta de Alergia, Valladolid, Spain, (4)Centro de Salud la Solana Talavera de la Reina, Spain

9• *Can primary amyloidosis mimic angioedema?*

D. Machado, B. Tavares, G. Loureiro, C. Pereira, A. Segorbe-Luís

Immunoallergy Department, Coimbra University Hospital, Coimbra, Portugal

2nd International Congress
Southern European Allergy Societies

poster sessions

1st April, 2011

12:30 - 13:30 POSTER EXHIBITION AREA **Poster Session 1**

ASTHMA, CLINICAL IMMUNOLOGY, DRUG ALLERGY, FOOD ALLERGY

CHAIRS *Angelo Passaleva (Italy), Luís Miguel Borrego (Portugal), Jose Manuel Zubeldia (Spain)*

1• Acute asthma: the challenge of approach in Emergency Department
R. Pitchon(1), M.T. Mohallem(1), J. Ribeiiro(1), G. Chaves(1), F. Machado(1), J. Ministério(1), T. Teixeira(1)F. Pacheco(1), D. Reis(2)
(1)Mater Dei Hospital - Pediatric Department, Belo Horizonte, Brazil, (2)Universidade Federal de Minas Gerais - Faculty of Medicine, Belo Horizonte, Brazil

2• Paradoxical vocal cord dysfunction in an asthmatic adolescent - Case Report
M. Nascimento(1), N. Fontes(1), N. Rodrigues(1), N. Oliveira(2), S. Soares(1), G. Oliveira(1)
(1)Department of Pediatrics, Hospital Pedro Hispano Unidade Local de Matosinhos, Porto, Portugal (2)Department of Otolaryngology, Hospital Pedro Hispano Unidade Local De Matosinhos, Porto, Portugal

3• Occupational asthma and dermatitis due to epoxy resins
A. Moreno Ancillo(1), A.C. Gil Adrados(2), J. Jurado Palomo(1)
(1)Servicio de Alergia, Talavera de la Reina, Spain, (2)Centro de Salud La Solana, Talavera de la Reina, Spain

4• Advances in pid meeting - extensive longstanding lymphoproliferation – how to manage it?
S. Pereira Da Silva(1), S. Lopes Da Silva(1), S. Luz(1), R. Barbosa(2), A. Sousa(2), E. Pedro(1), M. Barbosa(1)
(1)Immunoallergology Department, Santa Maria Hospital (Chln), Lisbon, Portugal, (2)Instituto Medicina Molecular- Fac. Medicina Lisboa, Clinical Immunology Unit, Lisbon, Portugal

5• The allergy diagnosis plan in veterinary medicine
L. Martins, O. Bento
University of Évora, Évora, Portugal

6• Quality of life in hereditary angioedema
S. Luz(1), J. Alves Da Silva(2), F. Barbosa(3), A. Spínola Santos(1), M. Branco Ferreira(1), M. Barbosa(1)
(1)Immunoallergology Department, Santa Maria Hospital (Chln), Lisbon, Portugal, (2)Psychiatry Department, São Francisco Hospital (Chlo), Lisbon, Portugal, (3)Psychology Department, Santa Maria Hospital (Chln), Lisbon, Portugal

7• The emerging role of 1,25(OH)2D3 in the immune response: three case reports
S. Imbesi, P. Quattrocchi, S. Gangemi
School and Division of Allergy and Clinical Immunology, University of Messina, Messina, Italy

8• Anaphylaxis to omeprazole
J. Geraldo Dias, S. Luz, A.C. Costa, J. Caiado, F. Duarte, E. Pedro, M. Branco Ferreira, M. Pereira Barbosa
Immunoallergology Department, Santa Maria Hospital (Chln), Lisbon, Portugal

9• Non-pigmenting fixed drug eruption due to cotrimoxazole
J. Gonzalez-Cervera(1), B. Rodriguez-Dominguez(1), A. Henriquez-Santana(2), D. Manzano-Lopez(1), J. Ruiz-Hornillos(2), E. Galan-Dorado(1)
(1)Hospital General de Tomelloso - Department of Allergy, Tomelloso, Spain, (2)Hospital de Valdemoro - Department of Allergy, Valdemoro, Spain

10• Non-IGE mediated anaphylaxis to paracetamol: a case report
M. Couto, Â. Gaspar, M. Morais-Almeida
Immunoallergy Department, Cuf-Descobertas Hospital, Lisbon, Portugal

11• IGE-Mediated metamizol allergy: a case series
M. Couto, Â. Gaspar, S. Piedade, C. Arêde, M. Morais-Almeida
Immunoallergy Department, Cuf-Descobertas Hospital, Lisbon, Portugal

12• A case of hypersensitivity to multiple corticosteroids
J. Bruno Soares(1), L. Viegas(1), A. Lopes(1), R. Silva(2), M. Branco Ferreira(1), M. Pereira Barbosa(1)
(1)Hospital Santa Maria - Immunoallergology Department, Lisbon, Portugal, (2)Hospital Santa Maria - Dermatology Department, Lisbon, Portugal

13• Estimation antibiotic drug allergy in children
A. Bajraktarevic(1), B. Begovic(2), A. Dzinovic(3), H. Niksic(4), T. Frankic(5), A. Djulepa Djurdjevic(6), L. Sporisevic(7), M. Valha(8), J. Musabegovic(9), D. Boldic(10), B. Rakic Prnjavorac(11), E. Gusal(12), A. Mehmedbegovic(13), A. Pahor Kurilic(14), S. Zelenturovic(15), A. Kadic(16)
(1)Public Health Institution Of Health Center Sarajevo - Pediatrics Department, Sarajevo Bosnia Herzegovina, (2)Clinical Medical Center Sarajevo, Sarajevo, Bosnia Herzegovina, (3)Pediatrics Clinic Sarajevo, Sarajevo, Bosnia Herzegovina, (4)Pharmacy Faculty Sarajevo Department For Clinical Pharmacology, Sarajevo, Bosnia Herzegovina, (5)Children Hospital Mostar, Mostar, Bosnia Herzegovina, (6)General Hospital Sarajevo, Sarajevo, Bosnia Herzegovina, (7)First Medical Aid Sarajevo - Pediatrics Department, Sarajevo, Bosnia Herzegovina, (8)Pediatrics Clinic Banja Luka, Banja Luka, Bosnia Herzegovina, (9)Pediatrics Clinic Tuzla, Tuzla, Bosnia Herzegovina, (10)Pediatrics Hospital Foca, Foca, Bosnia Herzegovina, (11)Pediatrics Hospital Tesani, Tesani, Bosnia Hezegovina, (12)Children Regional Hospital Zenica, Zenica, Bosnia Herzegovina, (13)Regional Epidemiological Institute of Middle Bosnia Travnik, Travnik, Bosnia Hezegovina, (14)Pharmaceutical Advisers Board of Bosnia and Hezegovina, Sarajevo, Bosnia Herzegovina, (15)Public Health Institution of Gracanica – Pediatrics Department, Gracanica, Bosnia Herzegovina, (16)Regional Hospital Pediatrics Ward Bihac, Bihac, Bosnia Herzegovina

14• Different patterns of sensitisation in betalactam allergy
E. Almeida(1), N. Sousa(1), F. Ribeiro(1), L. Geraldes(2), E. Faria(1), A. Segorbe
(1)Coimbra University Hospitals Centre - Immunoalergology Department, Coimbra, Portugal, (2)Guimaraes Hospital - Immunoalergology Department, Guimaraes, Portugal

15• Successful desensitisation by insulin: case report
E. Almeida, N. Sousa, F. Ribeiro, E. Faria, A. Segorbe Luis
Coimbra University Hospital Centre - Immunolallergology Department, Coimbra, Portugal

16• Study of the prevalence and clinical features of self-reported adverse food reactions in Portuguese children. Preliminary results
A. Miguel Jorge(1), E. Soares(2), F. Lorente(3), L. Taborda Barata(2,4)
(1)Paediatrics Department, Cova Da Beira Hospital, Covilhã, Portugal, (2)Cics, Centro de Investigação em Ciencias da Saude, Universidade da Beira Interior, Covilhã, Portugal, (3)Department of Paediatrics, Salamanca University Hospital, Salamanca, Spain, (4)Department of Allergy and Immunology, Cova Da Beira Hospital, Covilhã, Portugal

17• A new validated questionnaire for the study of adverse reactions to food in Portuguese adults
C. Lozoya Ibáñez(1), A.F. Macedo(2), A. Rodrigues(3), L. Silva(4), E. Rodrigues(5), M.J. Pimenta(6), T. Mendes(7), L. Taborda-Barata(8, 2)
(1)Cics, Health Sciences Research Centre, University of Beira Interior; Allergy Department, Ulsch, Epe, Castelo Branco, Portugal, (2)Cics, Health Sciences Research Centre, University of Beira Interior, Covilhã Portugal, (3)Emergency Department, Unidade Local de Saúde de Castelo Branco, Epe, Castelo Branco, Portugal, (4)Escola Superior de Saúde Dr Lopes Dias, Instituto Politécnico de Castelo Branco, Castelo Branco, Portugal, (5)Idanha a Nova Community Health Care Centre, Unidade Local de Saúde de Castelo Branco, Epe, Castelo Branco, Portugal, (6)Vila Vêlha de Ródão Community Health Care Centre, Unidade Local de Saúde de Castelo Branco, Epe Castelo Branco, Portugal, (7)Sertã Community Health Care Centre, Unidade Local de Saúde de Castelo Branco, Epe, Castelo Branco, Portugal, (8)Department of Allergy & Clinical Immunology, Centro Hospitalar Cova da Beira, Epe, Covilhã, Portugal

18• Study of self-reported prevalence of adverse reactions to food in a Portuguese population. Preliminary results
C. Lozoya Ibáñez(1), A.F. Macedo(2), A. Rodrigues(3), L. Silva(4), L. Fernandes(5), M. Fernandes(6), F. Amaral(7), L. Taborda-Barata(8, 2)
(1)Cics, Health Sciences Research Centre, University of Beira Interior; Allergy Department, Ulsch, Epe, Castelo Branco, Portugal, (2)Cics, Health Sciences Research Centre, University of Beira Interior, Covilhã, Portugal, (3)Emergency Department, Unidade Local de Saúde de Castelo Branco, Epe, Castelo Branco, Portugal, (4)Escola Superior de Saúde Dr Lopes Dias, Instituto Politécnico de Castelo Branco, Castelo Branco, Portugal, (5)Oleiros Community Health Care Centre, Unidade Local de Saúde de Castelo Branco, Epe, Castelo Branco, Portugal, (6)Proença-A-Nova Community Health Care Centre, Unidade Local de Saúde de Castelo Branco, Epe, Castelo Branco, Portugal, (7)Castelo Branco Community Health Care Centre, Unidade Local de Saúde de Castelo Branco, Epe, Castelo Branco Portugal, (8)Department of Allergy & Clinical Immunology, Centro Hospitalar Cova da Beira, Epe, Covilhã, Portugal

19• Anaphylaxis to sunflower seeds
M. Couto(1), Â. Gaspar(1), S. Piedade(1), I. Postigo(2), J. Martinez(2), M. Morais-Almeida(1)
(1)Immunoallergy Department, Cuf-Descobertas Hospital, Lisbon, Portugal, (2)Department of Immunology, Microbiology and Parasitology, Faculty of Pharmacy, University of the Basque Country, Victoria, Spain

20• Usefulness of basophil activation test in the diagnostic pathway of food allergy
G. Colombo(1), M-R. Yacoub(1), C. Mason(1), P. Pignatti(3), M. Corsetti(2), M. G. Sabbadini(1)
(1)San Raffaele Scientific Institute, Immunological Medicine Unit, Milan, Italy, (2)San Raffaele Scientific Institute, Gastroenterology Unit, Milan, Italy, (3)Salvatore Maugeri Scientific Institute, Allergy Unit, Pavia, Italy

21• Multiple and unusual food allergy - two clinical cases
S. Santos, C.C. Loureiro, S. Lemos, R. Rothwell, J.A. Pinheiro
Paediatric Allergy Clinic, Hospital Pediatrico Coimbra, Chc –Epe, Coimbra, Portugal

12:30 - 13:30 POSTER EXHIBITION AREA **Poster Session 2**

IN VITRO DIAGNOSIS, MEDITERRANEAN AEROBIOLOGY, MISCELLANEOUS, SKIN ALLERGY

CHAIRS *Guglielmo Bruno (Italy), Helena Falcão (Portugal), Carlos Loureiro (Portugal)*

22• The dactylis glomerata (Grass Pollen) allergen repertoire for dogs
L. Martins(1), A. Marques(1), A. Martins(2), O. Bento(1)
(1)University of Évora, Évora, Portugal, (2)Technical University of Lisbon, Lisbon, Portugal

23• Basophil activation tests in NSAID hypersensivity
J. Viana(1), N. Sousa(1), A. Todo-Bom(1,2), A. Mota Pinto(2), S. Vale Pereira(2)
(1)Serviço de Imunoalergologia dos Hospitais da Universidade de Coimbra, Coimbra, Portugal (2)Faculdade de Medicina da Universidade de Coimbra, Coimbra, Portugal

24• Specific IGE to grasses of pooideae subfamily: which one is the most reliable?
G. Calado(1), G. Loureiro(1), R. Cunha(2), F. Rodrigues(2), A. Segorbe Luís(1)
(1)Coimbra University Hospital, Immunoallergology Department, Coimbra, Portugal, (2)Coimbra University Hospital, Immunology Sector of Clinical Pathology Department, Coimbra, Portugal

25• Aerobiology and pollen allergenicity of spring trees in the city of Porto, Portugal
H. Ribeiro(1), A. Cruz(2), L. Duque(1), R. Sousa(1), I. Abreu(1, 3)
(1)Grupo de Ambiente e Sociedade, Centro Geologia da Universidade do Porto, Porto, Portugal, (2)Serviço de Patologia Clínica, Laboratório de Imunologia do Centro Hospitalar Vila Nova de Gaia, Vila Nova de Gaia, Portugal, (3)Departamento de Biologia da Faculdade de Ciências da Universidade do Porto, Porto, Portugal

26• Phl p 5 content in ambient air samples collected in evora (South Portugal): year-to-year variation and correlation with airborne grass pollen
A. Lopes(1), J. E. Moreira(1), R. Ferro(1), R. Ribeiro(1), C. Coelho(2), E. Caeiro(3,4), C. M. Antunes(1,3,5), M.L. Lopes(6), R. Brandrão(2,3)
(1)Department of Chemistry, University of Evora, Évora, Portugal, (2)Department of Biology, University of Evora, Évora, Portugal, (3)Institute of Mediterranean Agricultural and Environmental Sciences, University of Evora, Évora, Portugal, (4)Portuguese Society of Allergoly and Clinical Immunology, Lisbon, Portugal, (5)Center for Neurosciences and Cell Biology, University of Coimbra, Coimbra, Portugal, (6)Sta Luzia Hospital, Elvas, Portugal

27• Ambient air ole E1 content in samples collected in Evora: correlation with airborne olive pollen and year-to-year variation (South Portugal)
R. Ferro(1), A. F. Lopes(1), J. E. Moreira(1), C. Coelho(2), E. Caeiro(3,4), C. M. Antunes(1,3,5), M. Morais-Almeida(6) C. Nunes(7), R. Brandão(2,3)
(1)Department of Chemistry, University of Evora, Evora, Portugal, (2)Department of Biology, University of Evora, Evora, Portugal, (3)Institute of Mediterranean Agricultural and Environmental Sciences, University of Evora, Evora, Portugal, (4)Portuguese Society of Allergoly and Clinical Immunology, Lisbon, Portugal, (5)Center for Neurosciences and Cell Biology, University of Coimbra, Coimbra, Portugal, (6)Cuf Descobertas Hospital, Lisbon, Portugal, (7)Imunoallergology Center of Algarve, Portimão, Portugal

28 • **The Portuguese aerobiology network**

I. Camacho(1), E. Caeiro(2), M.L. Lopes(3), Â. Gaspar(4), A. Todo-Bom(5), J. Ferraz De Oliveira(6), C. Nunes(7)R. Alves(8), R. Câmara(9), M.J. Pereira(10), R. Brandão(2), M. Morais De Almeida(4)

(1)Life Science Competence Center, University of Madeira Funchal, Madeira, Portugal, (2)Dept. of Biology, University of Évora, Évora, Portugal, (3)Sta Luzia Hospital, Elvas, Portugal, (4)Cuf Descobertas Hospital, Lisbon, Portugal, (5)University Hospital, Coimbra, Portugal, (6)St. João Hospital, Oporto, Portugal, (7)Centro de Imunoalergologia do Algarve, Portimão, Portugal, (8)Ponta Delgada Hospital Ponta Delgada, Azores Portugal, (9)Central Hospital of Funchal, Funchal, Madeira, Portugal, (10)Dept. of Biology, University of Azores Ponta Delgada, Azores, Portugal

29 • **Grass pollen season in Portugal and its association with meteorological factors**

R. Brandão(1), E. Caeiro(2), L. Lopes(3), Â. Gaspar(4), A. Todo-Bom(5), J. Oliveira(6), C. Nunes(7), J. Trindade(8), M. Morais-Almeida(4)

I(1)Évora University - Department of Biology, Évora, Portugal, (2)Sociedade Portuguesa de Alergologia e Imunologia Clínica, Lisbon, Portugal, (3)Sta Luzia Hospital, Elvas, Portugal, (4)Cuf Descobertas Hospital, Lisbon, Portugal, (5)University Hospital, Coimbra, Portugal, (6)S. João Hospital, Oporto, Portugal, (7)Centro de Imunoalergologia do Algarve, Portimão, Portugal, (8)Sta. Maria Hospital, Lisbon, Portugal

30 • **No drugs treatment for adult eosinophilic esophagitis. Diet modification achieve a sustained clinical and histological remission.**

J. Gonzalez-Cervera(1)B. Rodriguez-Dominguez(1) A. Arias-Arias(2) T. Angueira-Lapeña(3) S.Gonzalez-Castillo(3) A.J. Lucendo-Villarin(3)

(1)Hospital General de Tomelloso-Allergy Department, Tomelloso, Spain, (2)Hospital General de Tomelloso-Research Unit, Tomelloso, Spain, (3)Hospital General de Tomelloso-Gastoenteorology Department, Tomelloso, Spain

31 • **Review of allergology department's activity in the emergency department**

J. Bruno Soares, L. Viegas, I. Mascarenhas, S. Lopes Da Silva, M. Branco Ferreira, A. Lopes, M. Pereira Barbosa

Hospital Santa Maria, Lisbon, Portugal

32 • **Sweet's Syndrome - An unexpected diagnosis?**

P. Barreira, D. Malheiro, J.P. Moreira Da Silva

Centro Hospitalar de Vila Nova de Gaia/Espinho - Epe, Immunoalergology Department, Vila Nova de Gaia, Portugal

33 • **Difficulties in treatment in kartagener syndrome – case report**

E. Almeida, J. Viana, E. Faria, C. Loureiro, A. Segorbe Luis

Coimbra University Hospital Centre- Immunoallergology Department, Coimbra, Portugal

34 • **What information in Portuguese is available online on chronic respiratory diseases?**

A. Sá-Sousa(1), M.G. Couto(1), E. Burnay(1), T. Jacinto(1,2,4), J.A. Fonseca(1,2,3,4)

(1)Cintesis Center for Research in Health Technologies and Information Systems, Porto, Portugal, (2)Biostatistics and Medical Informatics Department, Faculdade de Medicina da Universidade do Porto, Porto, Portugal, (3)Hospital S. João Epe, Allergy and Clinical Immunology Division, Porto, Portugal, (4)Hospital and Institute Cuf, Allergy Unit, Porto, Portugal

