Making an impact on club foot a graduate case story

Walter Tuni graduated from the University of Tumaini’s ISPO Category I recognised program back in 2007 having been awarded a scholarship through ISPO’s USAID funded scholarship program. His final year project Assessment of the outcome of Ponseti Method in treatment of congenital club foot in infants demonstrated his early interest in pediatric orthotic management. If neglected, club foot deformity leads to permanent disability for the individual, and this reduces standard of living for the entire family, and increases the burden to the community. If detected early club foot, more formally known as Congenital Talipes Equinovarus (CTEV), can be corrected with little or no surgical intervention.

In the next four years after graduation, Mr Tuni continued to develop his professional experience and practiced a range of orthotics at the Comprehensive Community Based Rehabilitation in Tanzania (CCBRT) - Disability Hospital, Dar es Salaam in Tanzania. Each year, amongst other general cases, CCBRT manages over two hundred cases of children with CTEV by adopting the Ponseti Method and utilizing the Pirani score before and after treatment. Mr Tuni is now working with the Sirindhorn School of Prosthetics and Orthotics (SSPO) in Bangkok, Thailand as an Instructor where he is passing on his wealth of knowledge, skills and experience to a new generation of prosthetists/orthotists.

It is clear to see the tremendous positive impact that a well-educated and dedicated individual like Mr Tuni can have on the lives of many other people. He continues to share his expertise at congress /continued on page 2
Abstract adapted from BSc thesis 2009: Assessment of the outcome of Ponseti Method in treatment of congenital club foot in infants

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Background: Club foot, more properly called congenital talipes equinovarus, is easily recognized because the cosmetic appearance resembles a club on the end of the leg. In physical examination, clubfoot includes equinus of the hind foot, varus of the hind foot, adduction and supination of the midfoot. The pathoanatomy of club foot includes contracture and shortening of soft tissues. Subluxation of joints, such as the subtalar and talonavicular joints and deformity of the bones especially the talus is common. (Hsu et al, 2008)

In Tanzania is estimated that 1 to 2 infants are born with club feet in every 1000 live births (ISPO, 2007). If neglected, club foot deformity results in permanent disability for the individual, reduces the standard of living for the entire family and is a burden to the community.

The majority of club feet can be corrected in infancy in about six to eight weeks with the proper gentle manipulations and plaster casts. This approach of treatment is based on a sound understanding of the functional anatomy of the foot and of the biological response of muscles, ligaments and bone structure to corrective position changes. Correction is gradually obtained by manipulation and casting on a weekly basis. The treatment should begin in the first two weeks of life to take advantage of the favorable elasticity of the tissues. Before application of the last plaster cast which is to be worn for three weeks, the Achilles tendon is often cut to complete the correction of the foot equinus.

The brace consists of a bar with shoes attached at the ends of the bar set in about 70 degrees of external rotation on the affected side and 40 degrees of external rotation on the normal side worn to maintain the correction. To prevent relapses, the brace must be worn full-time (23 hours) for two to three months and thereafter at night for at least three to four years (Colburn & Williams, 2003).

The primary objective of this study was to assess the outcome of the Ponseti method in the treatment of congenital idiopathic clubfoot in infants in Tanzania.

Methods: A retrospective case series was randomly selected from the period January 2002 to December 2006. Fifty cases with club foot (n=79) were reviewed. Serial manipulation and casting were performed on a weekly basis as described by Ponseti.

Results: The Pirani total score before and after treatment was compared. (Mean total score = 4.7, mean midfoot score = 2.1, mean hind foot score = 2.5). Sixty six feet (83.5%) responded to treatment with casts between 4 and 6 per foot. Out of 50 patients, 10 (20.0%) had corrective surgery on 16 feet in children between the ages of 6 and 12 months. The outcome was beneficial to all patients. Foot abductor braces were provided to all.

Conclusions: The method had a success rate of 84%. Delayed treatment was the indication for reconstructive surgery. Sensitisation to midwifes, traditional birth attendants, and establishment of referral pathways need to be encouraged. These results indicate that, the technique is cheap and easy to adapt. I recommend the method to other treatment centers in Tanzania.

