focus on the use of Angiotensin Converting Enzyme Inhibitors (ACE-I).

Methods A Europe-wide web-based survey and a sub-sequent DELPHI questionnaire was developed in the con-text of EU's Seventh Framework Programme under grant agreement n°6 02 295 using standard recommendations for survey design. The questionnaire consisted of 23 ques-tions addressing different aspects of drug therapy for HF in children. Use patterns of ACE-I i.e. dosage by age group, effectiveness and toxicity assessment according to HF ae-tiology where investigated. Clinicians from 204 different hospitals of 39 European countries were invited via e-mail to participate. The subsequent DELPHI process discussed controversial responses within a selected expert panel in two rounds.

Results The response rate of the survey had been 50%. The survey delivered valuable information about thcurrent paediatric heart failure therapy, especially with regard to the pattern of ACE-I use. Enalapril seems to be already the ACE-inhibitor of choice for children and ad-olescents. A suitable formulation and knowledge about dosing as well as adverse events might offer Enalapril also for neonates and infants. Several controversial aspects which were identified within the survey and which are re-lated to paediatric heart failure therapy had been put up for discussion to the DELPHI expert panel. They showed a high degree of consensus in their professional criteria about most of the contents presented for discussion. Pos-sible starting points in the way towards a standardisation of paediatric heart failure therapy were identified. With re-gard to non-consensus statements, DELPHI experts pro-vided a better visibility to some aspects of clinical practice with greater disparity of opinio Diagnostic and therapeu-tic approachesns among physicians.

Conclusion This survey and the subsequent DELPHI questionnaire provided an overview of the clinical treat-ment routine of paediatric HF across Europe. ACE-I seem to be a crucial part of the treatment strategies. Consensus but also still controversial aspects of clinical practice rou-tines for a safe and effective use of heart failure treatment for children in Europe were identified.

The research leading to these results has received funding from the EU's Seventh Framework Programme (FP7/2007-2013) under grant agreement n°6 02 295 (LENA).

PP-5 PRESCRIPTION OF BIOSIMILAR SOMATROPIN IN THE ITALIAN PAEDIATRIC POPULATION

Clavenna, Pepino, Cartabia, Bonati. *IRCCS Istituto di Ricerche Farmacologiche, Mario Negri, MILAN, Italy*

10.1136/archdischild-2017-esdppp.72

Background Omnitrope (somatropin) was the first bi-osimilar approved by the European Medicine Agency in 2006. Since somatropin is one of the biological products most commonly prescribed to children and adolescents, a study was performed with the aim to evaluate the pre-scription of this drug in the Italian paediatric population. To the best of our knowledge, no drug utilisation studies evaluated the prescription profile of biosimilars in the pe-diatric population.

Methods Data collected in healthcare administrative databases of Lombardy region, Italy, in the 2004–2012 period were analysed. Children and adolescents who received prescriptions of somatropin (H01AC01code of the Anatomical Therapeutic Chemical classification sys-tem) for at least two consecutive years were identified as prevalent cases. Subjects were defined incident cases if they had no somatropin prescriptions in the previous 2 years. Prevalence and incidence of somatropin prescrip-tion were estimated by gender, age group and observation year. Moreover, each youth with the first prescrip-tion (index prescription, IP) in the 2006–2010 period was monitored for 24 months, and somatropin prescriptions were analysed to evaluate if a switch between products occurred. In switchers, the occurrence of specialist vis-its and/or hospitalizations in the 60 days preceding the change was checked.

