Project Nepal

March 1-16.2013

Report on visits HAB team *

Contents

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to the Dhulikhel University Teaching Hospital, March 5+6+7.2013.

Targets

- To discuss the contents of a program for training on the job, based on the information gathered during the 2nd project of HAB, January 2013.
- To give insight in the utilization of Thera Putty (1st day)
- To introduce mirror imaging and discuss the applicability in Nepal (2nd day)
- To introduce flexor tendon repair and compose a protocol based on local findings and possibilities (3rd and 4th day)
- To stimulate cooperation between surgeons and therapists
- To gather information for upcoming projects.

Tuesday 5th of March

The team of HAB consists of: Marijke Tolsma (PT), Mike van Heel (OT) and Bart Muthert (OT). Participants of Dhulikhel Hospital: ten students of the 2nd and 3rd grade of bachelor study physical therapy, Krishna Dhulikhel (PT), two phsyiotherapists of the 'Self help group Cerebral Palsy' in Dhapakhel and finally two physical therapists of the Healh Care Centre Janakpur.

Work mode: Training on the job; there are two patients present. Observation, inspection, and physical exercises were trained by utilizing the hand of a patient with problems with dorsal soft tissue. The participants develop an active attitude during the training. In specific medical questions the students are supported by the HAB team when giving answers. Clinical reasoning (by explaining cause and effect) after which methods of treatment can be formulated, appears to be challenging. During a power point presentation, Thera Putty is used to perform various exercises. The exercises and, more important the clinical reasoning in using these, were discussed. Furthermore, the exercises are continuously translated into activities of daily life, by both the HAB team and the participants. Finally, alternative exercising materials such as old inner bicycle tubes, rubber bands and sponges were discussed.

In conclusion

The project was off for a good start with these enthusiastic and eager participants. The importance of exercising regularly by using certain schedules is stressed by the

participants. Training programs are available at various work places. Important challenge is to get patients of the Dhulikhel Hospital involved in the process.

Finally the future program content is reviewed, based on the data gathered at the evaluations of previous visits (March 2011 and January 2013).

Wednesday 6th of March, 2013

The HAB team starts off with attending the morning meeting of the Dhlukhel Hospital. This is a gathering of the entire medical staff of the hospital, moderated by medical director Dr. Ram Shresta. We are given the opportunity to introduce ourselves: “All the way from Holland”! Afterwards we have a private conversation with Dr. Ram Shresta. In summary: The most important accent in our work should be on the implementation of our knowledge and skills into the local structures. We should learn to understand the Nepalese way of learning, gain their trust and augment their level of motivation and inspiration Training on the job, as a way of achieving this, is supported by Dr. Ram Shresta: “Our therapists literally need to feel how hand therapy works”. His motto: “From problem -> to challenge -> to opportunity -> to success and: don’t forget to celebrate! “ To keep our input literally in the spotlight we present our poster.

We continue this day with an introduction to flexor tendon repair: the anatomy and rehabilitation. The number of participants is equal to that of yesterday. The level of knowledge of the anatomy is at beginners level. Given this observation the basis is created for the next day. Then, in a joint effort, we will create a protocol for rehabilitation

Orthopaedic surgeon Dr. Dhjou is asked to join the participants and to give insights into the surgical treatment and rehabilitation of ' his ' patients with flexor tendon injuries. During lunch Dr. Dhoju agrees to participate in the morning session. In this way we try to stimulate the cooperation between surgeons and therapists.

During the afternoon session, the phsyiotherapists of the Dhulkihel Hospital Rehabilitation Department join us. On their request Mirror therapy is discussed. The main topic discussed is mapping the state of the art in Nepal; which indications for treatment are probable and to simply assist them in using this knowledge in daily practice. Much effort and enthusiasm is showed, especially during the practical assignments. All three phases of treatment are discussed: discriminating between left and right hand, mental imaging and finally performing the movements with the non-injured hand. The attending therapists have little experience with mirror therapy although the material is present. They received this from the N.O.I (Neuro Orthopaedic Institute) in Australia. This material included ten mirrors and three sets of cards with images of the hand. The therapists are eager to learn more about the usage of these materials. Indications for treatment in Nepal are (among others):

CRPS, stroke, amputees and pain patients. At the end of the course, one of the students writes the summary on the blackboard. A hand out in PDF- file is copied for the participants.

