

Ursula's Report, October 2008 Tutor

31 October 2008

After having written some short reports to Martin Ritzen, who followed me in November 2008, I will try to summarize my impressions in Nairobi in October 2008.

First of all, I greatly enjoyed my stay there, the people are friendly and hospitable, the fellows extremely nice and eager to learn, and the weather and the public holidays were extremely hospitable to me. There were two long weekends, Moi-Day and Kenyatta Day fell on a Friday and a Monday respectively. My husband, who had just joined me in time, organized two wonderful tours for us, one to the Masai Mara, the other one to Naivasha Lake, so I managed also to see parts of the really magnificent country side, with its extraordinary wild life. Whenever you manage to pass by in Munich, we will torture you to see over 1500 pictures and certainly about 20 short movies, starting from lions lying majestically, to giraffes moving very slowly, and wildebeest running like hell to escape the crocodiles, to the leopard eating a wild boar.

Well that is the leisure time; the rest was work and a new and interesting experience. Since my turn was the last month of the first 6 months with the first batch of fellows, I had the advantage that the daily routine was laid out and familiar at least to the fellows who could easily show me around. So I could rely on them to find me when I got lost in one of the hospitals in the city, that is to say Aga Khan University or Kenyatta University Hospital, where we see patients and teach 1 day per week, respectively. The program has made arrangements with a very reliable taxi company, so moving around in the city works out very well, even though for a German who is used to hop-on-and off public transport, this is a change.

I had an intensive day with Martin to show him around, and I hope I was able to tell him about the course as much as possible, since he now faces a new group, with no Kenyan fellows, so that will be a challenge. We were also able to have an intensive lunch talk with Sid Nesbitt, on the vision of the program, so I guess he had a good start.

I tried to learn from Marek's report, who had been somewhat alienated, that certain things, which should be "normal" did not work. So I made a point of having Martin meet the CEO, the chief paediatrician (Dr Mukwana) and the Matron of Gertrude's Hospital on his very first day, and I said good bye at the same time. He will meet Ms. Prof Ngacha, Head of Paediatrics, from Kenyatta Hospital on Friday, together with Dr Lucy Mungai, who has signed her papers and will join the University shortly (I have just learned, however this did not work out, for reasons unclear to me). I met both ladies the day before I left, and we have agreed, that the Steering Committee of the program should meet within the next 2 weeks, preferably while Dr Sid Nesbitt is still in the country, to discuss the 1st of the 6 months of the new fellows. We also said this to the CEO and Dr Mukwana from Gertrude's, and they agreed and hopefully this meeting will take place. I had a similar discussion, two weeks ago with Ms. Prof.

Ocheng, from Aga Khan, and she also felt, that a Meeting of the Steering Committee is needed.

I hope that Martin Ritzen will receive a Temporary Medical License from the Kenyan Medical Board, he brought all the necessary papers. I was made to understand, that it takes about 4 weeks for a license to be issued, so let's see what his experience is. I did not pursue the license for myself any further, because, I had forgotten to apply for a "Letter of Good Standing" from the German Medical Board. So please everybody who has signed up to go to Nairobi, please keep in touch with Martin, I assume he will be able to tell you shortly, what is needed and how long it takes.

During the last two weeks I had numerous, very stimulating, discussions with Sid Nesbitt, on "the future" of this program. We were both most concerned how to achieve sustainability! How will this program be able to maintain itself, when the 3 year period covered by the WDF grant is over! One aspect would be to see that the program also earns money! We have made the statistics until October, unfortunately not as nice as Marc was able to, nobody seem to know how his program works. All the patients seen are on an "excel sheet" each week updated by Jacqueline, the secretary of the program, with hospital and hospital number, DOB and diagnosis, so they can be retrieved! We have seen 120 patients, with about 250 visits, 60 pts were in Aga Khan and Gertrude's, respectively, and there a visits is charged about 2500 Kenya Shillings (about 25 Euros, 30 US\$), the remainder were seen in Kenyatta Hospital, there the visit is 350 Kish (I guess this is negligible for us, but for the pts certainly not). I would suggest to negotiate with the CEO to establish a "fund" in which a certain percentage (50% of each visit?) of this money should be deposited, and the program then can decide to use it either for needy patients, or to fund other activities, as for example a camp for diabetic patients, etc. I know that most of the tutors as well as the fellows have paid out of their own pockets for medicine and laboratory tests for poor patients, something which is nice, but not really sustainable!

Patient population and diagnosis

The majority of patients referred to us are diabetic patients! I personally think this is due to the very good work of Ms Atieno Jalango, and not so much that other endocrine disorders do not exist but I will come to this later. Ms Atieno is a clinical officer, who is in charge of the adult diabetes clinic in Kenyatta University Hospital. The Diabetes Clinic in Kenyatta, takes care of about 9000 adult diabetics (type I and II) and about 300 type I children. Children are seen separately from the adults, and some are referred to us. I would assume and hope that Dr Lucy Mungai will also attend these clinics. There are no systematic studies how these children develop but in 2007 Ms Atieno did a study on the outcome of DKA in Kenyatta, and reported that 30% die! In my impression and also from the other tutors reports, I would assume that a great number of these children (in Kenyatta Hospital) suffer from Mauriac syndrome (I guess 30 to 50%), which is due to the lack of insulin (low insulin, consistent ketoacidosis) but also to the extremely poor diet! Most of these children live on a pure carbohydrate diet, that is 3-4 slices of white toast bread, maize porridge for lunch and dinner, with maybe beans or not. Milk is expensive and usually not part of the diet, except for some milk in the tea, and the fat comes most probably from chips! Protein (that is chicken) is only at Christmas!