35 • **Treatment of chronic urticaria with omalizumab**

H. Mata Amado Jacinto, F. García González, I. J. Sastre Pérez, R. Pérez Giménez, S. Juste Picón

Complejo Asistencial Universitario de Burgos - Allergy Department, Burgos, Spain

36 • **Sensitization pattern evolution of Madeira Island**

F. Sousa(1), S. Oliveira(1), L. Cardoso(1), C. Freitas(2), M. Rodrigues(3), R. Câmara(1), M. Morais De Almeida(4)

(1) Immunoallergy Unit, Funchal Central Hospital, Madeira, Portugal, (2)Pediatric Department, Funchal Central Hospital, Madeira, Portugal, (3)Statistics and Research Department, Funchal Central Hospital, Madeira, Portugal, (4)Immunoallergy Department, Cuff Descobertas Hospital, Lisbon, Portugal

37 • **Optimize the cost-effectiveness of the laboratorial tests for the sensitization study of allergic patients in Madeira**

F. Sousa(1), L. Cardoso(1), S. Oliveira(1), C. Freitas(2), M. Rodrigues(3), R. Câmara(1)

(1)Immunoallergy Unit, Funchal Central Hospital, Madeira, Portugal, (2)Pediatric Department, Funchal Central Hospital, Madeira, Portugal, (3)Statistics and Research Department, Funchal Central Hospital, Madeira, Portugal

38 • **Epidemiological investigation about allergies and their impact on quality of life and sports performance perceived by professional players**

A. Troilo(1), A. Ferraro(1), F. Fassio(1), I. Scacciati(2), P. Manetti(2), O. Rossi(1), E. Maggi(1), G. Galanti(2)

(1)School of Allergy and Clinical Immunology, Department of Biomedicine, AOU Careggi, University of Florence, Florence, Italy, (2)Sports Medicine, AOU Careggi, University of Florence, Florence, Italy

39 • **Nei pazienti con rinite allergica la terapia topica steroidea modificala flogosi producendo una riduzione significativa delle IGE e della triptase nasali**

E. Panfili, G.M. Campus, A. Latini, F. Marcucci, L.G. Sensi

(1)Servizio di Immuno-Allergologia Pediatrica, Dipartimento di Specialità Mediche-Chirurgiche e Sanità Pubblica, Università Perugia, Italy

40 • **L'immunoterapia sublinguale più che con un meccanismo di immunosoppressione sembra agire con un meccanismo di immunodeviazione**

A. Latini, G.M. Campus, E. Panfili, F. Marcucci, L.G. Sensi

Servizio di Immuno-Allergologia Pediatrica, Dipartimento di Specialità Mediche-Chirurgiche e Sanità Pubblica, Università Perugia, Perugia, Italy

41 • **Allergenic cross-reactivity between pellitory and mulberry: case report**

L. Losappio, F. Contento, A. Falco, C.D. Cannito

Emergency Department - 'Dimiccoli' Hospital, Barletta, Italy

42 • **A "modified" protocol for autologous serum skin test: in vivo and in vitro studies in a cohort of 47 patients with chronic urticaria**

A. Ferraro (1), E. Allegro (1), F. Fassio (1), O. Rossi (2), A. Matucci (2), A. Vultaggio (2), F. Almerigogna (2), E. Maggi (1)

(1) University of Florence, Dept. of Biomedicine, Immunology and Cell Therapies Unit, Florence, Italy, (2) University of Florence, Dept. of Biomedicine, Immunoallergology Unit, Florence, Italy

43 • ***Celiac desease in juvenile dermatomyositis: is possible?***

A. Marseglia (1), M. Pellegrino (1), M. Pastore (1), L. Losappio (2), M. Sacco (1)

(1) U.O.C. di Pediatria, IRCCS "Casa Sollievo della Sofferenza", San Giovanni Rotondo (FG), Italy, (2)P.O. "Dimiccoli", Barletta (BT), Italy

44 • ***Epidemiological data on anaphylaxis from the registry of severe allergic reactions of Piemonte region (Italy)***

A. Raie (1), S. Mietta (1), F. Nebiolo (1), G. Cadario (2), M. Galimberti (3), E. Heffler (4), G. Rolla (1)

(1)University of Torino, Ospedale Mauriziano Umberto I, Allergy and Clinical Immunology, Turin, Italy, (2) Molinette Hospital, Allergy and Clinical Immunology, Center for Severe Allergic Reactions of Piemonte Region,, Turin, Italy, (3) Ospedale Maggiore e della Carità, Allergy and Clinical Immunology, Novara, Italy, (4)University of Torino, Allergy and Clinical Immunology, Torino, Italy

poster sessions

ABSTRACTS

oral presentations 1

>>> FROM 1 TO 9

31st March, 2011

13:30 - 15:00 AUDITORIUM **Oral Presentations 1**

ANAPHYLAXIS, ASTHMA, DRUG ALLERGY

CHAIRS *Eustachio Nettis (Italy), João Fonseca (Portugal), Tomás Chivato Perez (Spain)*

1• *Learning with 'Guia de actuación en anafilaxia' (Galaxia)*

***A. Montoro De Francisco**, T. Chivato, B. Mateos, D. Garcia, A. Burgos, M. Fernandez*

Hospital Central de la Defensa - Servicio de Alergia, Madrid, Spain

INTRODUCTION Since GALAXIA was published by four scientific societies (SEAIC, SEICAP, SEMES and SEUP) in 2009, we have a tool to transmit our experience in such a relevant subject in Allergy as anaphylaxis. In order to provide an insight into its contents to the professionals in Allergy, we designed a course with theory, practises and pre- and post-course tests.

METHODS Course: four hours including theory (causes, clinic aspects, diagnosis and treatment included in GALAXIA) and workshops about cases and drugs management. Each attendee was provided with the guide and an adrenaline (epinephrine) trainer.

Participants: 30 first and second year residents in 14 specialities, performing emergency duty in the Emergency Service of Hospital Central de la Defensa, average age 29.4, with between 1 and 10 years experience in emergency in hospitals.

TESTS The previous knowledge test (included in the guide) to evaluate anaphylaxis management, that was repeated after the course; practical test of drugs management and satisfaction survey.

RESULTS Previous knowledge: average score 5.94 over 10. The questions about anaphylaxis definition and referring to an allergist were correctly answered by 95% of attendees. The questions about triptase and adrenalin way of administration were correctly answered in 9.5% and 23%. 38% did not know adrenaline auto-injectors, 85% did not know how to use them. After the course, the average score was 9.64 (a 62% improvement with respect to the initial score).

Satisfaction average: 9.31 (8-10).

CONCLUSIONS GALAXIA is an accessible, simple and efficient tool that improves the knowledge of the professionals seeing emergencies, where anaphylaxis episodes are mainly attended. Initiatives like this course help to assess knowledge and are favourably received by the attendees.

2• *Omalizumab therapy in severe allergic asthma under 12-years-old: real-life clinical case practice*

***H. Pite**, A. Gaspar, M. Paiva, P. Leiria-Pinto*

Immunoallergy Department, Dona Estefânia Hospital, Centro Hospitalar de Lisboa Central, Lisbon, Portugal

BACKGROUND Asthma is the most common chronic disease in children, associated with considerable morbidity, particularly if severe. The antibody omalizumab is a therapeutic option in severe allergic asthma. It has been recently approved to be used in children aged 6 to 11-years-old. Our aim was to report and evaluate the efficacy and safety of omalizumab therapy in our first treated patient under the age of 12.

CASE REPORT A 7-year-old boy, with severe persistent uncontrolled allergic asthma despite optimal therapy, including daily inhaled long-acting bronchodilators and high-dose corticosteroids, has been additionally treated with omalizumab for 32 weeks. Since early beginning of omalizumab treatment, significant improvement in asthma control has been registered, especially evident in daily symptoms, severity and frequency of exacerbations. Lung function has inconsistently improved over time. Reduction of inhaled corticosteroid dose hasn't been possible yet as two respiratory tract infections have recently occurred, with associated worsen asthma control. However, the general need for daily short acting bronchodilators and systemic corticosteroids has been clearly reduced as well as the number of unscheduled physician visits. No hospitalizations took place since the beginning of omalizumab treatment. Other adverse events haven't been registered, except for pain at the injection sites, during omalizumab administration. Both child and parents subjectively evaluated the treatment favourably, highlighting mostly his quality of life significant improvement.

DISCUSSION All the criteria for omalizumab treatment were met in this case report. The continuous evaluation of efficacy and safety has supported treatment maintenance as asthma symptoms and exacerbation rate have declined. Similarly to published data, lung function has shown no constant significant differences. Inhaled corticosteroid dose hasn't been reduced, as opposed to some previous study results, as we expected to achieve better consistent asthma control with continued treatment at the end of the winter season. Pain due to drug injection may jeopardize treatment tolerability, especially in younger children.

CONCLUSION The overall efficacy and safety analysis of this treatment in our patient has been positive, suggesting that omalizumab may be an important additional therapeutic option in severe allergic asthma patients in this age group, in real-life practice, following international guidelines.

3• *Dental caries in the primary dentition of Mexican children relationship with asthma*

***V. Francisco**, E.M. Vázquez R., Ma. Del C Barrientos G., José A. Cordova F., D. Lin O., F.J. Beltran G., C.F. Vázquez R.*

Autonomous University Of Tamaulipas Madero Mexico

RATIONALE Asthma has been associated with a great number of negative health outcomes. The aim was to study the association between asthma and dental caries in the primary dentition.

METHODS Data were obtained on a cohort of 1,160 Mexican children aged 4–5 years. We used the questionnaire of the International Study of Asthma and Allergic Diseases in Childhood (ISAAC). Classification of asthma was based on parents' reports. The caries index

was measured as the number of decayed (d), missing (m), and filled (f), teeth (t) (dmft) or surfaces (dmfs). Decayed teeth included initial caries in this study. Adjusted Odds ratios (adjusted ORs) were determined for asthma using logistic regression model. Gender, sugary products consumption, and oral hygiene habits were utilized as covariates.

RESULTS Dental caries prevalence was 17.9%. Approximately 226 (19.6%) children were identified with asthma. Among the children with asthma, 166 (73.4%) suffered from asthma symptoms only during the day and 60 (26.6%), suffered asthma symptoms during the day and night. Prevalence of caries in children with asthma was 19.9%. Percentage of caries was higher among children who suffered nocturnal asthma symptoms than those who suffered asthma symptoms only during the day. Logistic regression model showed that asthma (adjusted OR=1.24; 95% Confidence interval [95% CI]=0.84–1.81), was not associated with caries. We found a significant association between nocturnal asthma symptoms (adjusted OR=1.85; 95% CI=1.00–3.44) and dental caries.

CONCLUSION Asthma was not associated with caries. Nocturnal asthma symptoms appear to be associated with caries in the primary dentition.

4• *Role of haptoglobin and its polymorphism in bronchial asthma*

***M. Cortez** (1), J. Ferreira (2), M. Pereira-Barbosa(1), M. Bicho(2), C. Marinho(2)*

(1)Allergy Department-Hospital Santa Maria – Chln, Lisbon, Portugal, (2)Genetic Department- Lisbon Medical School, Lisbon, Portugal

BACKGROUND Haptoglobin (Hp), an alpha 2-sialoglycoprotein known to bind free hemoglobin (Hb), has been implicated in the modulation of Th1/Th2 response. The Hp locus is located at 16q22 chromosome, being in humans polymorphic for the alpha chain, that leads to 3 genotype variants, Hp1-1, Hp2-1, Hp2-2.

METHOD 116 asthmatic patients were compared with a control group (n=50) in order to:1) Evaluate different Hp genotype and allelic frequencies between the 2 groups; 2)Correlate the Hp genotype with serum Hp levels (intermediate phenotype/ endotype);3)Correlate Hp genotype and phenotype with asthma susceptibility/ severity. Hp levels assayed by nephelometry and genotypes by PAGE. Statistical analysis was performed with PASW 18, establishing a significance level of $p< 0.05$.

RESULTS Hp Allelic and genotype frequencies were not significantly different between groups. In asthma, differences were observed in Hp levels at the age-groups:< 29 years presented lower Hp levels compared with older than 30 years ($p< 0.05$). Additionally, Hp 2-2 asthmatics have lower levels of Hp when compared to Hp 2-1 and 1-1($p< 0.05$). Different genotype distribution of Hp levels was only observed in the group older than15 years ($p< 0.05$). Hp 1-1 asthmatic patients presented an increased risk of 4.7 to be uncontrolled when compared to Hp2-2 patients (OR: 4.7; IC95% [1.012-21.891]). No differences in Hp levels between asthma and control group (137.83±51.4 mg/dL vs 123.92±51.36mg/dL), however Hp 1-1 and 2-2 individuals presented statistical differences between groups, being the asthmatic patients those with lower levels of circulating Hp ($p< 0.05$). In the control group, no differences were observed in Hp levels by genotype or age group ($p> 0.05$).

CONCLUSION Despite not having observed a prevalence of the Hp allele 1 in asthma, that has been extensively associated with a Th2 profile, the data point to differences among groups that could be related to Hp polymorphism, contributing for a different polarization of the innate and adaptive immune system.

5• *Aspirin desensitization in cardiovascular diseases – Portuguese experience*

J. Caiado(1), E. Pedro(1), P. Canas Da Silva(2), M. Barbosa(1)

(1)Immunoallergology Department, Centro Hospitalar Lisboa Norte/Hospital Santa Maria, Lisboa, Portugal, (2)Cardiology Department, Centro Hospitalar Lisboa Norte/Hospital Santa Maria, Lisboa, Portugal

BACKROUND Several studies have demonstrated reduction in adverse cardiovascular events with the administration of dual antiplatelet therapy with aspirin and clopidogrel to patients (pts) with heart coronary disease, especially in the prevention of thrombosis after implantation of bare-metal and drug-eluting coronary stents. However, when pts have aspirin hypersensitivity (AH) this treatment is limited, and pts are maintained on monotherapy with clopidogrel. Aspirin desensitization (AD) might be an option for these pts. AIM: To describe the experience of a Portuguese Allergy Department in AD on cardiovascular pts, between April 2006 and July 2010.

METHODS Twelve pts with previous history of AH who needed dual antiplatelet therapy due to cardiovascular disease (female-5;male-7), mean age 59 years-old, were desensitized to aspirin. The clinical presentation of AH was asthma (3pts), anaphylaxis (3pts) and urticaria/angioedema (6pts), in some cases (5) with very remote reactions (>10 years ago). In 9 pts, AD was performed immediately after percutaneous coronary intervention (PCI): four pts had primary PCI due to acute myocardial infarction and 5 pts had scheduled PCI (previous acute coronary syndrome). Three pts were on clopidogrel only: two with chronic stable angina and one with patent foramen ovale. AD were performed in Cardiology Department; doses were increased every 30-60 minutes (target dose:162.5mg) under a 4.5-hour protocol. None received pre-treatment with antihistamines or corticosteroids.

RESULTS There were no reactions during AD. All pts were monitored after AD (>6months), and are still on daily aspirin 100mg (there were neither hypersensitivity reactions nor drop-outs).

DISCUSSION Despite positive clinical history of AH, some pts had a remote reaction, and due to the emergency of the procedure we were not able to confirm their AH. This fact could in part explain the absence of reactions during AD; another reason could be the smaller dose of aspirin used as antiplatelet (100-150mg) compared with the dose to which pts previously reacted (>500mg). Some authors advocate that AD should be performed before PCI, but PCI could provide greater hemodynamic stability and therefore allow a safer AD. Based on our experience, AD was shown to be safe and efficacious, even when performed after PCI, with all pts responding to the desensitization procedure.

6• *Analysis of 5-year hospital admissions due to angiotensin converting enzyme inhibitors-induced angioedema*

***L. Viegas**, J. Soares, S. Luz, S. Silva, A. Santos, A. Lopes, M. Ferreira, M. Barbosa*

Hospital Santa Maria – Chln, Lisboa, Portugal

BACKGROUND Angiotensin-converting enzyme inhibitors (ACE-I) frequently induce angioedema (AE) with an estimated frequency of 0.1 to 0.7%. Among other effects, ACE-I inhibit bradykinin degradation, leading to enhanced bradykinin plasma levels and angioedema.
AIM To describe the clinical characteristics of AE putatively associated with ACE-I treatment in hospitalized patients in our Allergology Department.
METHODS Retrospective review of medical records of hospitalized patients admitted in a Universitary Hospital's Allergology Department between January 2005 and December 2010, AE during treatment with ACE-I. Demographic and clinical data were analyzed.
RESULTS Sixteen patients were evaluated (10 F/6 M; mean age 63.1±11.9 years; median 62.5). The majority was caucasian (13, 81.2%), and the other 3 patients were Africans. The most frequent co-morbidities were hypertension (15, 93.7%), isquemic stroke (5, 31.2%) and Diabetes mellitus (4, 25%). Lisinopril (6) and enalapril (5) were the drugs most frequently incriminated. The majority of patients developed symptoms within the first year of treatment (minimum 1 week, maximum 10 years), although 40% reported AE episodes previous to ACE-I. All patients experienced AE involving the face: lips (9), tongue (8); one patient presented with. (laryngeal edema. In addition to facial edema, one patient also experienced edema of both hands. None of the patients presented with concomitant urticaria. Treatment strategies included glucocorticoids, H1 and H2 antihistamines and antifibrinolytics; All patients discontinued treatment with ACE-I as soon as they were hospitalized. Most patients were discharged after 3 days (mean duration of hospital stay 3,5±2 days; median 3), and 75% were sent to an Allergology appointment.
CONCLUSION ACE-I are often responsible for angioedema, especially involving the face and upper airways. Given the widespread exposure to ACE-I worldwide, it is important that physicians consider these drugs as possible AE inducers when evaluating patients with acute or recurrent AE, independently of time elapsed since beginning of treatment with ACE-I.

7• *Delayed cutaneous hypersensitivity vasculitis to iodinated contrast media*

***L. Viegas**(1), A. Sá(2), M. Gomes(2), M. Ferreira(1), M. Pedro(1), M. Barbosa(1)*
(1)Immunoallergology Department, Hospital Santa Maria – Chln, Lisboa, Portugal, (2)Department of Medicine 1, Hospital Santa Maria – Chln, Lisboa, Portugal
INTRODUCTION Iodinated contrast media (ICM) have been associated to severe reactions, thus representing a serious health problem. Delayed allergic reactions to ICM occur in approximately 0.5-2% of patients, between 1 hour and 7 days after injection of ICM even with non-ionic dimmers, such as iodixanol.
CASE REPORT A 77-year old man with history of rhinitis, arterial hypertension controlled with propanolol and currently being studied for an hepatic nodule, developed a vasculitic cutaneous reaction affecting both feet 8 hours after an abdominal CT scan using iodixanol, which later progressed to both hands. The patient also reported anorexia and asthenia. 48 hours later he was admitted to a medical ward and treated with methylprednisolone 1g/daily for 3 days, followed by prednisolone 1 mg/Kg daily tapered over a 38-day period. Sometime during this period the patient abruptly discontinued prednisolone and presented neuropsychological changes which were interpreted as psychotic symptoms induced by corticotherapy. A skin biopsy before steroids was performed showing toxidermia. The allergologic study was performed 8 weeks after, with patch tests with the standard contrast media battery as defined by the Portuguese Contact Dermatitis Study Group and undiluted radiologic contrasts iodixanol and ioversol. They were positive at 96 hours to iodixanol, ioversol, iodopovidone and balsam of Peru.
DISCUSSION In this case report some common risk factors to contrast reactions are present, such as age over 60 and □-blocker therapy. Skin reactions account for the majority of delayed reactions, but more than 50% are maculopapular rashes, and other frequent cutaneous reactions are angioedema, urticaria and erythema, vasculitis being less frequent and more serious. This case illustrates the importance of awareness to delayed reactions induced by ICM, especially if the patient needs to undergo repeated exams with contrast media. It also illustrates the importance of the allergologic study to identify the culprit, as well as the tolerated agents for future use.