In the evening, we are invited for a dinner at Dinesh' place, a third grade student physical therapy. His hospitality is remarkable. He elaborates on the health care in Nepal. Every year at Dhulikhel fifteen students are admitted to qualify as a physical therapist. Annual costs are: € 1.500 per student. There is still a lack of quality control of the physiotherapists. The post-graduation courses are few and, if available, often literally unreachable. Uncontrolled growth and lack of specialization is the effect. A few phsyiotherapists working in private practices uses the title 'Doctor' , a development with which NEPTA is not pleased.

Report on Thursday March 7, 2013

According to the plan a mutual protocol for rehabilitation of flexor tendon repair is drafted. Participants are second and third grade students physiotherapy, moreover Nischal representing the physiotherapists of Dhulikhel Hospital and dr. Dhoju, orthopaedic surgeon. It starts with a brief theoretical introduction on yesterdays flexor tendon repair; such as suturing techniques, elongation strenght of the tendon during the post-operative weeks, the importance of tendon gliding, the type of splint and comparison with other protocols.

Dr. Dhoju explains his 4-strand technique which enables early active mobilisation postoperatively. A lively discussion follows to develop a rehabilitation protocol suitable for the Nepalese situation, such as few postoperative visits to the policlinics, poor compliance and illiteracy. Finally concensus is obtained; visits to the policlinics will included visits to the surgeon and the therapists

As for the involvement and many questions asked by Nischal the trainnow appears to be on the move. Finally the splinting technique is demonstrated by making a Kleinert device. Later on we received the completed protocol and will study it.

During lunch time there is a meeting with Mrs Ammy van Gooswilligen-Hoekstra, president and secretary of the Foundation NepaliMed Holland. Education in the field of hand surgery/hand therapy for General Practitioners (GP's) for the outreach centres (fourteen locations in Nepal) are again discussed. Training staff (para medic assistants) of the outreach centres are the targets for extra training by HAB.

People responsible for this training are Akina Shresta en Sashita Shresta. They may be the appropriate persons for the introduction. We immediately came into action and arranged a meeting with Akina Shresta. After introducing ourselves and explanation of the mission and vision of HAB Akina reacts enthusiasticaly. She definitely sees opportunities for participation of HAB in training the staff.

We are invited to join a visit to an outreach centre in Dhading (west of Kathmandu) the following day in order to get an impression of their working method and to investigate the posible participation of HAB in training. The conclusion of HAB is: "Yess, we will"! It can be a challenge in the future. Akina Shresta refers us to dr. Koju (director of finance) to participate in the development of a curriculum for future GP's

For posible training at this school by HAB the accent will be on diagnostics and conservative treatment of frequent hand lesions such as burns, postoperative treatment of tendon injuries, distal nerve compression syndromes in the arm and wound management.

**During our conversation with Sashita, we found there was a need for training on hand therapy problems of the paramedic assistants of the fourteen outreach centers. They will attend Dhulikhel University /Teaching Hospital twice a year for two days of training. Is there a possibility for HAB to develop a 'hand diagnostics and treatment learning plan' to add to the curriculum of the training to become a paramedic assistant?

Secondly, a project for the General Practitioners (GP) training can be started, when it is possible to be implemented in the curriculum. Dr. Koju, administrative director of 'Learning Plan Development' at the university medical center Groningen (UMCG) will be supervising these projects. Another challenge! This project will be financed and coordinated by the organization NepaliMed Nederland.

In conclusion

It was an instructive day for both counterparts We feel we had made a breakthrough for the implementation of a, locally useful, treatment protocol for flexor tendon injuries, for the surgeon and the therapist. The new contacts with the Public Health staff excite us; we are looking forward to tomorrow.

Report on the visit of HAB to the Dhading outreach centre on Friday March 8, 2013

By jeep we drove to Dhading, about an hour west of Kathmandu. Sashita Shresta proudly gives us a tour: laboratory, pharmacy, examination rooms, surgery and on the first floor a spacious staff room.