Clinical relevance: Club foot deformity if neglected results to permanent disability for the individual, reduces living standards and impacts financially on the community. If detected early it can be easily corrected with little or no surgical intervention.

References

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Rwandan graduate networking in Leipzig

Desire Ngendahayo (right) visits the ISPO booth at the Orthopädie + Reha-Technik 2012 Trade show and World Congress, Leipzig, Germany in May. Desire is chairman of the new ISPO National Member Society in Rwanda. He graduated from the University of Tumaini, Tanzania in 2011 as a prosthetist / orthotist (ISPO Category I Professional) and is working at the Kigali Health Institute together with partner organisations, training personnel to establish much needed physical rehabilitation services. Rwanda is a low income country with a population of over 10 million (according to the World Bank Country profile).

Orthopädie + Reha-Technik 2012 Trade Show and World Congress

This event, which runs every second year, included the largest P & O related trade show in Europe showcasing the newest technologies in our field. The trade show reserves an area called the “Forum International” where organisations and training institutions may exhibit a single poster for free. Additional booth space can be booked separately. The trade show makes a good meeting place and an opportunity to share information. A scientific congress ran parallel to the trade show and included German/English translation in many sessions. Specialist symposium focussing on various clinical and professional topics ran throughout the congress. Of particular interest to this newsletter was an education symposium discussing different philosophies, modes and methods of education. One speaker, Mr Eldar Husanovic, from Human Study urged us to become more active in education because if we continue to train people in clinical skills at the current rate “it would take 375 years to educate people to meet the need” of persons with disabilities requiring basic access to prosthetic and orthotic devices globally! This is encouragement for an increase in activity for P & O faculty and students alike!

Mr Mujahid Zaman and Mrs Adeline Prieur from ISPO Head Office, Brussels, Belgium promote our ISPO members society, our activities (including the USAID funded grant program) and the next ISPO Congress in Hyderabad, India in February 2013. ISPO attracted 45 new and renewing members from different countries in Leipzig. Further information about ISPO can be found at www.ispoint.org
Tajikistan student profile

“I am Tojiddin Rahmov. I was born on March 24, 1987 in a mountain village, Darvoz, district of Tajikistan. My family and I left my country on August 17, 1999 when I had finished the sixth form of secondary school and moved to Dushanbe City, the capital of Tajikistan. On September 1, 1999 I continued my study at school №24 in the city and finished in 2005. I had not chosen a university and my major so I wondered where to go and what to do. After few days I was advised to enter the Tajik State Institute of Languages and I chose the English Department, Roman and German faculty. The first year was very difficult for me because of my English. During the third year I decided to work as a teacher in a High School for two years whilst continuing my university studies. In the fifth and final year I left to study full time. I graduated from the language institute in 2010. My hope and dream for the future is to become a professional prosthetist/orthotist to help and support the poor and disabled people in Tajikistan by providing good physical rehabilitation services. Passing every exam will be my goal and I have been and will be working hard. I am thankful to my sponsors (SFD ICRC and USAID) and also to the staff of VIETCOT for being so helpful to students.”

Mr Tojiddin Rahmov is a mature student studying towards becoming an ISPO Category II level Orthopaedic Technologist at VIETCOT, Vietnam. As a graduate of the Tajik State Institute of Languages, he talks about the ingredients for success in education and has some advice for other P & O students. He writes “One of the clearest differences between successful and unsuccessful professionals in all fields is self-discipline. Set a schedule for yourself and stick to it. As a graduate student you must learn about your field of study in depth, set up a plan of research, carry out experiments, analyse the data or models, write manuscripts based upon the results, and participate in seminars and scientific meetings. To accomplish all this successfully, you must set up a schedule. Set a specific time that you will devote each week to reading new articles in journals. Set up specific times that you will work on experiments or analyse data. Set a specific time that you will devote each day to writing (5-6 days each week), except during the peak weeks of your research and data analysis each year. Having a specific writing schedule will become especially important after your first or second year by which time you will continually have proposals and manuscripts that need attention. Never catch yourself saying, ‘I have not had time to set up the experiments (or read that important new paper, or analyze the data, or work on the manuscript)’, because these other things got in the way. You must set your priorities so that it is only the other nonessential things that don’t get done. Anything else is simply procrastination and excuses…” Outside of study, Tojiddin has a personal interest in literature “Some of my favorite authors are Charles Dickens, Arthur Conan Doyle, Abel Boyer and William Shakespeare”.

