5th ONLINE NEWSLETTER

REPORTS

TURKEY

7th EAPD Interim Seminar and Workshop

together with the
18th Congress of the Turkish Society of Paediatric Dentistry
took place in Istanbul, Turkey
31 March - 2 April, 2011

THEME: ENDODONTICS IN PRIMARY AND IMMATURE PERMANENT TEETH

The 7th Interim Seminar of the European Academy of Paediatric Dentistry (EAPD) was held on the first and second of April this year in Istanbul (Turkey).

It has already become a tradition that the EAPD invites some experts to a special topic in the years between the biannual congresses. is devoted in the years between their meetings in a seminar topic and invites experts. The goal is the development of guidelines, which are then discussed in a larger panel of experts. This year the theme was "Endodontics in primary and immature permanent teeth".

On the first evening, all delegates were invited to a traditional Turkish dinner in restaurant on the other side of the city, true to the motto of the congress: "let´s meet where the two continents meet". There, in a nice and relaxed atmosphere all the delegates could

enjoy excellent food and conversation with colleagues and friends.

The next day, the actual first day of the meeting started with the three main speakers.

The first speaker, Prof. Dr. Dimitrios Tziafas (Department of Endodontology, Aristotle University of Thessaloniki, Greece) dealt with the theme "the changing patterns of vital pulp therapy (VPT) in primary and immature permanent teeth". In his lecture he gave an overview of the biological mechanisms that underlie the healing and / or regeneration potential of the dentin-pulp-complex. Experimental and clinical data on the biologic and therapeutic validity of the various VPT techniques used in daily practice today in primary as well as in young permanent teeth were presented, followed by the future directions in terms of regenerative treatment. In his introduction he stated that the development of new strategies is based on the recognition that

a) the dental pulp cells are genetically programmed to become potential preodontoblasts and the expression of the dentinogenic potential requires specific epigenetic signals and

b) the nature of the biological mechanisms by which the traumatized pulp-dentin complex is therapeutically healed determine the properties of the newly formed dentin and therefore play a critical role in the outcome of dental treatment.

The most important signaling mechanisms leading to regeneration of the pulp-dentin complex, which seem to offer exciting therapeutic opportunities for the future, were discussed.

First of all, the biology of the dentin-pulp complex and its dentinogenic dynamics were briefly reviewed in order to assess the biologic and therapeutic validity of the currently used VPT techniques as well as future directions. The review included structural and developmental aspects of the dentin-pulp complex, pathological aspects and the biology of tertiary dentinogenesis.

Then, he went on to the VPT in today´s clinical practice, which include

pulp protection in deep dentinal cavities, indirect pulp capping as well as direct pulp capping and pulpotomy. He concluded that the prognosis of VPT in teeth with pulp exposures remains one of the most problematic and unpredictable methods of dental treatment, regardless of the variety of materials and methods that have been used over the years.

He continued that during the last two decades many research efforts have focused on the control of wound healing and how pulp cells could be stimulated to regenerate the pulp-dentin complex.

To achieve effective clinical strategies in VPT research has to be focused on two biological goals:,

a) the transdentinal stimulation of pulp-dentin regeneration as an alternative treatment modality in deep dentinal cavities without pulp exposure and indirect pulp capping treatment.

The ultimate goal of an attractive treatment modality for carious or caries-free deep dentinal cavitites without pulp exposure might be a molecule(s)-based technique aiming to signal reduction of dentin permeability beneath the cavity, i.e. localized formation of peritubular dentin in the affected dentinal tubules and a regional and time-limited effect on surviving odontoblasts to form reactionary dentin (Tziafas et al. 2000).

b) The direct induction of new dentin formation as a predictable strategy to initiate reconstitution of the dentinal defects in direct pulp capping and pulpotomy situations. This might be an achievable goal for the near future. It requires tissue engineering-techniques based on specific biologically active molecules and / or biomatrices.

He then spoke about the following methods and research subjects:

Cell-based and gene therapies and

Molecules / matrices-based therapies

In his closing remarks he stated that the treatment of deep dentinal cavities and indirect pulp capping with materials aiming to reduce dentin permeability, and the application of biologically active molecules or matrices in direct pulp capping and pulpotomy procedures to induce early formation of reparative dentin bridge, as well as the exploitation of the regenerative capacity of young permanent teeth for the reconstitution of lost tooth structure in carious or traumatized teeth, are only indicative examples of the new directions of

research in the fields of endodontology and pediatric dentistry.
In the end Prof. Tziafas pointed out that much research is still needed before practice-ready therapies are developed from this basic research.

