GPED Newsletter

Global Pediatric Endocrinology and Diabetes

Keeping you up to date on Global Health in Pediatric Endocrinology and Diabetes around the world

GPED newsletter - 2 new features

Dr. J von Oettingen

I'm delighted to extend warm spring greetings to the Northern and crisp fall greetings to the Southern hemisphere of the GPED community - **welcome to our 6th quarterly Newsletter!** It is my pleasure to have taken over the editorial of this newsletter from our Secretary General Dr. Jean-Pierre Chanoine who continues to be the driving force of our society. Reminders first: **Mark your calendars** for the Working Group on Global Health in Pediatric Endocrinology and Diabetes Program happening at the 10th International Meeting for Pediatric Endocrinology in Washington DC: Join us on **September 14 2017, 830-1130 AM** to hear about and discuss two important hot topics in our field: 1) Access to medicines in Pediatric Endocrinology and Diabetes and 2) Newborn Screening in Low-Income Settings. Check out the full program on our homepage or facebook page!

New editor, new features: I would like to introduce **two features to our newsletter** that I hope will resonate with and engage you, our membership:

1. Member's Corner:

We would love to hear from you and from each other! All of you have interesting backgrounds, lives, activities and accomplishments. This space creates room for exactly that—please share with us your ideas, thoughts, stories, rants (!), and anything worth putting out into the world of GPED. **See page 2.**

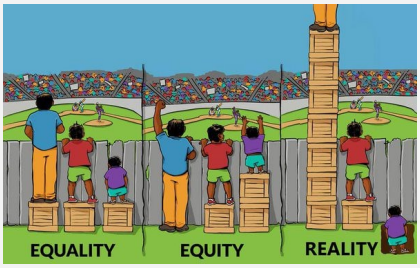
2. Mystery Case:

First time seeing this syndrome? Never thought of *that* diagnosis with *this* presentation? Some of us may feel the same way! Let's take advantage of our broad range of settings and experiences and challenge our colleagues with our own tough, surprising, or simply interesting cases! **See page 3.**

Inside this issue:

Newer, faster, better - or is it? *Opinion Piece*

FIAsp, Novo-Nordisk's faster-acting insulin aspart, the first "new generation insulin", has made it to Canada and Europe: approved, available, prescribable, purchasable, **accessible**. We should be thrilled!! Over a dozen papers support its favorable pharmacologic properties and superior potential to decrease post-prandial glucose excursions and hemoglobin A1C, and we even have the evidence in children, thanks to our colleagues from Europe (Pediatr Diabetes. 2017 Feb 6. doi: 10.1111/pedi.12506). Patients rave about it on social media (check out #FIAsp), and some of us may have already gotten requests for prescriptions.



And while this is great news for my patients in Canada, I can't help but be reminded about our patients in resource-limited settings, who feel fortunate to have programs like Life For A Child (www.idf.org/lifeforachild) to support them with *any* insulin, be it slower like human soluble or faster like FIAsp. I am reminded of the picture on the left, frequently used in global health talks. When it comes to insulin access, the little guy on the right probably won't be able to see over the fence anytime soon. And this global reality is becoming very local, touching low-income patients in high-income countries. The American Diabetes Association is on to something: #MakeInsulinAffordable.

Improving access to medicines remains a major issue in many settings and is an objective of GPED. Email us if you want to make a difference in YOUR country.

Member's Corner:

Francesco Chiarelli - *Improving care for children and adolescents with*


Dr. Francesco Chiarelli

Francesco Chiarelli, former Secretary General (2004-2011) and President (2009 and 2013) of the European Society for Paediatric Endocrinology (ESPE) and current member of GPED, has dedicated his past year to travelling to low– and middle-income countries with the aim of helping children with diabetes and endocrine disorders and their families. Dr. Chiarelli works in collaboration with the WHO and UN, and has been supported by the Italian NGO Africa CUAMM. Franco sent us his list of travels and support projects:

In **July 2016,** Franco visited Dakha, **Bangladesh**, where he gave a seminar on diabetes and on collaboration with the Novo Nordisk program "Changing Diabetes in Children" (http://www.novonordisk.com/sustainability/actions/Access-to-care/CDiC.html). Local physician Dr. Bedowra Zabeen left an impression on the Italian visitor, whose clinical service for children with diabetes was found to be very good, ensuring insulin and glucose monitoring for all children with diabetes. In **September 2016**, Franco was invited to speak in Gaborone, **Botswana** where Dr. Joel Dipaselema, local pediatric endocrinologist and graduate of the PETCA program (http://paedendoafrica.org/feloowship.html) has developed an excellent service for children with diabetes and endocrine disorders. This is in contrast to neighboring Zambia and Zimbabwe, where insulin, hydrocortisone and antibiotics are not always available for children. In **December 2016**, he visited **Erithrea** and **Somalia**, this time with the support of Italian Government. A violent civil war in Somalia with many tribes fighting and many civilian casualties, insulin availability is close to none, and Franco was able to support the Hospital in Mogadishu with insulin for children with diabetes. In **February 2017,** Franco travelled to **Bolivia** and **Paraguay**, where, except in the main cities, quality of care for children with diabetes and endocrine disorders remains quite poor, highlighting the need for advocacy for children in those countries. Finally, in **April 2017,** Franco sent insulin and glucometer strips for children with diabetes to hospitals in **Guinea** and **Guinea Bissau**. **For the next two years**, Franco is very committed to continue supporting initiatives in developing countries for children with diabetes and endocrine disorders.