8• *Hypersensitivity to non B-Lactam Antibiotics – 6 years of experience*

***F. Ribeiro**, E. Faria, E. Almeida, D. Machado, I. Carrapatoso, A. Segorbe Luís*
Coimbra University Hospital, Coimbra, Portugal
BACKGROUND Hypersensitivity reactions to macrolide and quinolone antibiotics are rare (less than 3%), and only a few series of allergic reaction to these drugs have been published. This study aims to characterize patients with suspected hypersensitivity reactions to non ß-lactam antibiotics (NBL-AB) followed in a Drug Allergy Consultation of a 6 year period (January 2005 to December 2010).
METHOD We evaluated clinical files retrospectively of patients with suspected hypersensitivity to NBL-AB, regarding drug involved, reason of administration, symptoms, reaction type and need of relief medication. Skin tests (prick and intradermal) and oral challenge test (OCT) were performed, according to ENDA guidelines, in order to establish the diagnosis.
RESULTS Twenty-three patients, corresponding to 29 episodes, were investigated. Mean age was 49.4±14 years, and 18 out of 23 patients were female. The drugs involved were macrolides (13), quinolones (12) and co-trimoxazole (4). The reasons why these antibiotics were taken were respiratory infection (6), urinary tract infection (4), surgical prophylaxis (3), tonsillitis (2), sinusitis (1), otitis (1) and unknown in 12 cases. Clinically, patients presented urticaria and/or angioedema (16), dyspnea (4), anaphylaxis (2), other symptoms (5) and unknown (2). The reaction was immediate in 4 episodes, non-immediate in 12 and poorly characterized in 13 episodes. In 14 episodes patients needed relief medication while in 6 episodes there was spontaneous resolution of the symptoms. All patients were submitted to skin testing and in 11 patients 17 tests were positive: 9 to macrolides, 6 to quinolones and 2 to co-trimoxazole. Seven patients were submitted to OCT and 2 out of the 8 tests performed were positive: 1 to ciprofloxacin and 1 to co-trimoxazole.
CONCLUSION Macrolides antibiotics were the drugs most frequently involved in our study followed by quinolones. Twenty one percent of patients had severe allergic reactions. The OCT allowed us to exclude hypersensitivity reaction in 21.7% patients and we managed to confirm this hypersensitivity in 56.5% patients.

9 • ***Plantago L. Pollen: airborne and immunological profiles***

R. Teixeira De Sousa(1), *A. Cruz(2), H. Ribeiro(1), I. Abreu(1,3)*

(1)Grupo de Ambiente e Sociedade do Centro de Geologia da Universidade do Porto, Porto, Portugal, (2)Serviço de Patologia Clínica, Laboratório de Imunologia do Centro Hospitalar, Vila Nova de Gaia Portugal, (3)Departmento de Biologia da Faculdade de Ciências da Universidade do Porto, Porto, Portugal

Plantago lanceolata L. forms a rosette of basal leaves and flowers on a dense, terminal spike. Native from Europe and Asia, grows practically anywhere in the world nowadays. Plantain has been cited as a respiratory allergenic pollen producer (9.8% allergy prevalence [1]) and its sensitization is highly concomitant with other pollen types. Three allergens of 17, 19 and 40 kDa have already been described [2]. The aim of this study was to characterize the aerobiology of plantain pollen, to identify its different allergens and ascertain its cross-reactivity with other weed and grass pollen. Airborne pollen was sampled from 2004-2010 using a 7-day Hirst-type volumetric trap. The antigenic and allergenic properties of plantain pollen were assayed by SDS-PAGE and immunological techniques using polysensitized-patient sera to plantain, pellitory and grass mixture pollen. Plantain pollen is present in the atmosphere of Porto in mid-May to early-June representing about 4% of the annual pollen spectrum. We observed a high reactivity in all tested sera. Similar bands to the already characterized plantain allergens of 17, 19 and 40 kDa were also observed. Moreover, all tested sera presented two IgE-reactive bands of 50 and 30-35 kDa, and another of 14 kDa in some patient sera, which do not correspond to plantain allergens already characterized. Components with similar molecular weight have been referred as cross-reactive proteins common to several allergenic pollen producer species. In this study, it was verified that the pollen of plantain is an important allergen in Porto and the existence of cross-reactive antigens with other taxonomically related and nonrelated pollens.

oral presentations 2

>>> FROM 1 TO 9

2nd April, 2011

13:30 - 15:00 AUDITORIUM **Oral Presentations 2**

FOOD ALLERGY, IMMUNOTHERAPY, SKIN ALLERGY

CHAIRS *Oliviero Rossi (Italy), Manuel Branco Ferreira (Portugal), Ignacio Javier Ansotegui Zubeldia (Spain)*

1 • ***Purified natural and recombinant molecular allergens in kiwi fruit allergy***

H. Pite(1)*, M. Gavrovic-Jankulovic(2), M. Popovic(2), M. Grozdanovic(2), A. Gaspar(1), G. Pires(1), P. Martins(1), V. Matos(3), V. Loureiro(3), P. Leiria-Pinto(1)*

(1)Immunoallergy Department, Dona Estefânia Hospital, Centro Hospitalar de Lisboa Central, Lisbon, Portugal, (2)Biochemistry Department, Faculty of Chemistry, University of Belgrade Belgrade, Serbia, (3)Clinical Pathology Department, Dona Estefânia Hospital, Centro Hospitalar de Lisboa Central, Lisbon, Portugal

BACKGROUND Kiwi is a common cause of fruit allergy. Its relevant allergens are unknown in our population. This study's purpose was to evaluate the use of individual allergens for component-resolved diagnosis and clinical approach in kiwi allergy.

METHOD Patients with IgE-mediated kiwi allergy were recruited from a Portuguese Immunoallergy Department and characterized by clinical history data. Skin prick tests (SPT) with commercial extracts (CE) were performed to kiwi (and prick-prick SPT if the aforementioned test was negative), pollens, latex and also with prepared natural or recombinant allergens actinidin (Act d 1), thaumatin-like protein (Act d 2), cystatin (Act d 4) and kiwellin (Act d 5). Specific IgE (sIgE) to kiwi CE was determined. The same SPT were performed in subjects with regular asymptomatic kiwi ingestion. Mann-Whitney and Fisher Exact tests were applied for the statistical analysis.

RESULTS Twenty-two children and eleven adults were included: 61% had positive SPT to actinidin as well as to thaumatin-like protein, 24% to cystatin and 3% to kiwellin. The frequency of positive SPT to thaumatin-like protein and/or cystatin was 73%, which was the same obtained with sIgE determination and superior to the one obtained with kiwi CE SPT (64%). No significant association between SPT reactivity to actinidin and kiwi monosensitization was observed. Latex-sensitized patients reacted more frequently to cystatin (67% vs 15%, p=0.020). The frequency of positive SPT to cystatin combined with actinidin or with thaumatin-like protein was significantly higher in those patients with more severe symptoms (89% vs 47%, p=0.020 and 94% vs 47%, p=0.004; respectively). This difference wasn't seen regarding kiwi CE SPT or sIgE results. Significant stati-

stical differences in wheal mean diameters to actinidin (p=0.025) and thaumatin-like protein (p=0.035) were found between patients with and without severe symptoms. SPT to kiwi allergens were negative in all controls.
CONCLUSION Actinidin and thaumatin-like protein were the major allergens in the studied population. A panel of two allergens used for SPT, thaumatin-like protein and cystatin, resulted in higher diagnostic sensitivity when compared to CE. It was also useful to differentiate patients' reaction severity and latex sensitization. This allergen-based characterization may contribute to improve patients' clinical approach.

2• *Cow's milk allergy – dose-dependent after all*

***J. Antunes**, M. Chambel, H. Pité, S. Rosa, P. Leiria-Pinto*
Immunoallergy Department - Hospital Dona Estefânia Lisboa Portugal

BACKGROUND Cow's milk protein (CMP) allergy is the most common food allergy in children, and oral tolerance is expected in 20-75% of patients by the age of 3. The management strategies are still controversial. Elimination diet represents the mainstay of treatment but oral desensitization (OD) strategies can also be adopted with success.
CASE REPORT The authors present the case of a 15-months-old girl, exclusively breastfed until 3-months-old. On the 1st week under CMP formula, the patient developed generalized urticaria and bilateral feet and hand angioedema 1 hour after milk ingestion. She was successfully treated at an emergency department. In our outpatient clinic skin pick tests (SPT) were positive to alpha-lactoalbumin (AL), beta-lactoglobulin (BL) and whole milk and negative for casein, enn's egg, soy and common aeroallergens. Specific IgE (sIgE) determination (Immulite®) yielded 0.4KUA/L (AL), 12.40KUA/L (BL), 9.67KUA/L (casein), 2.5KUA/L (whole milk) and total IgE 161KUI/L. Milk eviction diet and extensively hydrolysed formula were advised.
Several episodes of urticaria/angioedema occurred on the following 3 months, possibly due to accidental exposures. Symptoms were mild and resolved with anti-histamines. With 12 months-old, an accidental ingestion of CMP (trace amount of yogurt) was mentioned at kindergarten with no adverse reactions. At this time, sIgE results (ImmunoCap®) were: AL 0.12KUA/L; BL 0.09KUA/L; casein 0.39KUA/L; whole milk 0.48KUA/L. An oral food challenge was then performed and a final cumulative dose of 125g (one yogurt) was achieved with no adverse reactions. A daily maintenance dose (DMD) of 125g was tolerated for one week but two episodes of urticaria/angioedema were elicited when higher non-fractioned doses were given, one week apart. At this time, milk intake was suspended. Five days later we started on an OD program. Progressive increases in CMP were carried out in 5 weeks and a total dose of 250g was achieved with success. At present, a DMD of 375g (3 daily portions) is tolerated.
DISCUSSION Immunologic tolerance is a dose dependent phenomenon and increasing doses can be achieved with success. Motivated caregivers play a crucial role. Eventual drawbacks can occur but persistence is essential not to loose the opportunity in the face of eventual adverse reactions.

3• *Innovation in specific oral tolerance induction in severe cow's milk allergy*

***G. Sampaio**, S. Piedade, C. Santa-Marta, A. Gaspar, M. Morais-Almeida*
Immunoallergy Department - Cuf Descobertas Hospital Lisboa Portugal

BACKGROUND Cow's milk allergy (CMA) affects up to 5% of children in early childhood and around 20% of them keep their allergy during the second decade of life. CMA prognosis is less favourable for severe and persistent cases; for those patients it is important to have alternative therapies.
OBJECTIVE Evaluate the efficacy and safety of a cow's milk (CM) specific oral tolerance induction mixed (sublingual-oral) protocol in children with severe persistent IgE-mediated CMA.
METHODS From May2009-May2010, 10 children with severe IgE-mediated CMA were included. All had persistent CMA, since their first year of life, previous history of anaphylaxis and allergic reactions to CM in the past year, the most severe after unintended ingestion of the allergen. The oral tolerance induction protocol, using non-diluted fresh pasteurized CM as allergen extract, began with sub-lingual doses followed by oral ingestion of increasing doses of CM to a 200mL/day target dose. Doses were always increased in the hospital under medical surveillance. The procedure was explained to the children and their family. Informed consent was obtained at the beginning and at all treatment sessions and telephonic contact of the medical staff was available 24hours/day.
RESULTS Mean age of 10.9±4.8 years; M/F ratio 1:1; 100% had personal history of allergic respiratory disease and sensitisation to common aeroallergens; 40% had other food allergies. The maintenance dose of 200mL/day was achieved in all patients, on a variable interval, being the average of 12 weeks and 4 hospital visits. During the induction phase, 8 children had mild to moderate allergic reactions successfully treated with oral anti-histamines and/or steroids, one 16 year-old boy had a CM dependent exercise-induced anaphylaxis episode and one 15 year-old girl had an anaphylaxis episode after accidental ingestion of hidden allergen, which was treated with self-injectable epinephrine device. When indicated the dose was adjusted.
CONCLUSION CM specific oral tolerance induction is a real therapeutic alternative option in persistent and severe IgE-mediated CMA, irrespective of the degree of sensitization. The used protocol was effective, practical and safe. All patients achieved a dose that allows a cow's milk free diet, with striking improvement in quality of life of children and their family.

4• *Severe latex-fruit syndrome in children*

***C. Ribeiro**(1), A. M. Romeira(2), P. Leiria Pinto(2)*
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BACKGROUND Latex-fruit syndrome is unusual in children and when it happens it is not a cause of severe reactions.
CASE-REPORT Female, 7 years, with multiple congenital arthrogryposis, was submitted to two orthopaedic surgeries at an early age. At 30 months, after contact with balloons, she developed rash and conjunctival hyperaemia associated with labial and periorbitary oedema, and required emergency treatment. She had several other similar episodes and allergy to latex was suspected. Total eviction was initiated. At the age of 4, during planned surgery in a latex-free environment, a severe anaphylactic reaction occurred 10 minutes after anaesthetic induction with alphentanil, midazolam, propofol, servoflurane and one dose of cefazoline and paracetamol, which required hospitalization in the Intensive-Care Unit. She was then referred to our Immunoallergy Department, where determination of specific IgE (sIgE) for penicillin G,V and amoxicillin and skin prick tests (SPT) and intradermal tests to betalactam antibiotics (including cefazoline) and propofol were performed. All the results were negative. Paracetamol had been used before

the reaction and, since then, alfentanil, midazolam, cefradine, amoxicillin and clavulanic acid were used without intercurrences. SPT with latex and fruits like chestnut, kiwi, passion fruit, grape and banana were positive; aeroallergens were negative. sIgE determination were positive to latex (71.1 KU/L) and kiwi (0.57 KU/L), and negative to chestnut, passion fruit, grape and banana. The child underwent surgery 8 months later with no events. Incidental contacts with latex occurred, with mild to moderately severe reactions. At 4 years, she developed rash and wheezing after hand contact with peach skin. At 5 years, 10 minutes after drinking orange and passion fruit juice, an episode of coughing, wheezing, generalized rash and urticaria occurred, which demanded emergency treatment. She has a self-delivery adrenaline kit.

CONCLUSION This case is an ununsual presentation of latex-fruit syndrome in children because it occurs with severe reactions. The route of sensitization was probably the contact during surgery in the early years of life. In these cases, latex-fruit reactivity is more uncommon. It will be important to characterize the allergen profile sensitization in this child in order to plan future interventions, such as specific immunotherapy.

5• *Low dose oral administration of cytokines a new hope in the treatment of allergic asthma*

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Low dose oral administration of cytokines a new hope in the treatment of allergic asthma. Comments over of study in vitro, in a murine model Comments over an original study published in Pulmonary Pharmacology & Therapeutics which could sugerate a new intriguing way of treating allergic asthma.

OBJECTIVE This study aims to determine, in a murine model of allergic asthma, the possible therapeutic activity of low dose cytokines solutions, mechanically activated.

METHODES • Preparation of cytokines solutions • Experimental asthma model induction • Animals treatment with cytokines solutions • Broncho-alveolar lavage • Hematoxylin–eosin staining • Masson-trichrome staining • ELISA • In vitro treatment of splenocytes • In vitro treatment of CD11c+ dendritic cells • Statistical analysis

RESULTS • Oral administration of a pharmacological dose of il-12 is efficacious in an experimental murine model of asthma • Oral administration of low doses of activated il-12 (il 12, ch 4) maintains efficacy in an experimental murine model of asthma • Oral association of activated il-12 (il12 ch 4) and IFN gamma (ch 4ch) is still efficacious at dosage of 1 fg/die/mouse • Further experiments on the effects of the 1 fg/die/mouse dosage of activated il-12 (ch 4) and IFN-G (ch 4) solution •In vitro treatment of splenocytes with low doses of activated il-12 (ch 4) and IFN-G (ch 4) induces high il-12 and IFN-G Secretion

CONCLUSIONS It was found that oral administration of low doses IL-12 (CH 4) plus IFN-g (CH 4) is able to solve the bronchial hyper responsiveness condition of mice, establishing normal cytokine levels. The antiasthma activity was confirmed by histological analysis of lungs and broncho-alveolar lavage fluid cell count. Serum ovalbumin-specific IgE was also significantly inhibited by treatment with low dose activated cytokines solution. These findings may suggest a novel approach to diseases which involve a Th1/Th2 imbalance.

6• *Advantages and disavantages of subcutaneous immunotherapy*

L. Viegas, *M. Ferreira, M. Santos, M. Barbosa*

Hsm - Chln - Immunoallergology Department, Lisboa, Portugal

GOAL Evaluation of the advantages and disadvantages of subcutaneous immunotherapy (SCIT), as perceptioned by patients.

METHODS A self-administered questionnaire was applied to 204 patients receiving a SCIT injection in our Hospital in May 2010. SPSS software was used for the statistical analysis.

RESULTS 50% of patients mentioned more advantages than disadvantages, 35% mentioned the same number and only 15% reported a higher number of disadvantages, specified in the table below. Those patients under SCIT for less than 3 years, those with non-local adverse reactions and those who mentioned painful SCIT injections reported a greater % of disadvantages. There aren't significant differences in the perception of advantages/disadvantages between different extracts and between patients with more or less frequent reactions. The patients who describe more disadvantages of SCIT also state that they would prefer the sublingual route. Among the disadvantages, the direct and indirect costs dominate.

ADVANTAGES	%
Improvement of allergies	34,3
Monthly administration	16,2
Easier to remember	11,8
Faster onset of action	10,8
Improvement in quality of life	10,3
Less drugs	8,8
Improvement of the immune system	6,9
Less asthma crisis	4,9
Hospital admission / medical treatment readily available	4,4
Less symptoms	3,9
Greater efficacy	2,9
Convenient	2
Preventive action	2
Other[1]	10,3

DISADVANTAGES	%
Monthly visit to the hospital	36,3
High cost	18,1
Secondary effects	9,3
Waiting 30 minutes after the vaccine	5,4
Missing work and school days	4,9
Long duration of treatment	4,9
Waiting time in the hospital	2
Other[2]	12,8

[1] *Less costly, possibility to reschedule, safe, decrease in the disease progression, gastric tolerance, lasting effect.*

[2] *Stinging/pain, needs refrigeration, monthly administration, disappointment if failure, need to memorize*

7• *Icatibant in emergency department, one year experience*

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FUNDAMENT Icatibant is a selective bradykinin beta-2 receptor antagonist, which has been available for treatment of severe acute hereditary angioedema (HAE) attack in Portugal since November 2009.

GOAL Describe our department's experience with icatibant's use for HAE attacks during a period of one year.

METHODS Retrospective study of the patients' files to whom icatibant has been administered for acute treatment of HAE attacks between November 2009 and December 2010.

RESULTS Seven patients (4 men; average age of 31,1) were treated with icatibant in the emergency room (ER). Six patients had HAE type II, and one type I. They were admitted in the ER with faringo-laringeal (3), abdominal (2) and serious mucocutaneous facial attacks (2), which had started for most of them 10 hours before. Concer-

ning their past medical history, one of the patients with faringo-laringeal attacks had had 2 asphyxia episodes, with need of orotraqueal intubation and traqueostomy. All patients reported relief in the first 90 minutes after subcutaneous administration of 30mg icatibant, reporting solely, as an adverse effect a mild local sensation of pain/burn in the abdominal wall.

CONCLUSION The authors suggest that icatibant use in acute treatment of HAE attacks (three faringo-laringeal, three abdominal and two mucocutaneous facial attacks) is effective and safe. Icatibant was associated with minor local, well tolerated adverse reactions.

8• *Omalizumab effectiveness in severe refractory chronic urticaria*

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BACKGROUND We report on the successful management of eight patients with refractory chronic urticaria using omalizumab.