The paramedic assistant is 'the man in charge', next to an administrator and a pharmacy assistant. The training to become a paramedic assistant takes 1,5 to 3 years on intermediate vocational education (MBO) level.

A general practitioner comes to the outreach centre about once every two weeks for consultation. We attend part of a consultation.

Report on 'The Hand therapy Congress' NEPTA on March 9. 2013, Patan B&B Hospital

Goals of HAB:

- Transfer of knowledge
- An impulse for the total 'hand care' in Nepal
- To stimulate the collaboration between (hand) surgeon and (hand) therapist
- To gather information for new projects for HAB
- To gain insight in the development of hand surgery and hand therapy in low threshold care by general practitioners in the Netherlands

Report of 'the Hand therapy Congress' NEPTA

There were 58 (!) participants, 53 were physiotherapist and 5 were (hand) surgeon.

The organization by NEPTA was adequate, from welcome to certificate. The program of this day was also visible on our website www.handsacrossborders.nl.

The HAB team presented the following subjects:
- flexor tendon repair and protocols
- extensor tendon repair and protocols
- Burns and Stiffness.

The presentations by the HAB were well received and were followed by interesting discussions. Before our presentation on flexor tendon repairs and our presentation on extensor tendon repairs there was a presentation by, respectively, Dr. Kiran Kishor (Model Hospital Kathmandu) and Dr. Nirajan Parajuli (Dhulikhel University / teaching Hospital). This gave a good overview of the total treatment after surgical repair of tendon injuries.

The collaboration between hand surgeon and handtherapist is intense is one place (Model Hospital Kathmandu), but usual moderate. However, the presenting surgeons on this day at 'The handtherapy Congress' consider the collaboration between hand surgeon and handtherapist essential.

In comparison with the 'fact finding mission' of HAB in March 2011 many initiatives in the field of hand therapy have been undertaken. As suggested by our HAB team (currently present), the NEPTA considers to spend part of their biennial congress on

hand therapy. This way it will become a tradition, namely to guarantee postdoc hand therapy training in Nepal. On behalf of HAB we offer our support for this.

There was also a strong advocacy for the development of occupational therapy in Nepal. The NEPTA is asked to help with the laborious foundation of the Association Nepalian Occupational Therapy (ANOT).

In the Dhulikhel University / Teaching Hospital we have also talked about starting an occupational therapy school, affiliated with the existing Physiotherapy school.

In short: the NEPTA 'Hand therapy Congress' was a success and particularly a good impulse for the development of the total hand care in Nepal!

The Anandaban Hospital, next to leprosy care, profiles herself more and more towards orthopedics, hand surgery and hand therapy, the latter takes a prominent role.

Report of the visit of the HAB team to the Anandaban Hospital on March 12 2013

Goals of the HAB team

- Tuning the content of the training program March 2013
- Introducing flexor tendon repair and develop a protocol based on local findings and possibilities (day 1)
- Giving insight in the application of splinting therapy and research on the possibilities of using local materials (day 3)
- Stimulating collaboration between physicians and therapists
- Gathering information for future projects
- Joint treatment of hand patients

Report of Tuesday March 12

After the usual 'morning prayer'at 8 a.m the HAB team is invited by Dr. Indra to introduce us (the current HAB team).

It is a warm welcome in a pleasant environment with friendly staff. We start our program with a short introduction on the work of HAB: vision, mission and working method.

Our visit in 2011 has made a good impression, however it was hard to get a clear question on the assistance required.

Sally Martin, an Australian occupational therapist, asks us to help think about the interior design and therapy materials needed. We also brainstorm about the possible support of manpower during the initial phase (by or through HAB).

The HAB hand team continues the joint discussion of patients: three physicians, four physiotherapists and nurses.