Franco Chiarelli: University of Chieti, Chieti, Italy
Email: chiarelli@unich.it

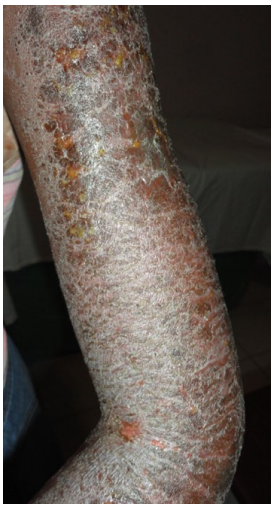
Would you like to read your own story here? Let us know via email (info@globalpedendo.org)!

Upcoming International Conferences

- **World Health Summit Regional Meeting**, Montreal (Canada) - May 8-9, 2017
  https://www.worldhealthsummit.org/regional-meeting/program.html
- **10th International Meeting for Pediatric Endocrinology** - September 14-17, 2017
  http://internationalmeeting2017.org/
  Reuniting: Pediatric Endocrine Society (PES), European Society for Paediatric Endocrinology (ESPE), Australasian Paediatric Endocrine Group (APEG), Asia Pacific Paediatric Endocrine Society (APPES), African Society for Paediatric and Adolescent Endocrinology (ASPAE), Chinese Society of Pediatric Endocrinology and Metabolism (CSPEM), Japanese Society for Pediatric Endocrinology (JSPE) and the Sociedad Latinoamericana de Endocrinologia Pediátrica (SLEP) and participating societies, Arab Society of Paediatric Endocrinology and Diabetes (ASPED) and Indian Society for Pediatric and Adolescent Endocrinology (ISPAE).
- **World Health Summit**, Berlin (Germany) - October 15-17, 2017
  https://www.worldhealthsummit.org/whs-2017.html
- **International Society for Pediatric and Adolescent Diabetes**, Innsbruck (Austria) - October 18-21, 2017
  http://2017.ispad.org/

Mystery case #1: 18 year-old girl with diabetes and a rash

Patient M is an approximately 18 year-old young woman from Haiti with a four year history of diabetes who has developed a peculiar skin rash (see picture) over the past few weeks. The rash started on her feet, which are also somewhat swollen, and progressed to involve her whole body. It is not itchy, but there is some oozing. Topical creams including Vaseline and local products have been trialed without success.



M.'s past medical history is notable for her diabetes, treated 70/30 NPH/R mixtard SQ BID (0.49 units/kg/day). She has no other known medical problems. Her diabetes history is notable for significant cachexia and diabetic ketoacidosis at initial presentation, insulin requirement since diagnosis, and suboptimal blood glucose control during the first 2 years after diagnosis due to a lack of access to a skilled health professional. 2 years following diagnosis, M was referred to a new chronic disease clinic, where she was found to be cachectic (weight 29.7 kg, BMI 11.7 kg/m2) and malnourished, but gained weight appropriately after insulin therapy was restarted.

The family history is negative for diabetes in the immediate family. M. lives with her parents and 8 siblings. Her mother is a local merchant and her father a farmer. The family's eats one meal per day, mainly consisting of local staple foods. M. and her parents are not literate, and she has not been attending school since she was diagnosed with diabetes.

On examination, weight is 46.8 kg, BMI 18.4 kg/m2, and vital signs are normal. The exam is notable for the skin rash displayed in the picture, and bilateral non-pitting edema of her ankles.

Finally, photos of the rash are sent to an astute Syrian dermatologist who asks an important question…

Has she had any diarrhea at all?

CAVE: SOLUTION FOLLOWING

Case by Dr. Julia von Oettingen and the Kay Mackenson Clinic team in Montrouis, Haiti

The answer to the question is YES, although this was not out of the ordinary for the clinic's pediatrician as many of the children with diabetes have frequent episodes of diarrhea. Upon questioning, the clinic nurses had also found her to display some mental slowness.