The second lecture discussed the topic „Clinical outcome of endodontic treatment in the primary dentition". In the beginning of his lecture Prof. Norbert Krämer (Gießen, Germany) pointed out that the problem of early childhood caries is still not solved.

Quite often these children already need extensive dental treatment before even going to school. In these cases endodontic treatments are commonly necessary. Indication, aims and kind of endodontic therapy are primarily dependent on pulp vitality. Therefore, correct history taking and diagnosis are of utmost importance. Dental radiographs are indicated for a number of reasons, including caries progression, any pathology and development of the permanent successor. Depending on the presence or absence of pain and the clinical and radiological findings, there are several treatment modalities. In principle, vital pulp therapies like direct or indirect pulpcapping or pulpotomy have to be distinguished from the therapy for nonvital pulps with irreversible pulpitis or necrosis.
Protective liners like calcium hydroxide or glasionomer cements are indicated when a normal, unaffected pulp is present, when caries is removed completely before restoration. A protective liner is applied in deep dentin areas, where remaining deninal thickness is < 500um, in order to facilitate pulp tissue healing, restrict pulp irritation, and to reduce postoperative sensitivity.
Indirect pulp treatment is performed in teeth with deep carious lesions approximating the pulp, however, being without symptoms of pulp degeneration. The idea of indirect pulp treatment is to leave caries close to the pulp in order to avoid pulp exposure and to apply some biocompatible material allowing re-entry of the situation. Recent literature shows however that reentry is *not*

mandatory. Instead, it is believed that a durable and tight seal against bacterial penetration from the oral cavity provides a good prognosis for arresting the remaining caries. Another argument in favor of this technique is, that the recent literature reported higher success rates compared to pulpotomy and that it also allows for regular exfoliation times.

The indication for direct pulp capping is given for primary teeth with normal pulp and exclusively after smallsized bur cuts or trauma and additionally when biological circumstances are optimal.

Pulpotomy is defined as complete removal of the coronal pulp to the entrances of the coot canal orifices. Main indication for pulpotomies are pulp exposures due to trauma or caries. The exposure area has to be covered medicamentously for durable clinical success. Medicaments used are: (effect in parentheses): Formocresol (devitalization), calcium hydroxide (regeneration), ferric sulfate (preservation) and mineral trioxide aggregate (MTA;
regeneration). According to numerous studies MTA is actually the amputation material with the highest success rates. In the end the tooth has to be sealed with an appropriate restorative material (resin composite, amalgam) or a stainless steel crown in order to prevent bacterial leakage and pulp damage.

Irreversibly infected or necrotic pulp due to caries or trauma requires pulpectomy as
root canal procedure. Root canal treatment should be limited up to 2 mm short of the radiologic apex in order to prevent damage to the permanent tooth bud. Infected tissue has to be removed with hand instruments before the canals are irrigated (1% sodium hypochlorite and/or chlorhexidine). After drying of the root canal, a resorbable material has to be used for obturation. Appropriate root canal sealers for primary teeth are non-reinforced zinc/oxide eugenol, iodoform-based paste (KRI), calcium hydroxide, or a combination paste of iodoform and calcium hydroxide (Vitapex, Endoflax). After completed treatment, x-ray control is recommended.

The following criteria should be taken into consideration when planning a lengthy treatment like a pulpectomy:

- Primary incisors are of inferior importance

- In a neutral occlusion the loss of a first primary molar only means a temporary space loss
- A second primary molar is of high importance before the first permanent molar has reached the occlusal plane

Finally, Prof. Krämer pointed out that it has to be taken into consideration whether it makes sense to avoid a pulp exposure in favor of the much more successful indirect pulp capping procedure.

The third and last speaker of this morning was Prof. Monty Duggal, Department of Paediatric Dentistry, Leeds Dental Institute, UK. His topic was „Interventions for the Endodontic Management of Non Vital Traumatised Immature Anterior Teeth in Children and Adolescents-Calcium Hydroxide Apexification, Use of MTA and Regenerative Endodontic Technique".