PATIENTS AND METHOD Seven patients were women. IgE levels ranged from 20 IU/mL to 761 IU/mL. The duration of the severe urticaria ranged from 9 months to 20 years. Patients needed frequent courses of steroids or were steroid-dependent. All patients received high doses of antihistamines. Underlying mechanisms of urticaria in each case were different. Patient 1 was woman with chronic urticaria, food allergy and moderate asthma. Patient 2 was a woman with chronic urticaria, pollen allergy and mild asthma. Patient 3 was woman with chronic urticaria and autoimmune hypothyroidism. Patient 4 was a woman with chronic urticarial vasculitis and very low IgE level. Patient 5 was a woman with chronic urticaria and Anisakis simplex sensitization. Patient 6 was a menopastic woman with chronic urticaria and severe asthma. Patient 7 was a woman with chronic urticaria and positive ANA. Patient 8 was a young man with severe cold urticaria and recalcitrant chronic urticaria.

Omalizumab was administered according levels of IgE and weight in each patient.

RESULTS Omalizumab was administered according levels of IgE and weight. Omalizumab become effective in all patients between 4 and 8 weeks. Steroids could be discontinued in all patients.

CONCLUSION Chronic urticaria involves different mechanisms in addition to FcERI autoantibodies; however, Omalizumab can be useful in different types of refractory chronic urticaria.

A trial with this drug could be a good option to achieve the control of the disease and to rule out the troublesome side effects of corticosteroids and immunosuppressive drugs.

9• *Can primary amyloidosis mimic angioedema?*

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We report a case of an 83 years old white male patient with a history of intermittent tongue swelling for some years, with spontaneous remission. When he was 81 years old, he was treated with an ACE inhibitor, without clinical worsening. At March 2010 he started swelling of the left testicle; he was submitted to an ultrasound that showed a heterogeneous mass with 5 cm and bilateral hydrocele. At August 2010 he started a severe worsening of the tongue swelling, without oedema in other locations, respiratory symptoms, abdominal pain or other cutaneous lesions. He was submitted to corticosteroids and antihistamines without clinical improvement. At our ER he was treated with aminocaproic acid EV and, because there was no clinical response, with icatibant.

There was a slight clinical improvement, but without complete resolution.

Besides the tongue swelling, there were no other changes in the physical examination. The laboratory study showed anaemia, chronic renal failure, IgM kappa and lambda biclonal gammopathy and questionable gamma heavy chains and lambda light chains monoclonal peak, high level of ß2-microglobulin, C1 INH and C1q, and reduced C4. Blood immunophenotyping showed an increased ratio kappa/lambda for B cells. Thyroid function as well tumour markers were normal. Urine analysis showed a doubtful monoclonal peak for kappa and lambda light chains. At this time the diagnosis of acquired angioedema was assumed, probably related to a lymphoproliferative disorder. The patient maintained treatment with corticosteroids and the ACE inhibitor was stopped, yet without clinical response.

Thoraco-abdominal-pelvic CT scan exhibited multiple mediastinal and lumbar-aortic adenopathies. Prostatic ultrasound was normal. Skeletal scintigraphy did not show evidence of secondary bone involvement.

The subsequent bone marrow cell count suggested a probable monoclonal gammopathy of undetermined significance. Tongue biopsy evidenced a primary amyloidosis (systemic).

COMMENT The clinical picture and laboratory evaluation conducted to a first hypothesis of acquired angioedema, related to a lymphoproliferative disease. Given the lack of response to the implemented therapy, it was critical to perform a tongue biopsy that guided to the final diagnosis of primary amyloidosis. This condition is related with macroglossia and renal failure, and rarely can be associated with testicular infiltration.

poster presentations 1

>>> FROM 1 TO 21

1st April, 2011

12:30 - 13:30 POSTER EXHIBITION AREA **Poster Session 1**

ASTHMA, CLINICAL IMMUNOLOGY, DRUG ALLERGY, FOOD ALLERGY

CHAIRS *Angelo Passaleva (Italy), Luís Miguel Borrego (Portugal), Jose Manuel Zubeldia (Spain)*

1• *Acute asthma: the challenge of approach in Emergency Department*

***R. Pitchon**(1), M.T. Mohallem(1), J. Ribeiiro(1), G. Chaves(1), F. Machado(1), J. Ministério(1), T. Teixeira(1)F. Pacheco(1), D. Reis(2)*

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BACKGROUND The objective of the study were to measure the 2009 performance of children's emergency department in the care of children with acute asthma, using a clinical quality indicator.

METHODS Non-controlled evolutionary study of 2123 visits by children and adolescents aged between 0 and 16 years old, between January 2009 and December 2009, with signs of an acute asthma attack. During the implementation of certification in this hospital were performed by the staff of Pediatrics, standard protocols, based on evidence, including the care of acute asthma. We defined a clinical indicator for assessment of care, represented by the return of the patient within 72 hours after the first visit. We considered two age groups: 0-3 years and 3-16 years old. The sample was evaluated by a clinical indicator, sex, oral corticosteroids administration in the emergency room and hospitalization rate.

RESULTS During this period were performed 72 returns (3.39%), after the 2123 visits for acute asthma. Among children aged 0-3 years, 62% were male, 36% used oral corticosteroids in the return and 28% required hospitalization. In the group of children aged 3-16 years, 58% were male, 33% used oral corticosteroids in the return and 11% required hospitalization. Seasonal oscillations occurred in the indicator between 0.5% in February (summer) and 11% in August (winter and the height of the H1N1 virus epidemic in Brazil)

CONCLUSIONS The implementation of quality measures of care enables the staff to prioritize and select the best actions for improvement, to compare data between different institutions and to provide incentives for improving the quality standard. The indicator may have been altered due to the large outbreak of H1N1 virus in our country. The staff in face of the results, planned intervention strategies to improve the indicator like: review protocols and continuing education of staff for knowledge and application of care protocols, in this case with guidance on the use of oral corticosteroids in addition to inhaled beta-2 for all patients in crisis on the first visit. Was instituted a standard discharge prescription in order to guide the patient and his family, especially regarding the use of inhaled corticosteroids for asthma prevention

2• *Paradoxical vocal cord dysfunction in an asthmatic adolescent - Case Report*

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INTRODUCTION Paradoxical vocal cord dysfunction (PVCD) is a disorder of the larynx characterized by abnormal and intermittent adduction of the vocal cords (VC) during the respiratory cycle, leading to variable upper airway obstruction. Common symptoms are dyspnea, wheezing, stridor, cough, hoarseness and chest tightness. It can occur independently or co-exist with asthma, which implies a high index of suspicion for its accurate diagnosis and therapy. Case report: A 16 year-old girl was referred to our Pediatric Allergy Clinic due to uncontrolled asthma. Her medical history included bronchospasm attacks since 5 months old, intermittently controlled with bronchodilators. At 6 she initiated immnunotherapy for dust mites, which she maintained for 3 years. By age 11 she began base therapy with inhaled budesonide, because of recurrent exacerbations, with clinical improvement. At 16 she started frequent cough, chest tightness and dyspnea with multiple admissions to the emergency department (ED). Physical examination revealed scarce wheezing but no hypoxemia, cyanosis or edema. Due to these episodes she was referred to our clinic and admitted for investigation. She underwent spirometry, body plethysmography, thoracic computed tomography, cervical ultrasound and esophageal-gastroduodenal transit, all reported as normal. During hospitalization she presented with the same symptoms and was treated with intravenous and nebulized normal saline with total reversal of the crisis. Five months after admission she presented to ED with severe dyspnea. Videolaryngoscopy was performed revealing laryngeal spasm with incomplete opening of the VC during inspiration and PVCD was diagnosed. Speech therapy and psychotherapy were provided with significant laryngeal spasm crisis reduction. She restarted immunotherapy and maintains pharmacological treatment for acute exacerbations of asthma. Discussion: We present a case of an asthmatic patient with PVCD. The overlapping symptoms between PVCD and asthma can lead to misdiagnosis of refractory asthma and increased morbidity due to unnecessary treatments. Videolaryngoscopy during an episode is the diagnosis goal standard. Treatment of these patients involves a multidisciplinary approach including speech therapy and psychotherapy. The awareness of PVCD as a comorbid condition affecting asthma is important. Future studies are needed to identify its specific pathogenesis and establish guidelines for diagnostic evaluation and treatment.

3• *Occupational asthma and dermatitis due to epoxy resins*

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Epoxy is a copolymer formed from two different chemicals referred as

the epoxy resin (ER) and the hardener. ERs are used in paints, protective coatings, and flooring materials. ERs frequently produce allergic contact dermatitis. Immediate-type hypersensitivity reactions and asthma to ERs are uncommon. We present 2 cases of occupational asthma due to ER.

CASE 1 A 28-year-old male worked laying epoxy-coated floors into the wind turbines in a wind farm. He developed dermatitis on hands, which rapidly spread to whole body and face. He also suffered dyspnoea, wheezing and sneezes. All symptoms disappeared within 3 weeks when he didn't use epoxy-containing products. Case 2. A 38-year-old male painter worker developed mild dermatitis a severe asthma attack two days after beginning a work with an ER containing paint in a small farm. He presented with hypoxemia pO2 53mmHg and needed admission during a week.

ALLERGY STUDY CASE 1 Skin Prick Test ER: (6x6mm); Patch test ER: +++ (48h&96h); Acute spirometry: Not done; 1st Metacholine: PD20 4mg; 2nd Metacholine (2 months): NEGATIVE

ALLERGY STUDY CASE 2 Skin Prick Test ER: (7x4mm); Patch test ER: +++ (48h&96h); Acute spirometry: Severe obstruction; 1st Metacholine: Not done; 2nd Metacholine (2 months): Not done

CONCLUSION ERs can provoke occupational asthma and allergic contact dermatitis in exposed patients.

4• *Advances in pid meeting - extensive longstanding lymphoproliferation – how to manage it?*

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F, 31 years-old, referred from haemato-oncolgy department at 27 for pronounced hypogamaglobulinemia (IgG150mg/dL, IgA <6,13mg/dL, IgM 9mg/dL) detected in context of generalized lymphadenopathy, hepatosplenomegaly and leuco-thrombocytopenia since she was 20. She presented low grade fever during one month, with recurrent coetaneous nodular lesions, at 19 years-old. Extensive diagnostic testing did not find evidence of lymphoma; ganglionar and bone marrow biopsies revealed reactive changes. From 21 years-old she reports 2 uncomplicated upper respiratory infections/year and at 22 a pneumonia. From 25 she started recurrent diarrhoea and, one year later, upper respiratory infections became more frequent, requiring antibiotics monthy. Diagnostic work-up for PID, at 27 years-old, revealed absence of isohemaglutinins and of specific antibodies for tetanus and pneumococcus, with no response to vaccination, compatible with CVIDs. Intravenous immunoglobulin G replacement therapy was started. She presented marked CD4 naïve T cells depletion, CD4 and CD8 activation and CD4/CD8 inverted rate. Proliferative responses were maintained for mitogens and absent for antigens.

EUROclass:B+smB-Trhi21lo. PCR for EBV and CMV were negative in peripheral blood. At 27 years-old, human papiloma virus infection was detected on gynaecologic examinations and was treated. Toraco-abdominal CT scans have repeatedly shown diffuse reticulo-micronodular infiltration in lungs, splenomegaly and mediastinic and abdominal prominent adenopaties. B2-microglobulin and ACE have been persistently raised. Functional lung testing reveals obstruction and reduction in CO diffusing capacity (67% in 2010). At 29, upper endoscopy and colonoscopy biopsies revealed lymphoid aggregates and chronic inflammatory infiltrate suggestive of Crohn´s disease; mesalamine was started with diarrhoea improvement. She also presents mal-absorption, zinc, iron and vitamin D deficiency.

At 30 years-old, she presented again coetaneous erithematous nodules recurred–which biopsy revealed septal panniculitis with granulomas, no microorganisms. An ultrasonography-guided biopsy of a celiac node was missed and hepatic tissue was obtained, showing inflammatory infiltrate, predominantly lymphocytes, with no granulomas or microorganisms.

We aim to discuss future investigations/therapeutic options in this patient, with almost 10 years of evidence of extensive lymphoid proliferation, that remains clinically stable and asymptomatic.

5• *The allergy diagnosis plan in veterinary medicine*

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Regarding the more common allergen sources for animals, fleas, several air-born allergens, as well as many food allergens are frequent causes of allergic reactions, showing different target organs from skin to eye and respiratory or digestive systems. The increasing attention to this field of veterinary clinical pathology needs to run well established guide-lines, either in clinical or in complementary diagnosis. Since Hanifin and Rajka (1980) proposed criteria for atopic dermatitis diagnosis in humans, successive proposals have been also developed to identify atopic dermatitis in dogs. A consensual plan was firstly proposed by Willemse in 1986, undertaking modifications in 1994. In 1998 Prelaud and col. would establish important modifications and in 2009 Favrot proposed several fine tune adjustments, which were supported by the International Task Force on Canine Atopic Dermatitis (ITFCAD) in 2010. Nevertheless, to improve the accuracy of diagnosis, integrating basal knowledge on sensitization etiopathogeny and allergen nature and diversity, allergen sources and implicated molecular allergens for animals should be well identified. This progressive process also stands as an essential step for the veterinary diagnosis of allergy in the near future, since it should be the basis of a Component-resolved diagnosis (CRD), which will be of high relevance for an increased efficiency of eviction measures and specific immunotherapy, besides the common pharmacoterapy.

Starting by a clinical diagnostic protocol that will lead to at least 80% of positive diagnosis of allergy, several possible laboratorial methods are necessary to extend and clarify the diagnosis. Our objective is to contribute to the clinical-laboratorial diagnostic improvement, attending to different complementary diagnostic methods already available for veterinary diagnosis and to others that may be very useful in the near future, in spite of their actual lack of standardization for veterinary use. Knowledge of the allergoms for animals from allergen sources proteoms is a work to be done in order to allow the CRD in veterinary allergy.

Over all, only a deep knowledge about the available laboratory diagnostic methods and implicated allergens will provide veterinary allergists the necessary information to proceed upon the application of the clinical diagnostic plan, in a further and further demanding scenario.

6• *Quality of life in hereditary angioedema*

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BACKGROUND Hereditary angioedema (HAE) is characterized by unpredictable episodic swelling involving the skin, gastrointestinal tract or other organs, of which life-threatening edema of the larynx is the most serious consequence. To our best knowledge, there are few data available about HAE impact on patient's quality of life (QoL). The aim of this study was to evaluate QoL in portuguese HAE patients. We used a health status questionnaire – SF-36 (Portuguese version) to analyze the QoL. This scale evaluates: physical functioning, limitations due to physical problems, limitations due to emotional problems, vitality, bodily pain, social functioning, mental health and general health perception.
METHODS We contacted all subjects with HAE (n=64) currently followed in Santa Maria Hospital's immunoallergology department. The final sample was composed of all patients that answered the QoL questionnaire (17 females/9 males; mean age: 41,08 ± 12,75 yrs; 7 severe disease/19 mild to moderate disease, Agostini et al criteria- JACI 2004). SF-36 scores of HAE patients were compared with scores of a group of 10 healthy controls. SF-36 scores were compared between patients with severe HAE and patients with mild to moderate HAE. Mann-Whitney test was used for the comparisons and Spearman's Rho was used to determine the correlation coefficient between number of attacks per year and QoL scores.
RESULTS Patients with HAE had QoL scores similar to controls (p>0,05). However, when we compared patients with severe disease (n=7) with patients with mild to moderate disease (n=19), the former had lower scores on SF-36's physical (p=0,041) and mental (p=0,018) components. The number of attacks per year was negatively correlated with the mental component score (p=0.005).
CONCLUSION We could not find any differences in QoL between our whole patient sample and our controls. All patients were currently receiving treatment, which by reducing the number of crises may lead to a better QoL. When patients are dichotomized into severe and mild/moderate categories, the patients with more severe disease have lower QoL scores. The main limitation of this study is the low number of subjects evaluated.

7• *The emerging role of 1,25(OH)2D3 in the immune response: three case reports*

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BACKGROUND Vitamin D is known to have a key role in calcium homeostasis and in the balance of electrolytes and blood pressure. Actually, the active metabolite 1,25(OH)2D3 seems to participate in regulation of the immune response and to have anti-inflammatory properties. In fact, current researches have implicated the disregulation of this hormone in several pathologies, such as heart disease, stroke, hypertension, diabetes, depression, chronic pain, cancer, infections, autoimmune diseases and more. Until now, 1,25(OH)2D3 levels of 20 ng/dl in winter have been considered below the norm. Nowadays, it has been proposed that a vitamin D deficiency exists when are less than 50 ng/ml.
We report three cases characterized by the association of 1,25(OH)2D3 deficiency and immunological disorders.
CASE 1 1,25(OH)2D3 levels have been dosed in a 54-year-old female affected by undifferentiated connective tissue disease. We have found in three determinations carried out at the distance of three-four months one from the other, these values: 15.60 ng/ml (in June); 17.20 ng/ml (in October); 13.90 ng/ml (in January). The researched antinuclear antibodies (ANA) were positive at the title of 1:640.
CASE 2 1,25(OH)2D3 levels in a 47-year-old female affected by autoimmune uveitis were 11.50 ng/ml. In this patient, inflammation indexes were increased. ANA and ASMA were positive respectively at the title of 1:160 and 1:320.
CASE 3 Finally, a 18 year-old female was admitted to our Division because of elevated total IgE serum levels (about 3000 UI/ml) and history of allergic rhinitis and previous infection by EBV and Chlamydia peneumoniae. 1,25(OH)2D3 levels were 18.60 ng/ml.
CONCLUSIONS These cases have been reported as examples of vitamin D deficiency in conditions of alterated immune response. Restoring the appropriate 1,25(OH)2D3 levels could be useful in treatment of autoimmune conditions and infectious diseases and could be a new approach in prevention of complications.
In the light of the new evidences, further investigations are necessary to advance our knowledge to better prevent and treat various illnesses.

8• *Anaphylaxis to omeprazole*

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INTRODUCTION Proton pump inhibitors (PPI) are widely used and are generally well tolerated, with a low incidence of adverse reactions. Although immediate-type hypersensitivity reactions induced by omeprazole and other PPI are rare, several anaphylactic reactions have been reported.
CASE REPORT A 37-year-old woman, with no personal or family history of atopic disease, was referred to our unit after an episode of facial, upper and lower members urticaria, nausea, vomit and dyspnea with wheezing, 10 hours after oral ibuprofen (600 mg) and 20 minutes (min.) after omeprazole 20 mg (prescribed for an acute pharyngitis). She denied any other drug sensitivity or any other concomitant therapy. She had previously taken omeprazole with good tolerance and she didn´t remember if she had already taken ibuprofen. Skin prick tests (SPT) to aeroallergens were negative. SPT (4mg/ml) and intradermal tests (IDT) (0,04mg/ml) with omeprazole were positive. Basophil activation test with omeprazole was negative. After a patient´s written informed consent we performed a challenge test with omeprazole and the patient experienced anaphylaxis (urticaria, cough, nausea and hypotension) 5 min. after 10 mg of omeprazole. The clinical picture resolved 60 min. after iv administration of clemastine, hydrocortisone, methylprednisolone and ranitidine. SPT with pantoprazole (4mg/ml) and with lansoprazole (30mg/ml) were negative. IDT with pantoprazole was positive (0,04mg/ml). IDT with lansoprazole were not performed (not available). Challenge with lansoprazole was not performed yet. Total IgE was 36,9 UI/ml. The patient self-administered oral ibuprofen at home with no reaction.
DISCUSSION We present a patient who experienced an anaphylaxis episode after oral intake of ibuprofen and omeprazole (prescribed for an acute pharyngitis). The clinical findings and the positive SPT to omeprazole suggest that an IgE-mediated mechanism was involved in the reaction to omeprazole. We excluded hypersensitivity to ibuprofen because the patient self-adminestered it at home with no reaction. Although PPI are extensively used and generally well tolerated, anaphylactic reactions can sometimes be observed. The positivity of IDT with pantoprazol suggests cross-reactivity between PPI, as other authors have reported. It is recommended an allergologic study, including skin and controlled challenge tests, before offering other PPI as a safe alternative.