Results During 2012, the prevalence of somatropin pre-scription in Lombardy region was 12.0 per 10,000, with an incidence of 2.8 per 10 000. Both prevalence and inci-dence increased across time (from 9.6 and 1.6 per 10 000 in 2004, respectively). The prevalence was greater in boys than in girls (14 versus 10 per 10,000), and increased with increasing age (from 2.7 in pre-schoolers to 21.1 per 10 000 in adolescents). A total of 1415 children had the somatro-pin index prescription in the 2006–2010 period. Only 98 of them (7%) started with the biosimilar Omnitrope. The percentage of children starting with the biosimilar slightly increased with increasing age, from 4.9% in the 1–5 years old to 7.5% in the adolescents. In all, 17 out of the 98 sub-jects (17.3%) with biosimilar as IP switched to another so-matropin product during the 24 months after the starting date. Of the 1317 children who started with a 'branded' somatropin, 47 (3.6%) switched to another products (no one to Omnitrope). The rate of switch was higher in pre-school aged children (3 out of 10) and decreased with in-creasing age (5 out of 45 in adolescents). On the contrary, the frequency of switch in subjects with other somatropin products did not change among age groups.

Only 4 out of 17 subjects had a specialist visit and/or an hospitalisation in the 60 days before the switch from bio-similar to 'branded' products, while in the non-biosimilar group, a specialist visit and/or hospital admission was re-corded for 26 out of 47 children.

Conclusion Only 7% of incident (naïve) cases started with the biosimilar somatropin. Subjects who started with the biosimilar switched more frequently to anoth-er product and the change was less likely preceded by a specialist visit.

PP-7 THE SAFE-PEDRUG INITIATIVE: AN OPPORTUNITY FOR ACADEMIA TO CLOSE THE GAP

[1]De Bruyne, [2]Vande Walle, [3]The SAFE-PEDRUG consortium. *[1]Ghent University, GHENT, Belgium; [2]Ghent University Hospital, GHENT, Belgium; [3]Ghent University, Ghent University Hospital, KULeuven and VUB, GHENT, LEUVEN AND BRUSSELS, Belgium*

10.1136/archdischild-2017-esdppp.73

Background The Paediatric Regulation[1] was launched ten years ago. As was also identified in the ten year report[2], this regulation has had a positive impact on paediatric research in Europe. However, some specific patient pop-ulations (such as neonates, critically ill children, children with comorbidities) do not receive enough attention in paediatric drug development. Furthermore, the top-down approach (from adults to children) results in considerable delays in making medicines available to

children. For most of the drugs long term follow-up is missing.

Methods The SAFE-PEDRUG project was initiated in Belgium in 2014 and is a collaboration of experts in pae-diatrics, pharmaceutical sciences, veterinary medicine, and ethics of three Belgian universities: Ghent Universi-ty, KULeuven, and Vrije Universiteit Brussel. An advisory board and stakeholder group consisting of national and international stakeholders support this consortium in the valorisation of results.

Results The SAFE-PEDRUG project explored the value of the porcine juvenile animal model[3] and PK modelling[4] (population pharmacokinetics and physiological-ly based pharmacokinetic modelling) in providing prior paediatric PK/PD knowledge, before the actual adult trials have been completed. For the evaluation of this approach, three case compounds were selected: des-mopressin, lisinopril, and fluoroquinolones. The results of the models are plotted against human paediatric data, including data in neonates and critically ill children.

Discussion A close collaboration of experts and stake-holders can help to tailor paediatric clinical trials to the needs of children. Pharmaceutical industry and regulato-ry authorities are key players in the paediatric drug de-velopment process. However, academia can also play an important role in rendering the paediatric drug development process more efficient by development and correct use of innovative tools. Besides, academia should defend the rights of the most important stakeholders: patients and their parents. During the SAFE-PEDRUG project additional opportunities for academia have been identified: initiation of networking; centralisation in registries and networks to improve transparency and efficiency; and education of paediatric clinical pharmacologists.

Acknowledgements The SAFE-PEDRUG project re-ceived a grant for Strategic Basic Research of the Agen-cy for Innovation by Science and Technology in Flanders (IWT-SBO 130033).