In the beginning he pointed out that dental trauma is common in young children and is the most frequent cause of nerve death in immature permanent incisors.

In immature teeth where there is death of the pulp clinicians face a challenge. Because there is no further root development, the root has thin dentine walls liable to fracture under physiological forces and a wide, open apex which is time consuming and technically difficult to treat. For decades, prolonged dressing of the root canal with calcium hydroxide for "apexification" has been the method of choice. Although this technique has been reliable and was frequently used, an increased prevalence of root fractures has been reported due to desiccation of dentinal proteins, making the dentine more brittle and more predisposed for root fractures.

In the last decade the introduction of Mineral Trioxide Aggregate (MTA) has lead to a change in treatment. MTA can be used to physically create a barrier at the root end thereby allowing the root canal obturation to be carried out in the same or the next visit. Although it remains expensive and there are few long term studies on its success, the recommended best

practice point is that clinicians should consider using MTA routinely as a method for creating an apical barrier to allow root canal obturation to be carried out. One of the potential disadvantages is discoloration of the crown, leading to poor esthetics. After the endodontic treatment is completed it is important to reinforce the coronal portion of the tooth at the time of final restoration in order to increase the fracture resistance of endodontically managed immature teeth.

Recently a technique referred to as Regenerative Endodontic Technique (RET) has been introduced. Through the repopulation of the root canal space with vital tissue, this technique aims to promote continued root development and/or thickening of the dentinal walls, thereby

improving the long term prognosis of the tooth.

The technique is based on the following prerequisites:

- Presence of stem cells
- Complete disinfection of the root canal
- Provision of a scaffold within the root canal (blood clot)
- Provision of a signal to the stem cells in order they can differentiate

Disinfection of the root canal is usually achieved with the triple antibiotic paste, which consists of ciprofloxacin, metronidazole and minocycline.

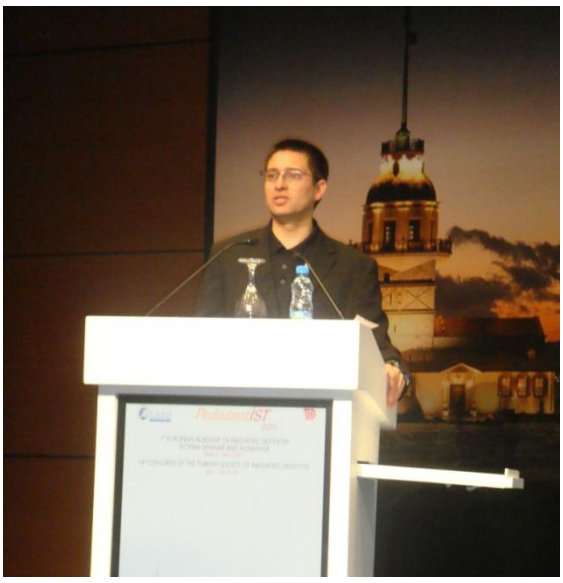
The speaker concluded that at present there is still insufficient evidence available for this technique to be recommended to be used routinely by clinicians for the management of non vital immature teeth in children, although some studies are being conducted at the moment. However, he suggested that clinicians should give due consideration to the use of this method,

especially in cases where the root development is very immature and even the use of MTA is unlikely to improve the prognosis of the tooth.

After closing of the session and lunch, the lectures were discussed in three different workshops in the afternoon.

Workshop number 1 '"The Changing Patterns of Vital Pulp Therapy In Primary and Immature Permanent Teeth" was moderated by Professor Ivar Espelid, Department of Paediatric Dentistry, University of Oslo, Norway, Chair EAPD Clinical Affairs Committee.

Workshop 2 "'Clinical Outcome of Endodontic Treatment In the Primary Dentition" was moderated by Dr Jan Kühnisch, Poliklinik for Zahnerhaltung und Parodontologie, Ludwig-Maximilians University of Munich, Germany, Member EAPD Clinical Affairs Committee.



And last but not least, Assoc. Professor Dominique Declerk, School for Dentistry, Catholic University Leuven, Belgium, Member EAPD Clinical Affairs Committee was the moderator for workshop number 3. "Biological and Novel Methodologies For the Management of Non Vital Permanent Teeth With Incomplete Root Development"

After a given time the workshop leaders presented their conclusions to the audience and gave recommendations for treatment.