Cambodia student profile

“I am Chin Samphors, a 2nd year student at the Cambodian School of Prosthetics and Orthotics (CSPO). Before I came here to study, I studied Associate Management for two years at Preah Kossamak Polytechnic Institute. My sister encouraged me to take the CSPO entry exam because she studied at CSPO and now is working in Cambodia”.

“When fitting a prosthetic leg for a patient I cannot explain the feeling of happiness when he said, “thank you very much I can walk again!” It made me feel more interested when I saw that even very young children being carried by their parents come for a device to help them become independent when they get older. Here at CSPO, students come from different countries, beliefs and cultures, but we still live in harmony, as we understand each other. I feel that we are like a big family rather than classmates”.

“The beginning of my first year was quite difficult as my English was poor, but my classmates helped me a lot. As for my studies, at the beginning it was very hard as I did not have any experience related to this course, but because of the very supportive staff and teachers who devoted their time to teach, as time passed I felt more confident about my studies. With the guidance and support of the staff and the teachers I am looking forward to successfully completing my studies and to being able to provide professional help to my fellow Cambodians with a disability”
Celebration for the students of Mobility India: graduation day!

30th December 2011 was a special day for the students completing their certificates in the Lower Limb Orthotics program and the Lower Limb Prosthetics program as well as the Diploma in Prosthetics & Orthotics at Mobility India (MI). It was their graduation day; a day of celebration! For the diverse batch of 22 students from India, Nepal, Bangladesh and Palestine, it was a day of review, preview, reflection and evaluation. They would graduate as professionals in Orthotics and Prosthetics to render their services for people with disabilities in their respective communities. It was a moment of pride for the teachers to have nurtured another successful batch of technologists. Mobility India provided a platform for students from different countries to come, learn, share and achieve their dreams together. The day gave the graduates the opportunity to review what they have done and to look forward to things to come. Various cultural items were staged by the students for their seniors graduating; making a memorable day. “It is a special moment for us, the scholarship gave us the opportunity to pursue our career forward” echoed Sanni Ram, Mohammad Nayaz, Rahima Akhtar and Md Asaduzzaman.

Reflections of Sanni Ram and Nayaz on Mobility India…

Sanni Ram’s aspiration to work in the field of disability grew as a young child. “My association with two of my friends as a child nurtured the passion in me to work for people with disability”, he enthuses. To meet his goals, Sanni Ram (right) started working in an NGO for educational support for children with disability. The experience opened a different perception of disability; he reflected on exploring his dreams where he could enable people with disability to attain independence and self-determination. He joined Mobility India in 2007 as a volunteer for three months and received the opportunity to undergo training in LLO in MI, Bangalore. His zeal and determination were soon recognized by the management and on a USAID-ISPO scholarship in 2010 he returned for further training in Lower Limb Prosthetics. “The pedagogy for the program was such that I could take one module at a time which helped my understanding of the subject. After finishing my module on Lower Limb Orthotics, I received two years of experience in fabricating and providing orthoses for people needing physical support and protection in the regional office of Mobility India, Kolkata”, says Sanni Ram. Under the aegis of Mobility India, he received English classes to improve his communication skills.