9• *Non-pigmenting fixed drug eruption due to cotrimoxazole*

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ABSTRACT Fixed drug eruption (FDE) are classified into two different clinical forms: the classisc pigmenting asymmetrical form and the non pigmenting symmetrical erythematous plaque form. Fixed drug eruption usually presents as a hyperpigmented lesion that reappears in exactly the same site after challenging with the causative drug. In 1987 Shelley described a distinctive type of FDE that consisted of symmetrical well demarcated , tender erythematous plaques but resolved without residual pigmentation.

METHOD We present the case of a 64 years old female who took 3 years ago cotrimoxazole for a common cold. Four hours after the start of treatment she noticed a rash on her back and buttock with itching. She described the lesion as an erythematous plaque, well demarcated. She discontinued the treatment and the eruption resolved without residual pigmentation. In 2009 she was studied in an allergy department and was challenged with cotrimoxazole without reappearing of the eruption in the observation period of two hours, nevertheless three hours later she reffered to the emergency department because she developed the eruption on her back and bottom as before. In 2010 she was reffered to our allergy department and we performed a rechallenge with cotrimoxazole.

RESULTS One hour after she took the first dose of cotr sulfamethoxazole 100 mg/ trimethoprin 20 mg she develop itching and erythema. Two hours later she developed a symmetrical well demarcated , tender erythematous plaque at back in the same site. We performed skin byopsi that showed superficial perivascular infiltrate of lymphocytes and eosinophils, without melanophages. The recurrent lesion resolved within 7 days whitout residual hyperpigmentation.

CONCLUSION We present a non-pigmenting fixed drug eruption due to cotrimoxazol, confirmed by oral rechallenge test and histological features. It´s important distinguish from the classical pygmented fixed drug eruption.

10• *Non-IGE mediated anaphylaxis to paracetamol: a case report*

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INTRODUCTION Paracetamol is a widely used drug. While the hepatotoxicity of paracetamol overdose is well known and described, there are only few reports of adverse reactions after its administration within its therapeutic range, and anaphylaxis is considered very rare.

CASE REPORT A 15 year-old boy, with a previous history of recurrent wheezing until the age of 4 years and allergic rhinoconjunctivitis since the age of 13 years, and family history of atopy (sister with allergic rhinoconjunctivitis and mother with cold urticaria), came to Immunoallergy Department because of 4 reproducible episodes of anaphylaxis after paracetamol administration. The first episode, at 8 years of age, occurred 10 minutes after oral intake of paracetamol 500mg, with generalized urticaria, wheezing and ocular, lips and ears angioedema, requiring emergency room assistance. The second episode was similar, at 9 years of age. The third episode was the most severe, occurred at 12 years, characterized by glottis edema with respiratory distress, hypotension with prostration, generalized urticaria and facial edema, immediately after administration of intravenous paracetamol 1g during a post-operatory recovery; he was treated with adrenaline, corticosteroid and anti-histamine. The last episode occurred when he was 14 year-old, after oral intake of paracetamol 1g for headache, and was similar to the first one. He tolerates ibuprofen.

The child underwent skin prick test (concentration 10mg/mL) and intradermal tests (1/1000, 1/100 and 1/10 concentrations) to paracetamol, which were negative. Skin prick tests to common aeroallergens were positive to grass pollens. A drug provocation test with meloxicam was performed, reaching a cumulative dose of 15mg, and no adverse reactions occurred. He was advised to strictly avoid paracetamol and all other nonsteroidal anti-inflammatory drugs except ibuprofen and meloxicam.

DISCUSSION Anaphylaxis to paracetamol is very rare, with only few cases described in literature and even less reported in children. When performed, most of the times skin tests are negative. This report provides an alert to health-care professionals regarding the potential severity of reactions occurring within the therapeutic range of this widely used drug. After reproducible complains, the lack of diagnosis in this boy lead to a severe anaphylaxis episode after intravenous administration of paracetamol.

11• *IGE-Mediated metamizol allergy: a case series*

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INTRODUCTION Metamizol is the pyrazolone derivative nonsteroidal anti-inflammatory drug (NSAID) that most commonly is associated with hypersensitivity reactions, some of which are IgE-mediated and potentially severe. Our aim is to describe 5 selective metamizol hypersensitivity cases with focus on clinical evaluation and diagnosis management.

CASE REPORTS Five female patients aged 27, 32, 45, 47 and 50 year-old. One had a prior history of mint allergy, 1 with prior history of allergic rhinitis sensitized to dust mites and dog, 1 with prior history of minocycline hypersensitivity and 2 were non-atopic. All had immediate reactions (less than 5 minutes up to 30 minutes after administration) to metamizol: 2 had anaphylactic reactions (1 with anaphylactic shock) and 3 had urticaria and angioedema. Only 1 patient was treated with adrenaline, 3 were treated with steroid and anti-histamine and 1 had spontaneous regression of symptoms. Skin prick test (SPT) with metamizol (0,4 g/mL) was positive in 1 patient (11x7mm), and intradermal (ID) tests with metamizol were positive in the remaining, all with 1/100 dilution, 2 of them also presenting systemic reactions after ID tests. Cellular allergen stimulation test (CAST) to metamizol was performed in 3 cases, all with negative results. All patients tolerate paracetamol and other NSAIDs.

DISCUSSION Allergic reactions to metamizol are frequently IgE-mediated, contrasting to what happens with other NSAIDs. Skin tests had proven to be a good diagnosis method for metamizol IgE-mediated allergy, although symptoms after skin tests seem to be common. The potential severity of allergic reactions is a limitation to perform oral drug challenge test, and prior data suggested that CAST could be a reasonable alternative in these patients. However, in our sample, CAST was negative in all the requested cases, revealing very low sensitivity, which differs from data previously reported. The identification of an IgE-mediated mechanism points to the absence of cross-reactivity with other NSAIDs, and so their avoidance seems unnecessary.

12• A case of hypersensitivity to multiple corticosteroids

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BACKGROUND Corticosteroids (CS) are widely used in the treatment of various conditions, due to its immunosuppressive, antiproliferative, antiallergic and anti-inflammatory effects. Coopman et al, classified CS by chemical structure into 4 reactivity groups and two subgroups from A through D2, with various possible cross-reactions (CR). Both topical and systemic treatments can induce sensitization and elicit an immediate or delayed-type hypersensitivity reaction with subsequent administrations. Some authors estimate the prevalence for allergic reactions following topical CS between 0.2% and 5%, and between 0.1% and 0.3% for systemic CS administration.

CASE REPORT 30 year-old woman presented an exuberant local reaction to a non-specified insect sting on the eyelid, which was treated with IV hydrocortisone in the emergency department, and later with oral deflazacort, hydroxizine, ebastine, and topical hydrocortisone.

24 hours later the local symptoms worsened and she immediately discontinued CS and continued treatment only with antihistamines. Since there was no improvement, deflazacort was added again, which led to a new exacerbation with disseminated pruritic and erythematous papules and vesicules. She was then admitted to a Dermatology ward and treated only with antihistamines, with rapid improvement.

In her medical past history she refers allergic reaction to various products, with patch tests positive for Tixocortol pivalatum, kathon, neomycin, nickel, cobalt, thimerosal and benzac. She hadn't taken any medication before the reaction.

Skin prick and intradermal tests with prednisolone, methylprednisolone, dexamethasone, bethametasone, hydrocortisone and deflazacort were negative for immediate reactions. However, there was a delayed reaction to hydrocortisone, deflazacort, methylprednisolone and prednisolone (readings at 48 and 96h).

Patch tests with the previously mentioned drugs and a standard battery as defined by the Portuguese Contact Dermatitis Study Group were positive for Tixocortol pivalatum, deflazacort, hydrocortisone, nickel and cobalt (readings at 24, 48, 96 hours and 1 week).

She was instructed not to take any group A CS to which she reacted, as well as to avoid groups B and D2 CS, due to possible CR.

DISCUSSION This case report aims to remind that, although rare, allergic hypersensitivity to CS can lead to both immediate and delayed-type reactions and that CR is frequent between CS in the same group.

13• Estimation antibiotic drug allergy in children

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BACKGROUND Drug allergies may cause many different types of symptoms in children depending on the antibiotic drug and the degree of exposure to the antibiotic. An allergic reaction will not occur on the first exposure to a drug substance. The first exposure allows the body to create antibodies and memory lymphocyte cells for the antigen.

AIM To evaluate the clinical and allergologic features of drugs allergy on antibiotics in children referred to the allergology and immunology units of Bosnian and Herzegovian children's hospitals and pediatrics primary care from 2000 to 2010.

METHODS A total of about 2000 children were followed from drugs allergy reactions and about 1800 from total drugs were antibiotics allergy in age one to six years throught all Bosnia and Herzegovina. Immunologic crossreactivity between the penicillin and cephalosporin beta-lactam rings is, therefore, very unlikely an observation confirmed by monoclonal antibody analysis.

RESULTS A total of 1800 allergic children on antibiotic drugs (93%) had allergy reaction to penicillins or cephalosporins or both , only 3% to trimetoprim sulphametaxasol, 2% to aminoglycosids, 1% macrolids and 1% to other antibiotics. From total number of allergy on penicillins groups , cephalosporins had 75 % and penicillins only 25 % inclusing amoxicillin and clavunic acid more than 80% all cases of allergy on penicillins. It is estimated that 1% to 2% of all children and 2% to 3% persons experience drugs allergy during their lifetime in Bosnia and Herzegovina.

DISCUSSION Many reactions to antibiotics meet the criteria for drug allergy, but their immunopathologic mechanism is not clear.

CONCLUSIONS A reaction to a drug is considered an allergic reaction if it involves an immunologic reaction to a drug. Identification of adverse drug events through an automated trigger system, supplemented by analysis, can help identify targets for intervention and improvement symproms in children. Generally a drug allergy is identified by signs and symptoms. Pediatricians are trained to recognize hives, swelling patterns, and rashes associated with antibiotics allergic reactions.

14• Different patterns of sensitisation in betalactam allergy

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BACKGROUND Betalactam are a frequent cause of different types of allergic reactions, immediate and non-immediate and the main cause of reference to Drug Allergology Clinic.

METHOD We studied 102 patients with suspected allergy to betalactam antibiotics. The clinical history was characterised and cutaneous tests to beta-actams benzylpenicillin-polylisine (PPL), minor determinant mixture (MDM), amoxicillin, amoxicillin-clavulanic acid and other culprit betalactam were performed in all cases by means of skin prick test (SPT) and intradermal (IDT). If the reaction took place in the previous 6 months, serum specific IgE to betalactams was performed. When the cutaneous tests and/or serum specific IgE were negative,

we proposed oral challenge test (OCT), according to ENDA recommendation.

Results Hundred and eight patients [77 female and 31 male; mean age 48 (13-89)] referred generalized urticaria (42.6%), angioedema (16.7%, associated with glottis edema in 22.2%), dyspnoea (2.7%), gastrointestinal symptoms (5.5%), anaphylaxis (9.3%), toxidermia (1.9%) e non specific (1.9%). The clinical manifestations were not defined in 10.2% patients. One patient developed a DRESS reaction. The drug implicated was amoxicillin in 25 cases, amoxicillin-clavulanic acid in 30 cases, cephalosporin in 8 cases, benzylpenicillin in 30 cases and betalactam not defined in 15 cases. Cutaneous tests were positive in 66 cases, 20 to PPL (1 SPT, 19 IDT), 20 to MDM (IDT), 2 to amoxicillin (IDT), 15 to amoxicillin-clavulanic acid (2 SPT, 13 IDT) and 9 to cefuroxime (IDT). We performed OCT in 40 patients, with 1 positive OC to cefuroxime, 3 to amoxicillin and 1 to placebo.

CONCLUSION Hypersensitivity reactions were confirmed in 38 cases, 24 cases only to benzylpenicillin, 2 cases only to amoxicillin, eventually 2 cases to amoxicillin-clavulanic acid, 10 cases to amoxicillin-clavulanic acid and 2 cases only to cephalosporin. In 6 cases the patients had at the same time positive tests to benzylpenicillin and amoxicillin. Cefuroxime proved to be an alternative antibiotic in aminopenicillin allergic patients.

15• *Successful desensitisation by insulin: case report*

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BACKGROUND Different types of insulin allergy have been published and it is reported in 0.1% to 2% of all patients treated with insulin. Desensitisation is the only alternative approach.

CASE REPORT A seventy years old male patient with history of type 2 diabetes mellitus and arterial hypertension was being treated with oral hypoglycemic agents for more than 10 years. Due to liver dysfunction, diabetes treatment was switched to insulin therapy. After 6 months of therapy with human insulin (75% insulin lispro protamine and 25% insulin lispro suspension), he developed local urticaria, 15 minutes after subcutaneous insulin application. Insulin was discontinued and he was referred to our Outpatient Clinic. Skin prick-to-prick tests were positive to five different insulins (lispro, aspartic, glargine, isophane, detemir) and patch tests to the same insulins were negative. The serum IgE was positive to human, porcine and bovine insulins (14.3, 13.2 and 16.0 kU/L, respectively). He was hospitalised to initiate a desensitisation protocol to subcutaneous human insulin (75% insulin lispro protamine and 25% insulin lispro suspension). It was started with 0,0001 UI and increased 2-fold with intervals of 15 minutes. In the first day and after 13 administrations, the patient had 3 wheal-and-flare reactions that disappeared after oral antihistamine. Since then therapy was accompanied by antihistamine therapy After 3 days of therapy, he tolerated the human insulin (75% insulin lispro protamine and 25% insulin lispro suspension) and achieved control with 22 UI per day, with no skin reaction.

CONCLUSION We report a case of successful desensitization in patient with proved IgE-mediated hypersensitivity reaction to different insulins.

16• *Study of the prevalence and clinical features of self-reported adverse food reactions in Portuguese children. Preliminary results*

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BACKGROUND Population-based prevalence studies of adverse reactions to food (ARF) in children are lacking in Portugal. Therefore, the aim of the present study was to determine the prevalence of ARF in a sample of adult Portuguese patients.

METHOD This study was based on simple random sampling, for which 280 randomly selected children (40% from pre-school; 60% from primary school) would be necessary in order to obtain a 95% confidence interval and an acceptable margin of error of 2%, around a prevalence estimate of 3%. In order to allow for an 80% response rate, and a assuming a "design effect" of 1.5 (to correct for sampling error from stratified sampling), a total of 525 children will be randomly recruited. However, we decided to analyse 4000 children, since we included a nested case control study. The target population was that of children between 3 and 11 years of age, from Cova da Beira schools (administrative regions of Covilhã, Belmonte and Fundão). Initially, a simple, preliminary questionnaire for screening of AFR was applied at each school. Subsequently, children with a positive preliminary questionnaire were observed at na outpatient clinic at the hospital, a thorough and validated AFR questionnaire for children was applied, blood was taken for determination of food-specific IgE, and skin prick tests with foodstuffs were carried out using commercial extracts and, where applicable, prick-prick tests were performed with fresh fruits.

RESULTS Out of a populacional target of 4037 children (923 from pre-school; 3114 from primary school) we obtained a response rate of 61.1% (2465 children (522 from pre-school; 1943 from primary school). Of these, 166 children reported symptoms upon ingestion of at least one foodstuff (6.73%). Most frequently implicated foodstuffs were fresh fruits (28,6%), legumes (10.9%), egg (10,5%) and shelfish (10,5%). Most frequently reported symptoms were mucocutaneous (75%), gastrointestinal (46%) and respiratory (15%). Of these, 52% had only one type of symptoms.

CONCLUSIONS In this first, preliminary study of the prevalence of self-reported food-induced symptoms in children in Portugal, the percentage of 6% of children with AFR is similar to that of other European countries. Most frequently implicated foodstuffs were fresh fruits and legumes.

17• *A new validated questionnaire for the study of adverse reactions to food in Portuguese adults*

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BACKGROUND One of the most important tools for the study of food-allergies is a standardised and validated questionnaire. As far as we know, no such questionnaire has been applied in adults in Portugal. The

aim of the study was to validate a questionnaire for food-allergies in a sample of adult Portuguese patients.

METHOD This was a multicentre, cross-sectional study using a simple random sample of 50 adults aged between 18-80 years from various parts of central Portugal. In addition, the questionnaire was also applied to 25 patients diagnosed with food allergy. A 17 question-questionnaire was applied by phone to both groups, with subsequent reassessment (re-test) with a time interval ranging between 2 weeks and 10 months (median: 1,5 months). Eight closed questions were analyzed for internal consistency and temporal stability using SPSS 17.0.

RESULTS A Cronbach-alpa value of 0.961 (excellent) was determined for internal consistency. The following parameters were considered as obligatory items: a) existence of adverse-food-reaction; b) need or not for treatment; c) existence of previous episodes; d) personal history of atopy; e) previous diagnosis of allergy; f) previous specialty appointment; g) willingness to be followed-up at specialty clinic; h) time elapsed since the previous episode. The general temporal stability of the test had a Spearman-correlation coefficient value of 0.90. Cohen's Kappa values for temporal stability (agreement level) for the relevant questions (0.41-0.60: moderate agreement; 0.61-0.80: substantial agreement; 0.81-1.00: almost perfect agreement) was as follows: a) existence of adverse-food reaction: 0.971; b) need or not for treatment: 0.875; c) existence of previous episodes: 0.806; d) personal history of atopy: 0.657; e) previous diagnosis of allergy: 0.942; f) previous specialty appointment: 0.945; g) willingness to be followed at specialty clinic: 0.943; h) time-elapsed since the latest episode: 0.581.

CONCLUSIONS With the exception of "time-elapsed since the previous episode", "existence previous episodes of food-allergy" and "personal history of atopy", all items showed almost perfect agreement. In view of the excellent internal consistency and temporal reproducibility, this questionnaire is an useful tool for the study of prevalence in Portuguese patients from central Portugal and may also apply to other similar populations.

18• *Study of self-reported prevalence of adverse reactions to food in a Portuguese population. Preliminary results*

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BACKGROUND Population-based prevalence studies of adverse reactions to food (ARF) in adults are lacking in Portugal. Therefore, the aim of the study was to determine the prevalence of ARF in a sample of adult Portuguese patients.

METHOD This study was based on simple random sampling, for which 369 randomly selected adults would be necessary in order to obtain a 95% confidence interval and an acceptable margin of error of 2%, around a prevalence estimate of 4%. In order to allow for a 40% response rate, a total of 923 adults will be randomly recruited. We have already carried out part of the survey during 2010, in various parts of Central Portugal, and have randomly selected 677 adult inhabitants aged between 18-80 years (mean age: 52.88years, median age: 50years) who have been booked an interview for application of a previously validated food reaction-focused questionnaire. The questionnaire has already been filled out by 410 of these individuals (mean age: 54.62years; median age: 54years, 49.63 % female).

RESULTS Of 410 interviewed adults, 33 (8%) reported ARF. Foodstuffs most frequently implicated were seafood (37%), fresh-fruits (22%), fish (19%), egg (7%) and dry-fruits (4%). Cutaneous reactions (urticaria) were the most frequent AFR reported upon ingestion of seafood, fish, egg and dry-fruits, whereas oral allergic syndrome (OAS) was most frequently reported in the case of fresh-fruits, fish and dry-fruits. Most ARF developed within 30 minutes of ingestion (48% of cases), followed by 30% of cases in which symptoms arose 2-24 hours after food ingestion. Around 56% of cases required medical treatment (47% at a Health-Care-Centre within the first 24 hours, and 33% at a Hospital Emergency-Department). Only 14% of the cases had previously been diagnosed by a specialist doctor, although around 59% of the patients had a GP-based "food-allergy" diagnosis. Only 30% of the patients had any personal or family history of atopy.

CONCLUSIONS In this first, preliminary, study of the prevalence of food-induced self-reported symptoms in adults in Portugal, a relatively high percentage of positive cases was detected (8%), with urticaria and OAS being the most frequently observed symptoms and seafood, fresh-fruits and fish the most frequently implicated foodstuffs

19• *Anaphylaxis to sunflower seeds*

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INTRODUCTION Food allergy to seeds and nuts is becoming increasingly prevalent and severe. Sunflower seeds (Helianthus annuus), despite its frequent consumption in oil form, bread and as snack seeds, is rarely reported as anaphylaxis cause. Sensitization occurs to lipid transfer proteins (LTPs) and seed storage 2S albumins, which have also been identified in sesame seeds, nuts, peanut and mustard.