At the moment, all 3 working papers are being revised by the experts so that they can be presented at the next EAPD conference in Strasbourg in May 2012.

In the evening the local organizing committee had organized a wonderful boat trip with dinner and dancing on the Bosporus. Although it was raining, everyone enjoyed the lovely food, the nice views and last but not least the belly dancing.

SLOVENIA

9th Meeting of the Slovenian Society of Paediatric Dentistry

September 24th – 25th 2010

Celebrating its 30th anniversary in 2010, the Slovenian Society of Paediatric Dentistry organized the traditional triennial meeting in Ljubljana (September 24-25, 2010). The main topic of this meeting was the use of fluoride in paediatric and preventive dentistry.

With the help of experts from Slovenia and abroad (Prof. Roger P. Ellwood, Manchester, UK, Prof. Ivar Espelid, Oslo, Norway, Prof. Melinda Madlena, Budapest, Hungary, Prof. Jack K. Toumba, Leeds, UK, and Prof. Vesna Zivojinovic, Belgrade, Serbia), biochemical, physiological and toxicological aspects of fluoride were presented. The past and current practice on fluoride use in Slovenia and other countries in the region were discussed. Presentations of contemporary evidence-based recommendations on the use of fluoride in children culminated in two hours of interesting panel discussion. More than 250 participants, mainly dentists working predominantly with children and adolescents in Slovenia, had the opportunity to share their knowledge and experience with the panelists, many of them being the key contributors to the process of production of European Academy of Paediatric Dentistry (EAPD) guidelines on the use of fluoride in children.

Following the conclusions of the meeting, Slovenian Society of Paediatric Dentistry will strive to proceed with the production of national recommendations on fluoride use in children and adolescents, based on the EAPD guidelines.

However, additional efforts will be necessary to attract all the potentially important partners in oral health care of children, e.g. paediatricians, dental health educators, dental hygienists, pharmacists, etc. Namely, only a handful of them responded to the invitation to the 9th Meeting of the Slovenian Society of Paediatric Dentistry. Might this also be a global/ European experience?

Young musicians enriched the opening ceremony of the 9th Meeting of the Slovenian Society of Paediatric Dentistry

Prof. Narcisa Kosir was nominated Honorary Member of the Slovenian Society of Paediatric Dentistry (accompanied by Dr. Rok Kosem, President of the Society, and Prof. Mitja Bartenjev, Honorary Member of the Society)

The panelist during a vivid discussion

The attentive auditorium

The speakers and panelists (LtoR): Prof. Narcisa Kosir, Prof. Melinda Madlena, Prof. Mitja Bartenjev, Dr. Tanja Tomazevic, Dr. Rok Kosem, Prof. Vesna Zivojinovic, Prof. Jack K. Toumba, Prof. Alenka Pavlic, Prof. Ivar Espelid, Dr. Alenka Senk Erpic, Prof. Roger P. Ellwood

Once again Ljubljana proved to be a nice place to host a meeting

SWITZERLAND

Annual meeting Bern

20th January 2011

Growth and development

The 28th meeting of the Swiss Association of paediatric dentistry was held on January 20th in Bern, Switzerland. The meeting got a bit of an international flair through some members from neighbouring countries who also took part. 400 participants had gathered in the old and sumptuous rooms of Bellevue Hotel in Berne and could enjoy a piano concert given by former SVK president Dr. Juliane Leonhardt Amar to start with. After that, member of the board of the French Association for Paediatric dentistry, Prof. Jean-Louis Sixou, brought his greetings to the board of the Swiss Association and the participants. He was followed by Dr. Verena Bürkle from the Austrian Association and Prof. Norbert Krämer, president of the EAPD. After a warm welcome by Dr. Giovanni Ruggia, president of the SVK, Dr. Hubertus van Waes was leading into the scientific program. First speaker was Prof. Christos Katsaros from the University of Berne. He dealt with the role of the paediatric dentist in orthodontics. In the first part of his speech he explained the most important new developments in diagnosis. The focus was hereby layed on the the completely three dimensional digital documentation of patient records. Of particular importance is the digital volume tomography (DVT), which is of especially helpful when spatial relationships are important like with retained teeth or relocation of tooth buds. Although this new technique is able to gain all informations that can usually only be gathered by doing multiple x-rays, the dose of radiation has also to be taken into consideration. After talking about three dimensional scanning of patient models for better planning, he continued to the use of mini implants for orthodontic reasons, which facilitate some treatments a lot and are usually well tolerated by patients.