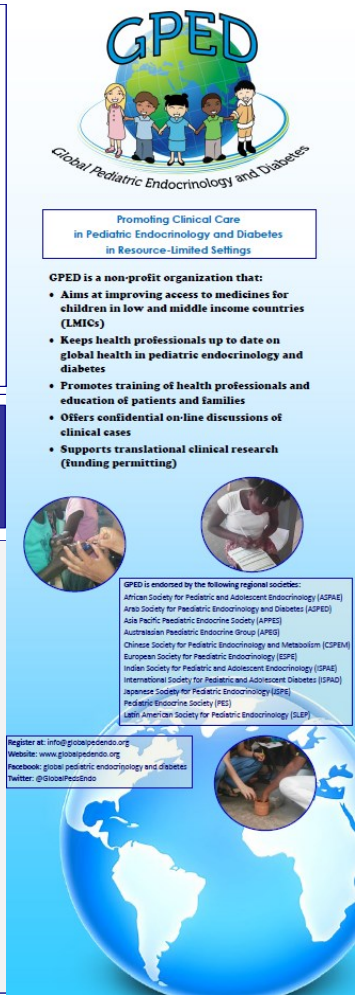
Dr. S. has previously worked in a Syrian refugee camp, and the rash on a background history of a carbohydrate-heavy, micronutrient-poor diet, quickly raises the concern about *Pellagra*. Measurement of vitamin B3 is unavailable, and so the team opts for an empiric treatment with Niacin 500 mg PO die. The rash resolved within a week, and her diarrhea within 2 weeks. 2 years later, the patient is doing well on a maintenance dose of Niacin (daily multivitamin).

Visit the GPED booth at the 10th International Meeting of Pediatric Endocrinology in Washington

Dr JP Chanoine

For the first time, GPED will have a booth in an International Meeting. We see this as an opportunity for GPED members to learn about the activities of GPED as well as to share material or information on global health in pediatric endocrinology and diabetes. A banner is being prepared (right). We will be available to answer your questions, display information on activities such as the e-learning program (Dr Sten Drop) and make booklets in various languages available for review. **We are also looking for pictures (with appropriate permissions) of situations illustrating pediatric endocrinology and diabetes care in low income settings to add to the banner and to the GPED website.** Send your requests/pictures to **info@globalpedendo.org**

Jean-Pierre Chanoine, Vancouver, Canada
Email: jchanoine@cw.bc.ca



Clinical tip: affordable phosphorous supplementation in children with hypophosphatemic rickets

Dr JP Chanoine

Dr M Zacharin

Children with hypophosphatemic rickets are characterized by renal wasting of phosphorous and by their inability to 1-alpha hydroxylase the Vitamin D. The recommended dose of elemental phosphorous is 30-70 mg/kg/d divided in 4-6 doses. Tablets of phosphate can be difficult to find and may be expensive. However, products such as Fleet® (Lynchburg, Virginia, USA) contain large amounts of phosphate salts, can be taken orally, are widely available and are inexpensive.

Two commonly used preparations are:

Fleet® Saline Enema contains 19 gr of monosodium phosphate monohydrate and 7 gr of disodium phosphate heptahydrate per 118 ml. **Each ml contains 43 mg of elemental phosphorous (12 ml are equivalent to 1 tablet of Phosphate Sandoz 500®).**

*Example: a 20 kg child who needs 40 mg/kg/day of elemental phosphorus will require 20 kg*40 mg/43 mg phosphorous = 18.6 ml of Fleet® Saline Enema per day, or 6 doses of 3.1 ml orally*

Fleet® Phospho-soda contains 7.2 gr of monosodium phosphate monohydrate and 2.7 gr of disodium phosphate heptahydrate per 15 ml. **Each ml contains 129 mg of elemental phosphorous (4 ml are equivalent to 1 tablet of Phosphate Sandoz 500®).**

*Example: a 20 kg child who needs 40 mg/kg/day of elemental phosphorus will require 20 kg*40 mg/129 mg phosphorous = 6.2 ml of Fleet® Phospho-soda per day, or 6 doses of 1.1 ml orally*

THERE ARE SEVERAL DIFFERENT FLEET® PRODUCTS AND THEY DIFFER BY THEIR COMPOSITION AND PHOSPHOROUS CONTENT. The content in elemental phosphorous can be calculated using the following information:

Phosphate salt	Elemental phosphorous content for one gram
monosodium (monobasic) phosphate monohydrate (NaH2PO4.H2O)	225 mg
disodium (dibasic) phosphate heptahydrate (Na2HPO4.7H2O)	199 mg
disodium (dibasic) phosphate heptahydrate (Na2HPO4.7H2O)	116 mg
disodium (dibasic) phosphate dodecahydrate (Na2HPO4.12H2O)	87 mg

Margaret Zacharin, Melbourne, Australia
Email: Margaret.Zacharin@rch.org.au

Jean-Pierre Chanoine, Vancouver, Canada
Email: jchanoine@cw.bc.ca

Keeping you up to date on Global Health in Pediatric Endocrinology and Diabetes around the world

Secretary General:

Jean-Pierre CHANOINE, MD, FRCPC (Academic)
Clinical Professor and Head
British Columbia Children's Hospital
Endocrinology and Diabetes Unit
K4-212, 4480 Oak Street
Vancouver, BC
V6H3V4
Canada
Tel: +1 604 875 2345, ext 5120
Email: info@globalpedendo.org

GPED website: www.globalpedendo.org