CASE REPORT Female patient, 32 year-old, with persistent moderate/severe rhinoconjunctivitis since 20 year-old, sensitized to Artemisia vulgaris, grass, Olea Europaea, Parietaria judaica, Plantago lanceolata, Chenopodium and Salsola kali pollens. Since 2007 she had had 3 episodes of anaphylaxis characterized by ocular angioedema, rhinitis, pharyngeal itching, cough, stridor and wheezing, immediately (5-10 min) after eating sunflower seeds; symptoms recede after oral anti-histamine and steroid. The first 2 episodes occurred after eating snack sunflower seeds, and the last one after eating potatoes fried in sunflower oil. She also complained of pharyngeal itching with pistachio. She had no symptoms with other nuts, peanut or sesame seeds, and refused eating mustard.

Allergy work-up revealed positive skin prick tests (Bial-Aristegui®) to sunflower seed (9x7mm), mustard (5x4mm), pistachio (4x3mm) and pine-nut (5x3mm), and negative results to others nuts, peanut and sesame seeds. Total IgE was 158 UI/mL and specific IgEs to sunflower seed was 79 kU/L (ImmunoCAP®). The ImmunoCAP ISAC® (Phadia) revealed sensitization to specific pollens and cat allergens (nCyn d 1,

rPhl p 1, nPhl p 4, nOle 1, nArt v 1, nSal k 1, rPar j 2, rFel d 1) and to cross-reactive LTPs (nArt v3, nPru p 3). An inhibition assay with sunflower seed extract was performed; sunflower seed extract inhibited (60%) IgE binding to LTPs, with no inhibition to the other allergens identified.
Strict avoidance of sunflower derivatives and always available the self-injectable epinephrine was recommended.
DISCUSSION This case of severe IgE-mediated allergy to sunflower seeds is noteworthy not only due to its rarity, but also to the fact that the patient also has anaphylaxis to sunflower oil. Most of the patients with this food allergy tolerate sunflower oil, which contains only traces of seed proteins. This can be explained by her sensitization to LTPs.

20 • *Usefulness of basophil activation test in the diagnostic pathway of food allergy*

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BACKGROUND More than 25% of the adults report allergic reactions to foods, but the real prevalence of food allergy in adults is less than 3%, based on traditional in vivo (Skin Prick Test and food challenge) and in vitro (specific IgE by immunoCAP) tests. The combined use of these tests, would allow a diagnosis of food allergy in 70% of cases. The gold standard in food allergy diagnosis is the double-blind placebo-controlled food challenge with the suspected food (DBPCFC). There is therefore a need to improve the tools in the diagnosis of food allergy.
AIM to determine if the basophils activation test (BAT) with food allergens could improve the accuracy of food allergy diagnosis, especially when traditional tests are negative or discordant with clinical history or even negative.
MATERIALS AND METHODS 33 adults, with previous adverse reaction to foods and discordance between clinical hitory and traditional tests, underwent SPT, immunoCAP and BAT with the suspected foods.
RESULTS 20/33 (61%) of patients discriminated the triggering foods. 14/33 refer anaphylaxis, 8/33 skin reactions and 7/33 only gastrointestinal symptoms. In 66% all traditional tests were negative. BAT resulted positive in 29/33 patients (87%). 20/33 (61%) showed an agreement between clinical history and BAT result. In 2/33 patients (6%), SPT, specific IgE and BAT were negative. Foods more frequently implicated were egg, tomato, alpha-amylase, wheat, milk, yeast, soy. Elimination diets were indicated in all BAT-positive subjects. 20/29 patients (69%) had a benefit of this diet, 1/29 (3%) an uncertain benefit , 1/29 (3%) no improvement and in 6/29 patients (21%) the food was inadvertently consumed and tolerated. One patient was lost during the follow-up. 8/33 patients underwent the oral challenge with the suspected food. Agreement between BAT and oral challenge occurred in 3/8 patients (37.5%).
CONCLUSIONS BAT may be useful in the diagnostic pathway of food allergy. We believe that BAT should be performed when food allergy diagnosis through the traditional tests is not achieved.

21 • *Multiple and unusual food allergy - two clinical cases*

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INTRODUCTION Food allergy affects about 5% of children below 5 years of age and 4% of adolescents and adults. The prevalence of multiple food allergy and less common allergies, such as bean and gluten, seem to be rising. The authors present the case of two siblings with multiple food allergies.
CASE REPORTS An eight month infant was referred to our Pediatric Allergy Clinic for suspicion of food allergy following an episode of urticaria, hours after eating a biscuit. Since 7 months of age he had lesions of atopic dermatitis treated with oat creams. The patient was exclusively breastfed until 4 months of age, legumes were introduced in his diet at 4 months. After 5 months cow's milk, gluten free porridge and fruits were introduced. There was a familiar atopic background. Allergy study revealed: sIgE class 6 for wheat and gluten; class 5 for rye, barley and for egg white; class 4 for oat; class 3 for egg yolk, maize and rice and class 2 for cow's milk. After 12 months, episodes of vomiting occurred with ingestion of bean and grain and he developed asthma and rhinitis symptoms. At 19 months of age, Prick-Prick test was positive for raw egg yolk and white and for baked beans.
The 8 year old brother had a history of asthma and allergic rhinoconjunctivitis. Since he was 5 years of age, he had acute urticaria after ingestion of raw egg and episodes of lethargy, drooling, swollen eyelids with spontaneous resolution after eating bean and grain. He reported disliking of seafood, with spontaneous eviction from his diet. The study revealed: sIgE class 5 for Dermatophagoides pteronyssinus; class 4 for grasses; class 3 for egg white; class 2 for peas, beans, chickpeas and egg yolk. Prick-Prick skin tests were positive for chickpeas, bean, yolk, raw squid and raw octopus.
CONCLUSION This is a case of important familiar atopy envolving uncommon allergies such as allergy to gluten and legumes. Prick-Prick skin tests continue to be an essential diagnostic tool together with a thorough medical history data collection.

poster presentations 2

>>> FROM 22 TO 44

2nd April, 2011

12:30 - 13:30 POSTER EXHIBITION AREA **Poster Session 2**

IN VITRO DIAGNOSIS, MEDITERRANEAN AEROBIOLOGY, MISCELLANEOUS, SKIN ALLERGY

CHAIRS *Guglielmo Bruno (Italy), Helena Falcão (Portugal), Carlos Loureiro (Portugal)*

22 • *The dactylis glomerata (Grass Pollen) allergen repertoire for dogs*

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Companion animals' consultation on allergic diseases is increasing much beyond the common flea bite allergic dermatitis. Several sources of aeroallergens, as well as many food allergens are also frequent causes of allergic reactions, showing different target organs such as skin, eye conjunctiva, respiratory or digestive systems.Hypersensitivity reactions studies, mainly from type I, but also from type IV are presenting a grown-up relevance also in veterinary medicine, as shown by the increase of scientific communications in the field. In pursuit of improvement in diagnostic guidelines for veterinary allergy diagnosis, the identification of allergens for animals among allergen sources allergoms, appears as an essential tool towards more successful therapeutic measures founded on deeper etiopathological knowledge.It is also important to know the allergic recognition profile of regional populations for several of the most relevant allergen sources which are, as for humans, mites and grass-pollens, because of the genetic pattern associated to a given population, conditioning individual predisposition. In our study, a group of 13 non subjected to specific immunotherapy atopic dogs from southern Portugal outpatient dermatology and allergy consultation was selected by means of clinical, intradermic tests and specific IgE determination. Dactylis glomerata proteome was separated by isoelectric focusing and allergens for dog were identified by patient serum IgE in Western Blotting. Twenty nine allergens were identified within a pH range from 4 to 9,85, five of them showing in this preliminary study a major recognition in our atopic dog population: pI 5,9; 6,1; 8,15; 8,25 and 9,85.

Great heterogeneity was observed between individual patient allergen recognition, with the majority of patients (11 out of 13) showing sensitization to other grass pollen species. Clinical manifestations were mainly dermatological with worse symptoms in Spring. Like what happens in humans no relation between clinical signs and a specific spectrotype pattern of allergen recognition was observed. Each patient spectrotype could be associated with an individual pattern of sensitization under genetic modulation or with the frequency and amount of exposure to grass pollen. More patients are being selected for inclusion and further electrophoretic techniques, especially two-dimensional SDS PAGE are being performed to obtain further data.

23 • *Basophil activation tests in NSAID hypersensivity*

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INTRODUCTION Flow cytometric determination of basophil activation following stimulation with different drugs is a promising in vitro diagnostic test.

We report a case of a 28 years old male patient with urticaria and bronchospasm and sensitivity to acetaminophen. He also had a history of suspected sensitivity to NSAID

METHODS Flow2 Cast basophile activation test (BAT) in vitro was used for detection of hypersensitivity to aspirin before provocation test in vivo. It was evaluated the percentage of basophils cells (CCR3+ cells) and activated basophils (CCR3+/CD63+) in peripheral blood. Basophil activation was assessed at basal condition (without allergen exposure), after in vitro exposure to Formyl-Methionyl-Leucyl-Phenylalanine (fMLP), to monoclonal antibody anti-FC□RI mAb) and after several dilutions of Lys-Aspirin (allergen from de kit) and Lysine Acetyl salicilate (Labesfal). BAT was performed during asymptomatic period and repeated during oral provocation test under medical surveillance with aspirin. It was also evaluated triptase and arterial blood gas after challenge.

RESULTS Approximately 4h after aspirin challenge with 400mg of aspirin, he developed urticaria and bronchospasm with hypoxemia (; PO2 61.2 mmHg) that reversed with adrenaline, antihistamines and corticosteroids. Triptase reached 25ug/L during the symptomatic stage. BAT results in both clinical conditions (fMLP1 and anti-FCeRI mAb2) were positive (CCR3+/CD63+= 90 %) Asymptomatic and After challenge results were the folloing: Total Peripheral Basophils (CCR3+) were 0,82% vs 0,91%; Activated Basophils (CCR3+/CD63+) in basal conditions were 3,9% vs 93% ; After in vitro stimulation with Lys-Aspirin (Kit) were 7,9% vs 96%; After in vitro stimulation with Lysine Acetyl salicilate were 16,3% vs 92%

CONCLUSIONS Prior to challenge, the activated basophiles stimulated with antibody KIT were above 5% but with a stimulation indice (IM)< 2, while with L-Lysine acetate the IM > 2. The oral provocation test, the gold standard in drug allergy diagnosis, triggered a severe systemic reaction and a high activation response in basophiles .This suggests that results from in vitro tests should be carefully evaluated although they cannot replace provocation challenges yet but may prove to be useful in the management of patients allergic to drugs.

24 • *Specific IGE to grasses of pooideae subfamily: which one is the most reliable?*

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BACKGROUND Once sIgE to the mixture of the five most common species of Pooideae subfamily (gx1) has an important economic burden and a high degree of cross reactivity is described, Phleum pratensis has been considered the most reliable grass species to replace gx1 in grass allergy diagnosis. Our aim was to analyze if this can be applied to our patients.

METHODS We included all patients who performed gx1 (ImmunoCAP®, Phadia, Sweden) in the Clinical Pathology Department of our Hospital, during January 2002 and September 2010. Demographical data and sIgE values of each grass species were analyzed (SPSS® Statistics 17.0).

RESULTS During the referred period, 136/257 patients had a positive gx1 result. The 110/136 patients that performed sIgE to the 5 grass species were included (57.3% female, 29.2±13.6 years; 1 patient presented sIgE<class 2 to the 5 grass species). The most reliable grass species in what concerns grass allergy diagnosis (sIgE>class 2) were, in descending order, Festuca elatior (98.2%), Poa pratensis (97.2%), Lolium perenne (96.3%), Dactylis glomerata (94.5%) and Phleum pratensis (92.7%), with statistical significance to: Festuca elatior vs Dactylis glomerata (p=0.046) and Phleum pratensis vs Festuca elatior (p=0.014), Poa pratensis (p=0.025) and Lolium perenne (p=0.046). Together, Festuca elatior and Poa pratensis performed 100% of grass allergy diagnosis. The cluster analysis in what concerns the difference between the highest and the lowest value of sIgE among the 5 species in each patient, showed 2 subgroups: A) 77 patients (70%), average difference of 2.9±3.1 KU/L (53.8% male; 30.0±14.2 years); B) 33 patients (30%), average difference of 21.9±9.1 KU/L (58.2% female; 21.9±9.1 years). Group B presented significantly higher sIgE values for all grasses, when comparing with group A, all > class 2.

CONCLUSION Our study suggests Festuca elatior as the most reliable grass species to replace gx1 in grass allergy diagnosis, in our patients, with statistical significance when compared with Phleum pratensis (important for group A). We speculate if groups A and B could eventually traduce differences in cross-reactivity between the five species, with group B eventually showing a less important sensitization to shared epitopes.

25 • *Aerobiology and pollen allergenicity of spring trees in the city of Porto, Portugal*

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The plantation of trees for ornamental purposes in urban areas, such as city avenues, footpaths or public parks is increasing with allergenic impact upon the health of the population. The aims of this study were to characterize the aerobiological behaviour of airborne pollen from several trees in the city of Porto and to identify their different reactivity levels in sensitized patients. This combined approach of aerobiology and immunology can be useful in order to adapt the standard skin prick test battery according to the local airborne content, to amend allergy alerting systems in a region and to evaluate the convenience of changing the catalogue of ornamental trees used. Airborne pollen was sampled using a 7-day Hirst-type volumetric trap (2004-2011). The antigenic and allergenic properties of Acer negundo, Betula pendula, Platanus occidentalis, Quercus robur and Populus hybrida pollen, collected from trees in public gardens or pavements, were assayed by SDS-PAGE and immunological techniques using sera from eight patients polysensitized to tree pollen. Tree pollen peaked in March and April, representing on average 22% of the annual pollen spectrum sampled. Pollination period was characterized by the production of a great amount of pollen during a short period (less than 40 days), with a fast release in the beginning of the main pollen season and the maximum airborne concentrations being reached a few days later. The highest reactivity was observed with A. negundo followed by P. occidentalis, while B. pendula and P. hybrida showed reduced IgE-binding affinity. Consistently, Acer and Platanus presented the highest airborne pollen concentrations, attaining levels superior to thresholds, considered moderate to high risk for allergenic reactions. The tested allergic patient sera probed with five tree pollen protein extracts revealed similar bands in distinct extracts. An unknown ~ 50 kDa protein band was shared by the different extracts in the eight sera tested. This study allowed the identification of the allergenic potential of the most abundant tree pollen present in the atmosphere of Porto. It is suggested the existence of cross-reactivity among tree pollens due to the binding of similar molecular weight proteins in the patient sera.

26 • *Phl p 5 content in ambient air samples collected in Evora (South Portugal): year-to-year variation and correlation with airborne grass pollen*

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Background: Grass pollen is a major source of aeroallergens worldwide and consequently a major cause of polinosis. Phleum p5 is a panallergen widely distributed among the Poaceae family that highly contributes for the grass pollen allergenic potency but its distribution among bioaerossol particles remains elusive. The aim of this work was to improve methodologies for ambient Phl p5 monitoring and to evaluate its relationships with airborne grass pollen counts.

METHODOLOGY Ambient air allergen was sampled with a Chemvol high-volume cascade impactor equipped with stages PM>10µm, 10µm>PM>2.5µm (polyurethane substrate) and extracted with NH4HCO3 buffer supplemented with 0.1%BSA. Phl p5 was quantified by ELISA. Airborne Poaceae pollen was simultaneously monitored with a Burkard SevenDay Recording Volumetric Spore Trap®. Both samplers were placed side-by-side with the air input at the same level.

RESULTS In 2009 and 2010 seasons, ~90% of the airborne allergen was found in the PM>10µm stage. The [Phl p5] was directly proportional to the atmospheric pollen content in both pollen seasons. The Phl p5 allergen content per pollen grain was slightly lower in 2010 (1.696pg/pollen grain) compared to 2009 (1.945pg/pollen grain). However, the total amount of pollen and allergen in 2010 were three times and twice the values observed in 2009 (15729 and 5643grains/m3/season and 25503 and 11460pg/m3/season of Phl p5, respectively).

CONCLUSIONS These results show that Phl p5 is preferentially associated with pollen grains, although a small percentage may also be found in submicronic particles. The allergenic potency of grass pollen was similar for both seasons, nevertheless the ambient allergenic load was higher in 2010. In conclusion, aeroallergen quantification may contribute.

together with airborne pollen counts, to a better understanding of the level of exposure to airborne pollen allergens.

ACKNOWLEDGMENTS This study is integrated in the European project HIALINE (Executive Agency for Health and Consumers, grant agreement No 2008 11 07)

27 • *Ambient air ole E1 content in samples collected in Evora: correlation with airborne olive pollen and year-to-year variation (South Portugal)*

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Background: In Portugal, Olea europaea pollen is a major source of aeroallergens and consequently a major cause of polinosis, where Ole e1, a glycoprotein of olive pollen grain, highly contributes to the olive pollen grain allergenicity. The aim of this study was to improve methodologies for ambient Ole e1 monitoring and to evaluate its relationship with airborne Olea pollen counts.

METHODOLOGY On a meteorological platform at the town center of Evora, ambient air was sampled with a Chemvol high-volume cascade impactor equipped with stages PM>10µm, 10 µm>PM>2.5µm. The polyurethane impacting substrate was extracted with 0.1M NH4HCO3 buffer supplemented with 0.1%BSA. Ole e1 was quantified using a specific ELISA. Airborne pollen of Olea europaea was simultaneously monitored with a Burkard SevenDay Recording Volumetric Spore Trap®. Both samplers were placed side-by-side with the air input at the same level.

RESULTS In both seasons, ~90% of the airborne allergen was found in the PM>10µm stage. The allergen load was higher in 2010 (18765pg/m3/season) when compared to 2009 (12641pg/m3/season) despite the lower pollen load in 2010 (7136grains/m3/season and 12524grains/m3/season in 2009). In both seasons, the [Ole e1] was directly proportional to the atmospheric pollen content. Additionally, a ~3-fold higher Ole e1 content per pollen grain was found in 2010 compared to 2009 (2.678 and 0.813pg/pollen grain, respectively), suggesting an elevated allergenic potency of the pollen in 2010.

CONCLUSIONS These results show that the Ole e1 is preferentially associated with the pollen grains, although a small percentage may also be found in submicronic particles, and demonstrated a year-to-year variation of Olea Europea pollen allergenic potency. In conclusion, aeroallergen quantification may contribute, together with airborne pollen counts, to define the outdoor air allergenic load.

ACKNOWLEDGMENTS This study is integrated in the European project HIALINE (Executive Agency for Health and Consumers, grant agreement No 2008 11 07)

28 • *The Portuguese aerobiology network*

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BACKGROUND Aeropalinological monitoring is an aiding factor to respiratory disease knowledge and control. This was the goal for creating the Portuguese Aerobiology Network (Rede Portuguesa de Aerobiologia, RPA) in 2002, which includes seven monitoring stations: Oporto, Coimbra, Lisbon, Évora, Portimão, and more recently Ponta Delgada and Funchal, included in 2006. This work presents the national pollen map from 2006 to 2009.

METHODS The bioparticle sampling was done with a sampler Burkard Seven Day Volumetric Spore-trape®, whose operation mode and subsequent data analysis methodology followed the recommendations of the International Association for Aerobiology. The counts were expressed as number of pollen grains per cubic meter of air.