The second lecture was given by Dr. Richard Steffen and Dr. Hubertus van Waes together. They dealt with problems regarding the second primary molar. The first problem can be undermining resorption of the second primary molar by the first permanent molar. Regarding the speaker it is best – if possible – to keep the primary molar in order to avoid space loss. He described different methods and appliances to achieve this but also solutions if the tooth is lost. The next

topics were ankylosed second primary molars and also permanent teeth in infraokklusion. Their motto in case was " just never give up".

Prof. Norbert Krämer gave the third lecture, he was talking about the latest news in MIH etiology and therapy. He stated that MIH is not a hypocalcification but that instead there is a remarkable increase in organic material in the enamel which leads to a disturbance in the development of hard tissue. The etiology is still unknown and authors give a prevalence of 3,3 to 25%. The symptoms include a sensitivity to hot and cold and pain during treatment. So sometimes local anaesthetic is not enough and has to be accompanied by analgetics like paracetamol or a sedation. When a restauration is made it is important to have the borders in sound enamel and dentin because adhesion of composite on enamel affected by MIH is very low. If the patient is very young or uncooperative or if the placement of rubber dam is not possible then a provisional filling with glasionomer cement is also possible. Then after a certain time, a definite restauration should be possible.

The last lecture was given by Dr. Wanda Gnoinski from the university of Zürich, who also became honorary member of the SVK on that day. She was talking about special insurance topics in Switzerland.

To summarize it was a meeting with lots of interesting collegues, a very interesting scientific program in a very special surrounding.

(Schweizer Monatsschrift für Zahnmedizin)

Prof. Krämer, Dr. van Waes

Dr. Steffen

GERMANY

APW Kontrovers Gießen

18th -19th February 2011

Bruxism in children – this was the title of an event held by APW in Gießen, Germany on 18th and 19th of February 2011. Under the leadership of Prof. Dr. Norbert Krämer etiology, therapy and prevention of bruxism in children and adolescents were discussed as well as psychological aspects of habits in childhood.

In the beginning a very interesting case about a young girl with bruxism was reported who had to be treated in a psychiatric clinic and who was also diagnosed with anorexia nervosa. This leads to the conclusion that there is also a psychologic aspect to bruxism.

Although literature states that the prevalence of bruxism in children and adolescents is around 16-20%, no guidelines for treatment or therapy exist. Should we just watch and see or should we start a treatment – and if so, which?

While abrasions due to bruxism can usually be seen in the front of the primary dentition, they occur more on the molars in the permanent dentition.

The aspects of psychogenic disturbances were presented by Prof. Dr. Burkhard Brosig and Dr. Markus Stingl who emphasized the importance of interdisciplinary work between dentist and psychosomatic doctor, which can finally lead to the desired success.

As an alternative for the usual plastic bite guard for the symptomatic therapy a new cheaper soft silicone material was introduced, which can be made chairside by the dentist. Participants could give it a try in a hands-on course.

The program was complemented by some other lectures on different subjects such as trauma, oral dysfunctions, MIH.

(A. Üsküdar, Gießen)

ITALY

South Tyrol Update Paediatric Dentistry

Meran 13-14.5.2011

On May14th, in the town of Meran near the city of Bolzano (South Tyrol, ITALY), took place for its first time in South-Tirols history the 1st International Symposium of Dentistry with an update on „Pediatric Dentistry". The big interest in the event was shown by the support of many institutions and societies, in primis the italian society of pediatric dentistry which elected this congress as its spring meeting 2011.

The quality of the speakers, representing mainly Professors from Universities in Italy and abroad, and the overwhelming frame of the Kurhaus of Meran in the springtime guaranteed a great amount of registrations, reaching between Friday and Saturday about 150 participants.

Also the many attending sponsors gave an important contribution to the good organisation of the congress.

This event was the chance to make come together the scientific knowledge of the italians with that of the german people, and this thank to the attendance of the president and of the italian (dr. Roberto Ferro) and austrian (dr. Verena Bürkle) society of pediatric dentistry at the same time.