He says “my association with service users is a daily affair; they come with a hope to be independent in their everyday life. Meeting their needs gives me immense satisfaction and helps me evolve as a better person each day; I am thankful to Mobility India and USAID/ISPO for their support and encouragement in showing me the path to success”. Mohammad Nayaz’s association with Mobility India (MI) goes back to the year 2003 when he joined as a trainee in Lower Limb Prosthetics. His perseverance to improve and to learn made him an integral part of the rehabilitation team. Besides his prosthetics he underwent training in wheelchair service provision in 2006 eventually becoming part of a teaching team for a module on wheelchair service provision (see left). He says, “It is a great transition period from a trainee to a trainer; It has helped to increased my skills and I have improved as a technologist”. Working with other P&O professionals encouraged him to further his career and in 2010, he enrolled for the program in Lower Limb Orthotics to become an ISPO certified technologist among the graduates of 2011.
Cambodian school - faculty reflection: Mike Humphries, CSPO Physiotherapy Lecturer

Having graduated from the University of Huddersfield (UK) in 2008 and completed my junior rotations within Scarborough NHS Trust, England before advancing to senior physiotherapist in medicine and rehabilitation, I was looking for a new challenge. I responded to an advert by Outreach International (a UK voluntary organisation) looking for a physiotherapist to write and teach 48 hours of physiotherapy to prosthetic and orthotic students at the Cambodian School of Prosthetics and Orthotics. Before I knew it I had been granted a career break and found myself at a snowy Heathrow Airport trying to contemplate what clothes were warranted in 38°C Cambodia. On arrival in Phnom Penh I found a city bulging with development, a city congested with traffic and a heightening skyline. The following day I arrived at CSPO to be greeted by smiling faces, a highly professional staff and energetic students.

As I sat at my laptop to write the first lecture I realised that despite my experience as a clinical educator this was going to be a big challenge. The school is an international school with students from Iraq, Pakistan, Nepal, Burma, Papa New Guinea, the Philippines, Malaysia as well as Cambodia, so I was relieved to find a good level of English among the students (although I did have to try hard to tone down my Yorkshire accent!). As the lecture series has progressed I have found the students to be more interactive, asking questions and appreciating the need for a close working multi-disciplinary team. In the same way my knowledge of the prosthetic and orthotic profession has grown; I was taken aback by the high level of gait analysis, excellent anatomy and physiology as well as the specialist skills required to produce prosthetics and orthotics.

Having had chance to explore the provinces in Cambodia it has opened my eyes to the difficulties faced by people with disabilities in developing countries such as Cambodia. This has proven another challenge for me as my experience working within acute hospitals in the NHS in the UK is a far cry from a developing health system that is predominantly community based in Cambodia. I had taken for granted how easy it was to access other professionals’ opinions in a centralised system such as the UK NHS and this required me to adapt my lectures to focus on difficulties experienced by professionals and patients in a developing country. As our multi-disciplinary team strives towards common goals I feel it is essential to understand the skills of different professions in order to achieve those goals effectively. By incorporating physiotherapy lectures in a prosthetic and orthotics course, I believe CSPO has the vision to get health care professionals to work closely together and more effectively to produce high quality prosthetists and orthotists that are the future of healthcare in these developing nations. What’s more I have had a fabulous time developing my own skills in a fantastic, forward thinking and friendly organisation and country.

International students study in Togo

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Tchegnon Cossi Arsène from Benin, Fofana Mastan from Mali, and Thierry Raherinianina from Madagascar (shown left to right), are three of the second year international students studying at the ISPO category II program in Ecole Nationale des Auxiliaires Medicaux (ENAM), Togo, West Africa. The students, all supported by joint USAID and ICRC-SFD funded scholarships report that “This Orthopaedic technologist training is not just a training but a great training as it leads to a profession that gives hope, joy, relief, autonomy and new life to physically disabled people. We really like what we are studying and hope not to finish at this level but also have the opportunity to have access to higher studies, attend international conferences and be learning more and more. The challenges are great within P&O in our countries and we hope to be the tools to fight them”.

The P & O Scholar

This newsletter is a twice yearly newsletter connecting prosthetics and orthotics students and graduates around the world who attend ISPO recognised programs for student prosthetists/orthotists (ISPO Category I) and orthopaedic technologists (ISPO Category II). Students, recent graduates and faculty of ISPO programs are encouraged to submit articles, share news and stories and exchange information. Articles, pictures and news to Sandra Sexton, ISPO Grant Manager - Email: sandra@ispoint.org.

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