RESULTS The national pollen map is typically Mediterranean, with pollen occurring throughout the year, even though higher concentrations (78% of total annual) and diversity of pollen types prevail in the spring, between March and June. The cities of Évora and Portimão had the highest pollen levels, while Funchal and Ponta Delgada had the lowest levels. The length of the pollen season was relatively constant over the studied years. Tree pollens account for the majority of the total pollen count, followed by shrubs/ herbaceous plants and grasses. The most prevalent tree pollen taxa identified include Quercus, Olea and Cupressaceae. These pollen types tend to reach peak concentrations in the spring. The predominant shrubs/ herbaceous pollen belonged to Parietaria and Urtica species, the most prevalent grass is the Poaceae, and altogether they occur mainly in the spring and summer. The average monthly pollen counts for the 4 years and 7 cities ranged from 0 to 3595 grains/m3 for trees, 0 to 1260 grains/m3 for weeds and 4 to 1983 grains/m3 for grasses (Poaceae).

CONCLUSION The observed seasonal patterns are defined by intrinsic variables of each region, such as location, vegetation cover and geo-climatic conditions. The RPA aerobiological monitoring has allowed a better interpretation and control of allergic symptoms, and the interpretation of the prevalence of multiple sensitizations on the sensitized population. The aerobiological monitoring has also been useful in pollinosis prevention campaigns and in selecting the appropriate extracts for skin prick tests.

29 • *Grass pollen season in Portugal and its association with meteorological factors*

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Background: Airborne pollen of grasses is one of the main sources of aeroallergens in the world, particularly in the mediterranean area. Grass pollen constitutes the main cause of pollinosis in Portugal.

OBJECTIVES 1) To analyse the main pollen season (MPS) of grass pollen in different monitoring stations of the Portuguese Aerobiology Net-

work: Oporto, Coimbra, Lisbon, Évora and Portimão; 2) to analyse the interannual and diurnal variations of Poaceae pollen concentrations in the atmosphere of each station; and 3) to analyse the influence of meteorological factors on grass pollen concentrations.

METHOD Airborne pollen was collected with the volumetric Hirst-type samplers. In this study, daily and hourly sampling data of Poaceae pollen from five monitoring stations over seven years (2002-2008) were used. The meteorological parameters analysed were the maximum, mean and minimum temperature, relative humidity, amount of precipitation, global radiation, insolation, wind speed and wind direction.

RESULTS The highest concentrations of grass pollen were recorded from May to July. Statistical significant differences were observed in pollen seasons and hourly curves. The beginning of the MPS was earlier at the monitoring stations near the coast line and it was recorded later in the south part of the country. The absolute daily maximum concentrations were recorded in June and in July in Oporto. The duration of the MPS decreased from north to south. The MPS end was recorded in August in the north, and in July in the south. Oporto and Coimbra showed the lowest levels of pollen, Évora recorded the highest levels. Poaceae pollen was recorded in the atmosphere during 24 hours, the lowest values recorded between 22h and 6h and the highest values observed in Évora between 7h and 21h. Statistically significant correlations have been found between grass pollen counts and all the meteorological factors analysed.

CONCLUSIONS Between the stations there were differences, in terms of quantity and other features of the pollen curve that can be mainly explained by the different species of grasses existing in these areas and by the different environmental conditions. In Portugal, the risk of exposure to this pollen is higher in the southern inland and rural areas.

30 • *No drugs treatment for adult eosinophilic esophagitis. Diet modification achieve a sustained clinical and histological remission.*

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BACKGROUND Eosinophilic eosphagitis (EoE) represents a chronic, immune/antigen mediated, esophageal disease characterized by esophageal dysfunction and eosinophil inflammation. We aim to present immunoallergic characteristics of patients suffering from EoE successfully treated with diet modification.

Methods Three patients (2F/1M) aged between 27 to 37 were diagnosed of EoE after long term esophageal complaints. Skin prick tests (SPT) and specific IgE for inhalants (pollen, house dust mite, epithelium and alternaria) and foods (milk, egg, meat, cereals, pulses, fruits, vegetables, fish, anisakis and shell-fish) were developed.

RESULTS Patient 1: A 27 years-old woman. Specific IgE and SPT resulted negative for food allergens and positive for grass pollen. Despite that, we introduced a 6-food elimination diet (avoiding cereals, milk, egg, legumes, peanuts, seafood and soya) and aminoacid-based supplements. After six weeks we performed a new endoscopy without inflammation. Then we sequentially reintroduced food, reappearing eosinophilic inflammation and symptoms with milk and wheat. The challenges with remaining foods were negative.

Patient 2: A 37 years-old man. Specific IgE and SPT results were observed for olea, grass pollen, dust mite and epithelium, and also were positive for milk, lentil and meat. Since this point the patient went on a diet without milk, lentil and meat excepting chicken and turkey. After six weeks we performed a new endoscopy without inflammation. The challenge with milk was positive after a new endoscopy showing inflammation. Negative results were observed after reintroducing lentil and meat.

Patient 3: A 37 years-old woman. Specific IgE and SPT were positive for hazelnut, almonds, oats and pulses. According to this point she underwent on a diet without these foods. After six weeks there was no evidence of inflammation in endoscopic and hystopathologic study. At this moment sequential challenge with hazelnut, almonds, oats and legumes were performed, and endoscopies with biopsies controls repeated after every individual food. Eosinophilic inflammatory infiltration and sympoms recurred with every food.

CONCLUSION We present three patients with different sensitization pattern in which diet modification definitively solved the EoE. No drugs were needed in the management of patients.

31 • *Review of allergology department's activity in the emergency department*

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INTRODUCTION Patients with allergic manifestations are admitted to the Emergency Department (ED) on a daily basis. The Allergology Consultation for the Emergency Department was created in 2004, aiming for the best possible orientation of those patients.

AIM To evaluate the referral motives, treatment and further orientation of the patients.

MATERIAL AND METHODS Data collected from the medical records of all the patients referred by the ED (ALERT®), from January 1st 2006 to December 31st 2010.

RESULTS A total of 532 consultations were requested, 374 (70.3%) of female patients, average age 43.3±18.2 years (median 41,5). The consultations were requested by Internal Medicine (488; 91.7%); Otorhinolaryngology (14; 2.6%), Dermatology (24; 4.5%), Stomatology (1; 0.2%) and by other hospitals (3; 0.6%).

The following were the most frequent motives for consultation: urticaria with or without angioedema (AE) (329; 61.8%), isolated AE (144; 27.1%), and eczema (27; 5.1%). Sixteen patients had anaphylaxis (3%). Sixteen patients (3%) were referred for cutaneous manifestations of non-allergic causes.

In 38.2% of the cases the cause was unknown. In patients with urticaria/AE or isolated AE, drugs were the probable etiologic factor most frequently identified.

The majority of the patients (371; 69.7%) was treated with antihistamines and systemic corticosteroids, according to the most frequent manifestations. Thirteen patients (2.4%) needed epinephrine as well.

Most of the patients (418; 78.6%) were discharged and sent to an Allergology Consultation at the outpatient clinic. Twenty seven patients (5.1%) were admitted to a medical ward. Eighty seven patients (16.4%) were referred to other specialists (most frequently to their General Practitioner and Dermatologist).

CONCLUSION Referral to the Allergology Department during their ED stay, allows a faster and better orientation of the allergic patients. Skin manifestations are the most frequent referral motives, and a significant percentage of the cases are presumably drug-induced.

32 • Sweet's Syndrome - An unexpected diagnosis?

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BACKGROUND The Sweet's Syndrome is characterized by fever, neutrophilia and erythematous skin lesions. On histological examination they reveal a diffuse infiltrate of mature neutrophils localized in the upper dermis. There are three different types of this rare disease: classical (idiopathic), associated with neoplastic diseases and induced by drugs. Due to the multiplicity of clinical conditions that may mimic this disease, the diagnosis is not always easy. Its pathogenesis is not fully understood but probably is multifactorial. Systemic corticosteroids remain the first line therapy.

METHODS The authors present a case of a 43-year-old Caucasian woman, referred to our department for a suspected toxicodermia, after hospitalization in the Department of Internal Medicine for fever + rash. This is a patient with a personal history of vitiligo, breast carcinoma in situ and anemia. She recurred for several times to the Emergency Room due to episodes of fever (without apparent focus), and weakness, which preceded the appearance of non-pruritic skin lesions (plaques with inflammatory signs), distributed on the trunk. The episodes had no identified triggering factor, lasted approximately three to five days and resolved spontaneously, without residual lesion.

RESULTS The analytical study revealed microcytic hypochromic anemia and leukocytosis with neutrophilia, associated with increased values of c-reactive protein and sedimentation rate. Renal, liver and thyroid function were normal, as well as the ionogram and protein electrophoresis. The immunological study showed decreased values of IgA, with no other changes. The urinalysis, chest radiograph, blood and urine cultures, and serology for various pathogens didn´t show alterations. The skin biopsy revealed dermal edema and mild inflammatory infiltrate of polynuclear neutrophils in a superficial perivascular location, consistent with Sweet's syndrome. The patient was treated with systemic corticosteroids. Since then, no new episodes occurred.

CONCLUSIONS In our patient, due to the personal history of breast cancer, the Sweet's syndrome could be the first manifestation of a recurrence of the neoplastic disease. After systemic corticosteroid therapy she did not have more episodes. That´s why we can think of an idiopathic type of the disease. However, we stress the importance of maintaining a rigorous follow-up.

33 • Difficulties in treatment in kartagener syndrome – case report

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BACKGROUND Kartagener syndrome belongs to a group of hereditary disorders called primary ciliary dyskinesias. It is characterised by the presence of situs inversus, bronchiectasis and sinusitis. The current therapeutic treatment is based only on clearance of airway secretions and antibiotic therapy of respiratory tract infections despite the efforts in finding new treatments.

CASE REPORT A 40 years old female presented chronic productive cough, rhinosinusitis and otitis since childhood. At age 16, the nasal symptoms worsened, became daily and associated with conjunctivitis and the cough associated with wheezing. Few months later she noticed loss of hearing and was referred to an ENT consultation that diagnosed chronic otitis media and rhinosinusitis with sensorineural hearing loss. At age 24, she was admitted in a hospital due to a stroke and situs inversus, bronchiectasis in inferior lobes and severe sinusitis were diagnosed. Two years later she had a miscarriage. In the same year she developed urticaria after intake of 30 mg of deflazacort. After the age of 30, her nasal symptoms got worse with intranasal mometasone furoate but she tolerates intranasal fluticasone. In last year, she developed urticaria and glottis oedema 30 minutes after oral methylprednisolone (MP). At age 32, an endoscopic nasal polipectomy was performed.

Skin prick tests to house dust mites and Candida albicans were positive. Intradermal skin tests to MP and betamethasone were positive but negative to prednisone and hydrocortisone. The oral challenge test to deflazacort at a cumulative dose of 60 mg was negative. The sinuses CT scan showed nasal polyposis and inferior turbinate hypertrophy and thoracic CT scan revealed multiple bronchiectasis in inferior lobes. Spirometry showed moderate obstructive ventilatory impairment with negative post-bronchodilator response. Currently she is on treatment with intranasal fluticasone, montelukast, acetylcystein, inhalated budesonide and formoterol.

CONCLUSIONS The diagnosis difficulty of this case is related with the severe nasossinusal pathology and chronic bronchial obstructive complicated by hypersensitivity to corticosteroids. Deflazacort revealed to be an alternative corticosteroid. Early diagnosis of sinopulmonary infections is essential to prevent clinical deterioratio.

34 • What information in Portuguese is available online on chronic respiratory diseases?

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BACKGROUND Internet is increasingly used by patients and physicians to access health information. In the context the project Chronic diseases of the airways - contents and tools for productive interactions between empowered patients and proactive professionals (HMSP-IDSIM/SIM/0018/2009), the assessment of what type of information available online is needed. We aim to describe the most relevant webpages in Portuguese language, on chronic respiratory diseases.

METHODS We've searched Google PT, between 2 and 12 November 2010, for the Portuguese translations of "Asthma", "Asthmatics", "Chronic Obstructive Pulmonary Disease", "Chronic Respiratory Diseases" "Smoking and Chronic Respiratory Diseases" and "Diseases of the Airways". The first 500 hits, sorted by Google default sorting algorithm, excluding blogs and advertisements, were screened. From those, news and forums were excluded. For the 156 remaining webpages, the content formats, target audience (health professional or general population: adults, young adults or children), language and sponsorship was registered.

RESULTS The 156 webpages were retrieved from the queries: "Chronic Obstructive Pulmonary Disease" 32%(50), "Asthma" 26%(41), "Smoking and Chronic Respiratory Diseases" 14%(22), "Chronic Respiratory Diseases" 12%(18), "Diseases of the Airways" 9%(14) and "Asthmatics" 7%(11); 24%(38) were dedicated webpages, 32%(50) were sections and 44 %(68) were non-dedicated webpages; 55%(86) were in Portuguese (BR) and 45%(70) were in Portuguese (PT). All webpages had text, 45%(70) images, 25%(39) had downloadable documents, 12%(18) charts or tables, 10%(16) videos, 4%(6) animations.

3%(5) quizzes, 3%(4) podcasts, and 1 webpage had interactive applications. The target audiences of the webpages were health professionals 42%(65), the general public 35%(91) and both 23%(36). The only available formats for health professionals were downloadable documents, charts or tables and images, mostly (92%) available in non-dedicated webpages. None were specific to children or young adults. Only 5 webpages had specific contents for children, delivered as videos, animations, podcasts and interactive applications. Sponsorship and/or financial support was not found in 45% of the webpages.

CONCLUSION Few of the information on chronic respiratory diseases, available online in Portuguese, was created and adapted for children and young adults.

35• *Treatment of chronic urticaria with omalizumab*

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BACKGROUND Chronic urticaria (CU) is a common skin disease. Approximately 45% of patients with CU have an IgG autoantibody directed to the □-subunit of the high-affinity IgE receptor (chronic autoimmune urticaria) leading to cutaneous mast cell and basophil activation. Omalizumab, which is approved for the treatment of asthma, decreases circulating IgE, surface-bound IgE, IgEfCR receptors on mast cells and basophils, and IgEfCR-mediated cellular responses.

We describe a small series of cases of chronic urticaria in which symptoms improved dramatically after treatment with omalizumab.

METHOD Up to now, we've selected 3 adult patients with CU that were refractory to standard treatment, including high doses of histamine1 and 2 blockers. However frequent short cycles of systemic steroids were required to provide only temporary relief.

Each patient received 300 mg of omalizumab subcutaneously every 15 days. As clinical improvement was achieved, symptomatic medication was progressively reduced and finally discontinued it. Then, omalizumab 300 mg every 15 days was maintained for 3 months as unique therapy and then reduced to 300 mg every 30 days.

RESULTS Basic diagnostic measures that include skin prick tests for food, examination for occult infection, underlying systemic diseases, stool culture for parasites, determination of specifics IgE (CAP system assay) and serum complement level and evaluation of thyroid function had negative results.

One patient had positive results on autologous skin testing. In another patient, we detected the presence of antithyroid autoantibodies.

Two patients had total clearing of urticaria within 2 weeks and 1 patient within 4 weeks of starting omalizumab therapy. All 3 patients were able to stop the rest of medication.

Quality of life improved and no adverse effects were reported or observed.

CONCLUSION We present three patients with CU who were refractory to standard treatment but showed good response to treatment with omalizumab. There are several reports supporting use of omalizumab as an effective therapy for relieving and controlling symptoms of patients with CU. Apparently, the presence of detectable autoantibodies to IgEfCR is not required for response to omalizumab.

We will follow the evolution of these patients and will continue including more patients in the study in order to obtain more conclusive data.

36• *Sensitization pattern evolution of Madeira Island*

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BACKGROUND Population aeroallergens sensitization may be influenced by changes in the environment like indoor conditions. Throughout an epidemiologic study, Portuguese Allergic diseases Childhood (PAC study) the asthmatic sensitization pattern in Madeira was studied in 1995. In 2008 in another epidemiologic study EPIASMA, asthmatic sensitization was also evaluated in the Immunoallergy Unit. Purpose: To compare the aeroallergens sensitization pattern in these two study populations and correlate with life style and environment changes due to Madeira development. Methods: In both studies t asthmatic patients were recruited. An epidemiologic questionnaire was applied to characterize atopic disease, demographic data, and indoor environment. To determine common aeroallergens sensitization, skin prick tests were performed with standardised extracts. Madeira resident population demographic and socioeconomic data were supplied by Regional Madeira Statistical Department. The statics comparison was performed by chi-square tests.

RESULTS The table summarizes the two populations results:

	PAC study 1995	EPIASMA 2008	p
n	88	97	-----
MEAN AGE	8,08	11,08	0,000
MALE/FEMALE	1,1	1,4	0,553
RHINITIS (%)	63,6	97,9	0,000
SENSITIZATION PATTERN			
DERMATOPHAGOIDES PTERONYSSINUS (%)	48,9	75,3	0,000
DERMATOPHAGOIDES FARINAE (%)	48,9	69,1	0,007
LEPIDOGLYPHUS (%)	40,9	36,1	0,546
ACARUS SIRO (%)	31,8	34,0	0,757
EUROGLYPHUS (%)	11,4	18,4	0,219
TYROPHAGUS (%)	31,8	8,2	0,000
DOG (%)	14,8	19,6	0,440
CAT (%)	8,0	17,5	0,078
PERIPLANETA AMERICANA (%)	19,3	12,4	0,227
BLATTELLA GERMANICA (%)	19,3	7,2	0,017
BLATTA ORIENTALIS (%)	15,9	4,1	0,001
INDOOR MOULDS (%)	12,5	5,2	0,114
OUTDOOR MOULDS (%)	5,7	9,3	0,776
GRASS POLLEN (%)	17,0	19,6	0,707
PARIETARIA (%)	11,4	11,3	1,000

Despite similar demography, in 2008 basic sanitation/indoor conditions were improved which might explain the decrease of sensitization prevalence to Tyrophagus, Blattella germanica and Blatta orientalis. Indoor moulds sensitization also decreased, although not significantly. The amount of pets living inside the houses increased as well as dog /cat sensitization. Conclusions: In the last 15 years urbanism expansion and life style changes have occurred. Different sensitization patterns may be related to changes in the environment conditions.

37• *Optimize the cost-effectiveness of the laboratorial tests for the sensitization study of allergic patients in Madeira*

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BACKGROUD Allergic diseases are a major concern in Public Health given their worldwide high prevalence. Consequently they represent a significant raise on the financial responsibility of the Health Systems. Purpose: Optimize the cost-effectiveness of the laboratorial tests for the sensitization study of respiratory allergic patients in Madeira, in order to aware health professionals of the relevance of cost reduction and better management of resources for these procedures.

METHODS Study participants were recruited among the patients of the Immunoalergology (n= 116), 50 females and 66 males, with an overall mean age of 13.0±8.6.Asthma was the most common diagnosis of the patients (88.8%). For all patients, Skin Prick Test (SPT) and ImmunoCAP Rapid® and specific IgEs were done. Aeroallergens tested included mite, funghi, grass/herbs, tree pollen, cockroach, dog and cat. Results: Study population was sensitized for at least one of the tested allergens on 72.4% of the cases. Higher sensitizing rate was observed for house dust mite D. pteronyssinus e D. farinae. The analysis of the three methodologies for sensitization to D. pteronyssinus, D. farinae and cat had a higher concordance (kappa> 0.75). Good concordance was also found for specific IgEs when tested individually or within a mixed assay of allergens (house dust mix (hx2), kappa = 0,9155; herbs (wx1), kappa = 0,9155; grasses (gx1), kappa =0,8252; funghi (mx2), kappa=0,7895; trees (tx6), kappa =0,5918;), so for an alternative to SPT, the tested allergen mixes were evidenced as good screening tests. Conclusions: According to the results of this study we recommend SPTs as the elected tests for the study of allergic sensitization. In vitro specific IgE tests should be limited to the particular situations, given their lower sensitivity and higher cost and mixed assay of allergens could be a good screening. ImmunoCAP Rapid® tests are evidenced as reliable tests, particularly for the most relevant allergens and may constitute an alternative to specific IgEs and SPT tests for Primary Healthcare Units. Our results allow us to suggest that the battery of aeroallergens to be tested in this population should include D. petronyssinus, D. farinae blómia, Parietaria, Artemisia, Alternaria, Aspergillus, Platanus, Juglans, mix of grasses, cockroach, dog and cat allergens.