REFERENCES

1. European Medicines Agency. Paediatric Regulation. 2006. Available from: http://www.ema.euro- pa.eu/ema/index.jsp?url=pages/regulation/document_ listing/document_listing_000068.jsp.
2. European Com-mission. The 2017 Commission Report on the Paediatric Regulation. Available from: https://ec.europa.eu/health/ human-use/paediatric-medicines/developments/2016_ pc_report_2017_en.
3. Gasthuys E, Vandecasteele T, De Bruyne P, Vande Walle J, De Backer P, Cornillie P, *et al*. The Potential Use of Piglets as Human Paediatric Surrogate for Preclinical Pharmacokinetic and Pharmacodynamic Drug Testing. *Curr Pharm Des*. 2016;**22**(26):4069-85.
4. Michelet R, Dossche L, De Bruyne P, Colin P, Boussery K, Vande Walle J, *et al*. Effects of Food and Pharmaceutical Formulation on Desmopressin Pharmacokinetics in Children. *Clin Pharmacokinet*. 2016;**55**(9):1159-70.

PP-9 PARTICIPATING IN PAEDIATRIC DRUG RESEARCH: IDENTIFYING THE BURDEN

Dewolf, Amza, Christiaens, De Bruyne, De Cock, Vande Walle. *UZ GENT, GENT, Belgium*

10.1136/archdischild-2017-esdppp.74

Background Nowadays, academic researchers, pharma-ceutical companies and regulatory authorities are more aware of the need for paediatric drug research. Conse-quently, more academic and industry-driven paediatric trials are conducted to evaluate the efficacy and safety of new drugs and to a lesser extent of off-patent and off-la-bel drugs. However little information is available on the burden associated with participating in clinical trials for the patients and their family/caregivers. In attempt of be-coming a Centre of Excellence in paediatric drug research it is important for us to fully understand this burden.

Methods This is a retrospective, single centre, observa-tional study. A questionnaire will be designed focusing on the overall costs and time investment for the participants and their caregivers. Topics of interest will be absenteeism at school, at work or in leisure; number of specific study related visits (out of standard of care); financial reward by the sponsor; etc. Additional questions will gauge the per-ception and experience of the patients and their parents. We will contact the parents of patients who participated in either an academic or industry driven trial between 2010 and 2017 at the departments of paediatric nephrol-ogy and gastroenterology of the Elisabeth Children's Hospital (Ghent University Hospital). We will display the results of this questionnaire by using descriptive statistics.

Discussion By evaluating the results, we will identify what brings most burden to patients and their family/caregivers in participating in clinical trials. This will enable us to better understand this burden and eventually to anticipate by more and better information and support during the participation. This may increase compliance, especially important in drug trials. The data can help us to include these aspects in discussions with both ethical committee and sponsors (industry) during the develop-ment of the study design and during negotiation of the clinical trial agreement (inclusive of some compensation) between research centres and sponsors.

Acknowledgements The survey is an initiative of the SAFE-PEDRUG project (IWT-SBO 130033), supported by the Agency for Innovation by Science and Technology in Flanders (IWT).

PP-11 COMPARING COMPLETION RATES OF PAEDIATRIC VERSUS ADULT RANDOMISED CONTROLLED TRIALS: A CROSS-SECTIONAL STUDY

Kaguelidou, Dufetelle. *Hôpital Robert Debré, PARIS, France.*

10.1136/archdischild-2017-esdppp.75

Background Clinical trial discontinuation represents a waste in research resources and raises ethical concerns. Conduct of clinical trials is perceived to be more challeng-ing in children than in adults. The aim of this study was to evaluate the impact of the age of participants on comple-tion rates of randomised controlled trials (RCTs).

Methods This is a cross-sectional study on RCTs regis-tered in the ClinicalTrials.gov database. All RCTs registered in the database from its inception date (February 29, 2000) to December 31, 2016, were extracted. RCTs with unknown recruitment status or registered more than 60 days after their start date were excluded. Remaining RCTs were classified according to their recruitment status: active, completed, and discontinued trials, and according to the age of participants: children (0–17 years), adults ($\geq$18 years), and mixed age populations. Further RCT charac-teristics were assessed using information registered in the database: study location, funding source, year of registration, study phase, study design, type of intervention evaluated, blinding procedure, study duration, and enroll-ment achieved. A logistic regression model was applied to assess the impact of participant's age category on trial completion while controlling for other potentially rele-vant trial characteristics.