I know Marc Maes was very frustrated that the children did not have any strips to test the blood glucose, so he and Dana arranged to give them free glucometers and

strips, now I was confronted with children who measured 3 to 4 times daily (!) “high” (or values between 20 and 40) ! The insulin dose was usually twice daily and amounted to 1 to 2 units per kg per day, a relatively high dose, which I often did not dare to increase further. It would of course be good to introduce another dose of insulin at lunch time, but I have the impression, that this is difficult at school, but this has to be explored further! I do not know, why with this poor diet the children need so much insulin? Has this to do with the Mauriac syndrome? It was interesting to see, that Danas “hallmark patient” had needed 36 Units of Mixtard-Insulin (at 31kg) and when she changed to Protaphane and Actrapid she was “low” on 12 Units (3 x 4 Units of Actrapid, and the mother often skipped the 10 U Protaphane at night, because the child was so low. I am sorry to say we had to change the ICT back to two doses daily, also because the mother was not there for lunch and the child was not send to school because of fear of hypoglycaemia! Is the now low dose of insulin due to a better metabolic state, or does it reflect basically a poor carbohydrate rich diet?

I would assume, that when it is possible to accumulate all the clinical data on the 300 children with DM type I in Kenyatta, this would be an interesting paper which certainly one could even publish in a good journal (in JAMA or even in the NEJM), and this might help to find out how to best approach the problem of DM in a country where still the diet is carbohydrate only! If it is possible at all!

I assume most of you have seen the program of the “Diabetes Symposium” which was organized by Ms Atieno and arranged by the fellows. I was very proud, they did a very good job and we had interesting discussion. I am well aware of the fact that most of the work had been done by the tutors of the previous months, I was just the one to happen to be there for the event (and for the praise)! There was a very good attendance; we had about 30 to 40 participants mostly from government hospitals, also from outside Nairobi, doctors, but mainly clinical officers, and nutritionists. I invited Dr Kollmann, an ophthalmologist from the University of Nairobi, whose research interest is diabetic retinopathy, and who lectured on this. He also invited the fellows in his clinic, on Wednesday in the Kenyatta Hospital, to see and examine patients there. On the first Wednesday the fellows saw his patients, but my idea would be that appointments are made for “our Pediatric patients” and we can see them there together with the ophthalmologists. This could be organized, his phone number is with Jacqueline.

“Other” endocrine disorders

In “my” month, the fellows called it the “sex” month, we saw a number of DSD-patients. Most were referred to by the surgeons, and I assume that is where they go first. Undescended testis and hypospadias are sent to the surgeons with any further investigations (?). I gave some lectures and we had some discussions with the fellows that these might be the patients which need further investigations. Another problem, probably even more difficult to solve, is the availability of certain drugs. When I was there, hydrocortisone was not available in Kenya, so I had to give to one of the CAH-girls prednisone. Since the parents were unable to come back for a visit (money-problems) I was not able to check whether the dosage is adequate or not. A similar problem seems to occur in Tansania, I met a Pediatrician from a Mission Hospital in Tansania, and she told me, that she has just met with a family who decided to raise the CAH-girl as a boy, because the consistent supply of medication

was not possible! So what to do in these cases? The girl I saw, had corrective genital surgery, which was by no means sufficient and apparently she had started to ask the mother whether she was a boy or a girl! So probably the medicine was also not very effective.

We also saw a patient who Marek had started to work up, an extremely feminized genetic boy, for which I repeated the HCG-stimulation test and the DNA was sent to Marek. I hope it arrived safely; I have not yet heard anything about it.

Thyroid and hypothyroidism

I saw a single child only with severe hypothyroidism and short stature, which turned out to be "central hypothyroidism". I do not know, what further diagnostic steps Martin undertook, but the parents were quite poor, so I assume this is difficult. This would be a patient who would benefit from a "fund" which would pay for the diagnostic procedures and maybe therapy.

Newborn Screening

There is no newborn screening in Kenya, but I learnt during the last week of my stay in Nairobi, that there is a collaboration with the Charite in Berlin and Gertrude's Hospital. While I was unable to meet the pathologist in Gertrude's, while I was there, I, at least managed to speak to the Charite, while I am back in Germany. The person in charge is Prof Heiko Krude, who was in Nairobi last year. His intention is to determine the incidence of "congenital hypothyroidism" in an African population. The lab of the Charite determines the TSH, free of charge. The hypothesis is, that in Africans the incidence is much less than in Europeans, so that a screening program would be almost not worthwhile to establish. Apparently the incidence in American Africans is something close to 1: 14 000, as compared to 1: 3000 in the Caucasian population. Apparently Dr Lucy Mungai is the contact person now, but Prof Krude does not personally know her, so it would be probably worthwhile to catch-up on this project. I assume such a data bank would be very useful, and the data quite important. If necessary I can help to contact Prof Krude, but Dr Lucy should know his details?

I think I will end here, even though there is still a lot to be said. I am looking forward to hear from my predecessors and the one who follow me in Nairobi, as well as from the fellows in Nigeria, Tansania and Kenya. I wish all of them luck and success in their future work.

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