Five interesting cases are presented by Rambabu Bista, PT. One patient is a eighteen years old male with leprosy who has a palsy of all three peripheral nerves and a burn on the dorsal side of the second phalanxes of all fingers. A treatment plan, conservative and surgical, is set up:

1. Expanding the space between thumb and index finger by splinting therapy, by means of a webspacer
2. Surgery: transposition of the Pronator Teres muscle into the Extensor Carpi Radialis Longus or Brevis (ECRL/B) muscle
3. Tunneling of (a split of) the FDS II muscle through the A1- pully of digit II-V and attaching it on itself (Lasso procedure)
4. Transposition of the FDS IV muscle to the base of the thumb, thus improving the opposition of the thumb
5. Transposition of the FCR muscle into the EDC
6. Increasing ROM and strength of the extrinsic flexors.

It is a huge and radical process, in different steps and means a challenging role for both (hand)therapist and patient (!). Once more it becomes clear that early diagnostics and adequate treatment of Leprosy is compulsory. We continue this day with a short review of the 'flexor tendon repair and rehabilitation' protocol.

Some of the present physiotherapist have attended 'The Hand Therapy Congress' on Saturday March 9. HAB has extensively presented the anatomy of the hand and the strategy on flexor tendon repair. A good step for the development of a customized protocol for Ananbadan Hospital.

It was an interactive afternoon with the complete medical staff, which hopefully will lead to an, immediately applicable, informed consensus.

Another interesting development is that the hospital received resources to start an occupational therapy department.

The general impression is that patients are well informed and perform their excercises and hand care well and with some regularity. By Hospital bus the three members of the HAB team, a dermatologist, the orthopaedic surgeon, two assistant nurses, two physiotherapists, a farmacy assistant and an administrative staff member travel to the outpatient clinic of Patran Hospital south of Kathmandu.

Visit of the HAB team on Wednesday March 13. 2013 to rhe oupatient clinic Patan Hospital

The main activities concern checking of leprose patients and several patients with acute conditions. These patients immediately are referred to the Anandaban Hospital. The outpatient clinic of the Patan Hospital is crowded with people, but the logistics are appropriate. During consultations ten other patients and family members are present; privacy seems to be an unknown entity. In some cases we can contribute to problem solving. The examinations follow a score chart and are registered adequately. At lunch time we returned to the bus leaving for the Anandaban Hospital. In the afternoon two physiotherapists, Arjun and Gyani (who did not join us on our trip to Patan), attend to clinical patients.

Most patients are waiting on the roof terras, where a therapy corner in the shadow has been realized. There are two tables for hand patients and a parallel bars. Patients are bringing their own file.

Prior to their operation patients are being screened by physiotherapists and the data are recorded in the medical dossier. Most common operations are the correction of a leprose claw hand and an opponens transposition. Mean while an emergency case is presented concerning an elderly male patient who, after a fall, ended up with lesions in his face and fractures of the scaphoid bone and the distal radius. His other wrist showed a contusion. Both wrists are treated with a plaster bandage thus awaiting for further treatment.

In the late afternoon support is given to Sally Martin, an Australian occupational therapist, involved in establishing an Occupational Therapy division. Completing an inventory, formulating goals and implementing them in the organisation are studied. Email addresses of active occupational therapists in Nepal are communicated. This means a tremendous achievement in which HAB probably can be of support.

Report on Thursday, March 14, 2013

Today the aims of making splints on the spot are being studied. Such as a brief theoretical introduction on the biomechanics, indications and policy of splint therapy. We continue working in the lab of orthopedic appliances centre, trying to construct a PVC intrinsic-plus splint. The splint is put into an oven of 300 degrees Celsius. This proves to be too high a temperature; after five minutes the old rain pipe appears to be non-resistant to high temperatures. With creative thinking and mutual skills we succeed in making another splint that meets a proper result. It has a nice shape although one edge has torn (because of age …). A standard hand model, in two sizes, probably will do for the purpose.

More important is the approval o f the orthotist/prosthetist. He is pleased with the work and so are the physiotherapists. Theoretical back ground information of our Costa Rican occupational therapist is printed.

The afternoon is spent with the introduction of the pollexograph, the web spacer, knuckle bender and a Mallet splint. We use thermoplastic material left from previous visits. It was a successful 'training on the job' again. In evaluation with the participants we learn that this way of training is preferred above listening to lectures.