38• *Epidemiological investigation about allergies and their impact on quality of life and sports performance perceived by professional players*

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OBJECTIVE The aim of this study is to estimate the prevalence of allergic diseases in professional athletes (football players), the subjectively perceived impact on both the quality of athlete life and on sports performance.

MATERIALS AND METHODS We recruited 30 professional athletes (football players), mean age 24.8 years (range 16-33 years), and we administered a questionnaire including 20 questions. For each player we searched total and specific IgE for a panel of inhalant and food allergens.

RESULTS 7 of the 30 athletes recruited (23%) reported suffering from allergic diseases. In 6 out of 7 cases, the diagnosis was based on skin tests for allergies (5 / 6) and / or in vitro (5 / 6). On a VAS from 0 to 10, 7 athletes suffering from allergic diseases attributed to allergy an impact on their social life and sports performance, with an average of 3.3 (range 0 to 9.2). The results of total and specific IgE assays are ongoing.

DISCUSSION In our study group represented by 30 professional players, allergic diseases have a high prevalence (23%). These pathologies have a negative impact on social life and sport performance, as shown by the athletes themselves, to varying degrees depending on the disease: 0 on a. VAS from 0 to 10 for subjects with only rhinitis and / or conjunctivitis, up to a mean of 4.2 (range 1.4 to 9.2) for athletes who have an association between variable respiratory allergies, food allergy or dermatitis atopic. These findings suggest the importance of monitoring allergic diseases in athletes for both their healthy and efficience of sport performance.

39• *Nei pazienti con rinite allergica la terapia topica steroidea modificala flogosi producendo una riduzione significativa delle IGE e della triptase nasali*

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BODY Più lavori sono stati condotti sugli effetti della terapia topica steroidea sulla flogosi allergica nasale dei pazienti con rinocongiuntivite [1-2-3-4-5-6]. In un lavoro sugli effetti degli steroidi topici sulla flogosi nasale a confronto con l'immunoterapia specifica [7] nei pazienti con rinite allergica da betulla, non risultavano evidenti variazioni significative della Triptase e delle EG2+ cellule diversamente da precedenti studi [2-3-8-9]. In relazione ai suddetti dati, l'obiettivo del nostro studio è stato quello di valutare se in un breve periodo di tempo (3 settimane) lo steroide topico fluticasone furoato era in grado di ridurre la flogosi allergica in pazienti di età pediatrica, affetti da rinite allergica moderata e grave da Dermatofagoidi.

MATERIALI E METODI Prima e dopo 3 settimane in 13 pazienti trattati con steroide topico e in 10 pazienti non trattati venivano esaminate le IgE specifiche nasali, l'ECP e la Triptase nasale mediante il metodo di incubazione sulle superfici mucose dell'epitelio respiratorio delle prime vie aeree e successiva determinazione con metodo ELISA.

Prima e dopo 3 settimane di terapia venivano valutati, dando un punteggio variabile da 0 a 3 in base alla gravità, i sintomi nasali di prurito, rinorrea, ostruzione nasale e starnuti.

RISULTATI Diversamente dai pazienti di controllo che non mostravano variazioni significative dei sintomi e dei 3 parametri immunologici esaminati, i pazienti trattati con steroide topico evidenziavano una significativa riduzione delle IgE specifiche per Dermatofagoidi (p 0,01) della Triptase (p 0,001) ma non dell'ECP (p 0,9). IgE nasali e Triptase risultavano correlate fra loro e con la riduzione dei sintomi evidente nei pazienti trattati e non nei controlli (p 0,01). Le IgE specifiche, la Triptase e l'ECP valutate a livello serico non mostravano variazioni significative.

CONCLUSIONI Analogamente ad un precedente studio condotto su biopsie nasali [7], noi abbiamo evidenziato una significativa riduzione delle IgE specifiche nasali. Diversamente da questi autori abbiamo trovato una significativa riduzione della Triptase ed una evidente correlazione fra IgE e Triptase nasale in accordo con gli studi che hanno dimostrato come le IgE nasali sono per il 90% di derivazione mastcellulare [10-11].

Il dato dell' ECP nasale che diminuiva ma non in modo significativo, può

essere dovuto all'elevata sensibilità del metodo rapidamente variabile per flogosi di natura infettiva per altro frequenti nella stagione invernale in pazienti pediatrici.
I dati da noi ottenuti dimostrano che il fluticasone furoato è in grado di ridurre la flogosi ed i sintomi in un breve periodo di 3 settimane di trattamento e che il metodo di determinazione sull'epitelio respiratorio delle prime vie aeree, per la sua elevata sensibilità, scarsa invasività e facile riproducibilità, può risultare particolarmente utile per il monitoraggio della terapia antinfiammatoria nella rinite allergica da Dermatofagoidi.

40 • *L'immunoterapia sublinguale più che con un meccanismo di immunosoppressione sembra agire con un meccanismo di immunodeviazione*

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I meccanismi immunologici attraverso i quali l'immunoterapia specifica sublinguale (SLIT) può indurre una condizione di tolleranza, non sono ancora ben conosciuti. Alcuni autori hanno messo in evidenza un aumento dell' IL-10 interpretato quale risultato dell' attività regolatoria delle cellule T-REG [1]. Per quanto concerne lo switch TH2/TH1 e la conseguente produzione di IgE e IgG4, non tutti gli autori hanno rilevato un aumento delle IgG4 dopo SLIT [2] e recenti studi segnalano un aumento delle IgA2 indotto dall'attivazione del TGF-b [3]. Nei pazienti trattati con SLIT, più autori hanno invece evidenziato un significativo incremento delle IgE specifiche dopo il primo anno di terapia.

OBIETTIVO Partendo da questi presupposti per cercare di chiarire il meccanismo immunologico con il quale la SLIT risulta efficace, abbiamo voluto studiare il comportamento delle IgE e IgG4 specifiche per gli epitopi del Phleum in un gruppo di pazienti trattato con SLIT per graminacee per uno o più anni a confronto con un gruppo di pazienti allergici alle graminacee non trattati con immunoterapia specifica (ITS).

MATERIALI E METODI Venivano arruolati nello studio un gruppo costituito da 10 pazienti (A) che avevano eseguito un solo ciclo di SLIT precostagionale con estratto mix 5 della ditta Stallergenes, un secondo gruppo di 10 pazienti (B) che avevano eseguito SLIT precostagionale per 2/3 anni con lo stesso estratto e un terzo gruppo di 11 pazienti (C) allergici alle graminacee non trattati con ITS. Per entrare nello studio i pazienti dovevano aver mostrato chiari sintomi di rinocongiuntivite stagionale nell'anno precedente l'inizio della SLIT, risultare positivi ai prick test almeno +++- e avere IgE specifiche positive di 3,5 KUA/L per Phleum. I test cutanei venivano eseguiti con il metodo dei prick test utilizzando gli estratti della ditta Stallergenes. La determinazione delle IgE e delle IgG4 specifiche sieriche per Phleum e per gli epitopi r Phleum P1-P2-P5-P6-P7-P12 è stata eseguita con metodo Unicap 100 IgE/ IgG4 Pheia della ditta Phadia (Usala, Sweden). La valutazione statistica dei risultati in considerazione del non elevato numero di casi esaminati veniva effettuata con il metodo di Wilkokson.

RISULTATI Diversamente dai pazienti non trattati, i pazienti sottoposti a SLIT mostravano mediamente un aumento delle IgE specifiche sieriche per gli epitopi P1-P2-P5-P6 del Phleum ed un aumento delle IgG4 per gli stessi epitopi. Le IgE e le IgG4 per P7-P12, evidenti solo in alcuni dei pazienti trattati, non potevano essere valutate. La valutazione separata dei 2 gruppi di pazienti, gruppo A sottoposto solo ad un ciclo di SLIT precostagionale e B trattato con SLIT precostagionale per 2/3 anni, evidenziava i seguenti dati:

• i pazienti del gruppo A mostravano un aumento medio significativo delle IgE e delle IgG4specifiche per gli allergeni maggiori P1 e P5 e per gli allergeni minori P2-P6, ma mentre per i primi le IgE aumentavano di quasi il doppio, l'incremento delle IgE per gli allergeni minori P2 e P6 era pari a quasi tre volte il valore basale.

• i pazienti del gruppo B, trattati per più anni con SLIT, non evidenziavano più un aumento medio significativo delle IgE specifiche per gli allergeni maggiori P1-P5, ma invece un incremento chiaramente significativo per l'allergene minore P2 (p 0,021) e non per P6. In questi pazienti le IgG4 specifiche per i differenti epitopi, mostravano un aumento medio significativo delle IgG4 e conseguentemente una riduzione per inversione del rapporto IgE/IgG4 per gli epitopi P1-P5 e per P6 un lieve incremento non significativo. Diversamente le IgG4 per P2 non incrementavano e il rapporto IgE/ IgG4 aumentava in modo significativo.

• L'esame del rapporto IgE per epitopi maggiori e minori P1/P2 e P5/P2 evidenziava una significativa riduzione prima e dopo SLIT per aumento significativo delle IgE specifiche per P2.

CONCLUSIONI L' incremento non significativo delle IgE specifiche per gli allergeni maggiori P1-P5 dopo 2/3 anni di SLIT e l'aumento invece significativo delle IgE specifiche per l'allergene minore P2, suggeriscono un possibile meccanismo immunologico di sostituzione indotto dall' immunoterapia specifica. Il comportamento delle IgG4 che aumentavano in modo significativo per P1-P5 con riduzione del rapporto IgE/ IgG4 ed non aumentavano invece per P2 con conseguente aumento del rapporto IgE/ IgG4, confermava il meccanismo di sostituzione immunologica. L'esame infine del rapporto IgE per allergeni maggiori e minori P1/P2 e P5/P2, confermava ulteriormente il meccanismo di sostituzione delle IgE per allergeni maggiori con IgE per allergeni minori. Complessivamente i risultati ottenuti indicano infatti che rispetto ai valori basali dopo SLIT la produzione di IgE specifiche per gli allergeni minori tende a sostituire la produzione di IgE specifiche per gli allergeni maggiori. Per altro se la SLIT è in grado di indurre un incremento significativo delle IgE specifiche per epitopi minori, scarsamente prodotti dall'esposizione allergenica in alternativa agli allergeni maggiori, sicuramente più rappresentati in atmosfera e più responsabili dei sintomi, diviene più razionale spiegare come ad un aumento delle IgE specifiche per gli allergeni minori già nel primo anno di SLIT, può corrispondere una diminuzione dei sintomi che secondo recenti studi può essere evidente già nel primo anno di trattamento.

In conclusione i risultati ottenuti suggeriscono che la SLIT, oltre ad indurre un meccanismo di switch isotipico TH2-TH1, testimoniato dalla riduzione delle IgE per gli allergeni maggiori dopo il secondo anno di terapia, può agire anche con un meccanismo di sostituzione idiotipica di switch da IgE per allergeni maggiori (P1-P5) ad IgE per allergene minori (P2). Diversamente dalle IgE per gli epitopi P5-P6 che possono risultare cross-reattivi, come parzialmente documentato dal rapporto IgE/ IgG4 da noi osservato, il comportamento del rapporto IgE/I IgG4 per P2 non dimostra alcuna cross-reattività tra le IgE per gli epitopi P1-P2, confermando quanto già rilevato da precedenti studi [4]. Rimane comunque necessario un ampliamento della casistica per confermare il meccanismo di sostituzione immunologica indotto dalla SLIT.

41 • Allergenic cross-reactivity between pellitory and mulberry: case report

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In Barletta, a city of Puglia in southern Italy, between May and June 2009, at the 'Dimiccoli' Hospital, Emergency Department, 189 people out of 4440 (about 4%) have been found positive to disturbances of allergic type. On May 25th a hot day (max. temperature: 28°C) immediately after a thunderstorm, 15 patients out of 189, rushed to the above mentioned Hospital. Among those 15 patients, there was a 51 years old woman who complained of oculo-rhinitis, cough, chest tightness after being outside on her balcony once it stopped raining. Furthermore she felt face edema and worsening of respiratory symptoms after about 30 minutes from eating few mulberries. Since the clinical outcome was that of "anaphylaxis", the woman was treated with cortisone and antihistamines injection, with successful feedback.

METHODS The patient went through skin prick tests for inhalants and foods. During the visit she reported a parental medical history of respiratory issues even though no significant history of allergy problems was found.

RESULTS The skin prick tests for food allergens and inhalants were positive for pellitory and mulberry. It is worth taking into account that the May 25th there was a high concentration of pellitory pollen (19 granules/m3) and the patient ingested few mulberries.

CONCLUSIONS This is a case report of allergy to mulberry and to pellitory which confirmed the theory of allergenic cross-reactivity between these two allergens. Furthermore it proved the synergy effect that balanced on the clinical worsening of the patient after inhalation of pellitory pollen and ingestion of mulberry which ended up with the clinical outcome of anaphylaxis.

42 • A "modified" protocol for autologous serum skin test: in vivo and in vitro studies in a cohort of 47 patients with chronic urticaria

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INTRODUCTION One-third of patients with chronic idiopathic urticaria (CIU) have circulating functional autoantibodies against IgE or high affinity IgE receptor. The intradermal injection of autologous serum causes a weal and flare reaction in many patients with CIU, and this is the basis for autologous serum skin test (ASST).

METHODS ASST (with 'classic' and 'modified' protocol) was performed in 47 patients with CIU. Twenty-seven patients had discontinued all influencing therapies for at least 7 days. Twenty patients with severe urticaria were not able to suspend therapy (due to uncontrolled symptoms or generalized urticaria) and underwent test while still in therapy with anti-histamines, corticosteroids or both.

"Classic" ASST (cASST) procedure was performed as described in literature. In our 'modified' ASST (mASST) procedure, a different sample of blood was allowed to clot at 37°C for 30 minutes. ASST positivity was defined as a serum induced weal with a diameter of >=1.5mm than the saline-induced response at 30 minutes.

RESULTS Twenty-one of 47 patients (45%) scored positive on cASST, while 31 out of 47 (66%) scored positive on mASST. All of the cASST positive patients scored positive also on the mASST. The difference between cASST and mASST was statistically significant on the chi2 test ($p<0.05$).

Tryptase levels did not differ between cASST and mASST sera.

CONCLUSION We propose a modified protocol for ASST, which differs from the 'classic' one for a 30 min 37°C incubation. This test revealed more positivities than the 'classic' one, with a striking difference for patients under pharmacologic therapy. These findings suggest a different pathogenetic mechanism in patients with severe urticaria, in which anti-H1 and corticosteroid therapies cannot control symptoms and do not influence the mASST result.

This mASST may prove useful to increase sensitivity of ASST, especially in cASST-negative patients who cannot discontinue therapies, but further studies are needed to confirm these results.

43 • Celiac desease in juvenile dermatomyositis: is possible?

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INTRODUCTION Juvenile dermatomyositis (JDM) is a rare, often chronic autoimmune disease with onset during childhood. It is characterized by weakness in proximal muscles and pathognomonic skin rashes. Although the etiology remains unclear, it has been proposed that JDM is caused by a vasculopathy within the muscle tissue and multiple other organ systems of genetically susceptible individuals, possibly in response to environmental triggers. Celiac disease is a malabsorption syndrome resulting from a small-bowel enteropathy related to the intake of dietary gluten in susceptible individuals. Gluten is thought to cause both direct and immune-mediated toxicity.

CASE We report a case of a six year and a six months old girl who was admitted to the hospital suffering from increasing muscle weakness and pain in the legs. She developed malaise, easy fatigability, fever with temperatures until to 38°C. The skin was pale and the physical examination revealed erythematous, desquamative lesions on the extensor surface of the fingers, especially the metacarpophalangeal and proximal interphalangeal and proximal interphalangeal joints (Gottron's papules). She also had a heliotrope rash characterized by a violet erythema around the eyes, in the upper eyelids. Neurological examinations demonstrated moderate reduced power in the proximal lower extremities. The laboratory investigations showed a marked elevation of creatine kinase (CK 537 and 769), a moderate elevation of serum glutamic oxaloacetic transaminase (GOT) and lactate dehydrogenase (LDH). The C-reactive protein (CRP) was negative and the erythrocyte sedimentation rate (ESR) was 33 mm in the first hour. In addition, none of the following autoantibodies (rheumatoid factor, antinuclear antibodies, antimitochondrial antibodies, anti-DNA antibodies, antithyroid antibodies) was detectable except for the antibodies against smooth muscle cells that were positive (++). An electromyogram (EMG) showed typical signs of myopathy. Chest X-ray, abdominal ultrasound, electrocardiogram and echocardiography showed no abnormalities. Her body weight was in the lower limits of the normal range and was performed a celiac screening that revealed anti-endomysial and anti-transglutaminase antibodies positive (EMA IgA ++, TG IgA 43,6). The patient underwent upper gastrointestinal endoscopy with a small-bowel biopsy that confirmed the suspicion of celiac disease but we are waiting for histology and analysis of HLA (DR3, DQ2).

CONCLUSION Our observation raises the question of an association between DM and celiac disease as part of a continuum, suggesting that celiac disease may be included within the spectrum of the gastrointestinal manifestations of DM. From a practical point of view, our data indicate that the diagnosis of celiac disease should be suspected in DM

patients exhibiting malabsorption syndrome. Based on our findings, we further emphasize that an evaluation for celiac disease, including anti-endomysium antibody and tissue trans-glutaminase antibodies should be considered in DM patients presenting with unusual and unexplained gastrointestinal features. This could lead to the early management of such patients, resulting in decreased morbidity related to misdiagnosed celiac disease.

44 *Epidemiological data on anaphylaxis from the registry of severe allergic reactions of Piemonte region (Italy)*

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RATIONALE The incidence of severe allergic reactions in general population is largely unknown and information about triggering factors is lacking.

METHODS We reviewed anaphylaxis cases from the database of the Piemonte Region Reference Center for Severe Allergic Reactions. The registry monitors a population of 4,400,000 inhabitants, with real-time registration of regional cases of severe reactions, and collects data mandatory for prescribing self-injectable epinephrine reimbursed by Regional Health System. Anaphylaxis cases were evaluated according to NIAID/FAAN diagnostic criteria, and assigned to one in three levels of probability of anaphylaxis using a clinical checklist based on recommendations of the Brighton Collaboration for anaphylaxis following immunization.

RESULTS Among the 2461 reported cases of severe allergic reactions, 1434 (58.3% [Females 44.3%, Males 55.7%, mean age 36.8yrs (range 0-87yrs)] were classified as anaphylaxis. The causes of anaphylaxis were: hymenoptera venom in 47.8% of cases (18.5% in subjects <18yrs vs 55.1% in subjects =18yrs, p<0.0001), foods in 39.7% (76.9% vs 30.4%, p<0.0001), drugs in 7.7% (2.4% vs 9.1%, p<0.0001), other causes in 1.9%, idiopathic in 2.9%. Skin, respiratory and gastrointestinal symptoms were more frequent in children compared with adults (95.8% vs 89.4%, p=0.001; 79.4% vs 73.2%, p=0.034; 38.1% vs 23.8%, p<0.0001, respectively), while cardiovascular involvement was more frequent in adults than in children (55.1% vs 22.7%, p<0.0001).

CONCLUSIONS The high prevalence of hymenoptera compared to drug-induced anaphylaxis we observed is probably explained by the required prescription procedure of self-injecting epinephrine. Differences in organ involvement and triggers of anaphylaxis were found between young and adult patients. We believe that a unified data collection system could help to understand better the occurrence and circumstances of severe allergic reactions.

WEBSITES

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