The presentations covered a large spectrum of topics regarding pedodontics: it ranged form the fillings and endodontic treatments of decidous teeth (dr.Bürkle, A) to the importance of caries and the timing of the first dental check up in a child (dr.Ferro, I). There were topics about the importance of the sealings and fluorid (Prof.Cadenaro, I), about dental traumatology (Prof.Filippi, CH), about EBM in pedodontics (dr.Greco, I) and about hypnosis in the everyday dental treatment of children (dr.Schöderbock, A). At last there were also presentations ranging from ambulatory surgical treatments (Prof.Angerame, I) to the use of injections in pediatric patients (Prof.Stellini, I).

Very stimulating for the pediatricians attending the congress were also the topics about the diagnosi and treatment of the mucosal lesions (Prof. Majorana, I), about the important relationship between pediatric dentists and pediatricians (Prof.Pizzi, I) and about the psychological approch with children who need dental treatment (Prof.Zerman, I).

Friday afternoon was guest in the „Pavillon des fleurs" Prof. Filippi form Basel (CH) who hold a very interesting workshop about HALITOSIS on evidece

based concepts and the last news about it in front of an odiens of dentists and dental hygienists.

The president of the congress, dr. Christian Greco, was pleased to have organised such a successful event that had a positive feedback and that had offered to South Tirol a weekend of great cultural exchange pointing the passion and great attention for the dental care of our little patients.

(Dr. Christian Greco)

The speakers and the local organizing committee. Second from left: Dr. Christian Greco, conference president.

GREECE

23d Congress of the IAPD, Athens

15th – 18th June 2011

The 23d Congress of the IAPD took place in Athens-Greece, June 15 to 18, 2011. The congress had a great success both scientifically and socially with the participation of more than 1700 delegates from 80 countries. The Chair, Professor Lisa Papagiannoulis and the members of the Organizing Committee surpassed themselves and made this congress one of the best in history of the IAPD, despite the very difficult political and economical circumstances of Greece.

This Congress, within the context of its main theme, Interdisciplinary Approach to Paediatric Dentistry, presented the need that all health professions should work together towards the well-being of the child, the adolescent and the patient with special needs. The Scientific Program included one Pre-Congress Symposium, two Clinical Continuing Education Hands-on Courses and one Postgraduate Student Workshop. All the Pre-Congress Sessions had a success beyond any expectation due to the excellent coordinators, speakers and tutors. The main Scientific Program consisted of 6 Symposia, 1 Debate and 15 Invited Lectures. More than 70 speakers, distinguished in their area, covered almost every aspect of the oral health care of the child and encouraged the application of the scientific knowledge to the every-day clinical practice. An important component of the Scientific Program was the oral and poster presentation sections. This year 766 posters were submitted and from those 166 had applied for the BSBF, Morita and Jens Andreasen Awards. With the help of the experienced coordinators and chair persons but also with the delegates' participation, the Symposia, the Invited Lectures as well as the Oral and Poster Sessions became really interactive, challenging and rewarding. The participants were impressed with the fact that the Auditoria and Lecture Rooms were filled to capacity.

The Social Program was also very successful with 1500 participants in the Opening ceremony, 500 in the Gala Dinner and more than 650 in the Beach Party. All the participants commented the cultural and ethical message of the opening ceremony performance, which was a dance performance under the theme "The friendship of the patient". The social events pleased everybody with Greek food, music and dancing.

Comments from the delegates for this congress:

"A Congress that will go to the history of Paediatric Dentistry; best attended, largest IAPD conference ever; extremely well organized; scientific quality superb!"

"Great IAPD meeting, excellent organization, enthusiastic staff and generous hospitality. The Greek flair and culture was everywhere!"

"Despite the worst of the financial and political circumstances in Greece, we had a great time; The congress facilities were excellent, the sessions were outstanding with fruitful interactive discussions and the social arrangement were wonderful!"

Figures

Figure 1 : The board of the IAPD and the Chair of the Organizing Committee Prof. Lisa Papagiannoulis

Figure 2 : The Local Organizing Committee at the Closing Ceremony

Figure 3 : A view for the Main Auditorium during the opening Ceremony

ANNOUNCEMENTS

11th congress of the European Academy of Paediatric Dentistry

A crossroads of knowledge, innovation and expertise for children´s wellbeing

May 24th – 27th 2012

Strasbourg, France

www.eapd2012.eu