Report on Friday, March 15, 2013

A morning meeting is arranged with dr. Indra Napit, R. Bista (PT)., Dyenna (lab) of Anandaban Hospital. Sally Martin (OT) Wim Brandsma and Bart Muthert also are present. The subject is: Initiating an Occupational Therapy division. The inventory is presented and supplemented. I have been able to present some organizational aspects, such as an intense collaboration with the physiotherapists in the field of developing / improving hand therapy. Recruiting of (Nepalese) assistant-occupational therapists in order to guarantee continuity and to create cross links within the organisation (OT, technical lab, self care unit, OT, carpenter, etcetera).

May be HAB can mediate in a qualifying project at one of the Dutch Academies of Occupational Therapy to start a department of occupational/handherapy in the Anandaban Hospital and in the coaching of the process. A location nearby the physical therapy department has preferance in order to create a 'Rehab Zone'.

Future tasks will be: Training of Activities of Daily Life, skills, hand therapy, splints, pre-and post operative tests, work hardening, training of mobilty and an active role during the anamnestic procedure. Finding a permanent occupational therapist is expected tob be difficult. Discussion is on the idea to collaborate with volunteers from abroad during some six months. An alternative would be that Apsara Ghimire (PT) qualifies into an OT, in India. In that case a period of three to four years will have to be covered. Our involment in this is greatly appreciated.

Additionally, on request, a 'hands- on-training on the job' with a power point presentation is given to the four physiotherapists. Topic: Excercises with 'thera putty'. Because of the advanced level of knowledge of the phsiotherapists/handtherapists the excercises are done without extensive anatomical references, like presented in Dhulikhel the former week. A PDF hand out is given as well as the thera putty.

In the afternoon joined treatments are given. The casus ‘ Triple Palsy ’ is discussed again and, on advice of Wim Theuvenet, treatment options are re-adjusted. Finally a Jamar hand strenght measuring device is given and received with great thankfulness. Later on (request of the physiotherapists) a Rotterdam Intrinsic Hand Myometer (RIHM**)** is given to facilitate their lepra research.

In the evening a barbecue with the staff is held to celebrate the first jubilee of dr. Indra Napit as medical director of Anadaban Hospital. The cosy and easy atmosphere is characteristic for the work in this nice hospital.

Report on Saturday, March 16, 2013

Departure day. A meeting with dr Koju, finacial director of the Dhulikhel Hospital, is cheduled. Issues are: physical examination, training options hand therapy/hand surgery to para- medic assistants. in the fourteen out-reach centres of Dhulikhel Hospital under the supervision of HAB. In future possibly also for General Practioners (GP’s) Participants are: Sashita Shresta, Akina Shresta, Nischal Shakya (PT) and dr. Koju representing the Dhulikhel Hospital; Mike van Heel and Bart Muthert representing HAB.

Summary: The medical staff is enthusiastic about the cooperation with HAB concerning training and development of the curriculum for para- medic- assistants and GP’s. HAB stresses the importance of reaching an independant situation at Dhulikhel Hospital. In concrete the plan is HAB to develop a curriculum for the para-medic- assistants in two to three episodes with basic handtherapy/surgery aimed at the Nepalese society. HAB will give the first training in the presence of a physiotherapist of Dhulikhel Hospital (Nischal) on a spot asigned by HAB. Next to that Nischal and colleagues will take over the job, with the aid of HAB.

Chalenge for HAB is met in the plan to introduce a chapter ‘hand therapy/hand surgery ‘ in the curriculum of General Practioners. Dr. Koju embraces the plan and is willing to introduce us to the developers of the project: the University Medical Centre Groningen(UMCG) and the foundation NepaliMed.

Modification will be for the Nepalese situation under the guidance of dr. Sanu of Dhulikhel Hospital. Planning is that the first training for GP’s will start in January 2014.

Conclusion

The mission had a successful outcome that enables us to start from the roots and to realize the mission of our foundation.

Finally I wish to thank Marijke Tolsma and my fellow board member Mike van Heel for their dedication, advices and pleasant collaboration during this third project in Nepal.

Bart Muthert, project leader.

** Translation by Gaby van Meerwijk.*

*** Translation page 6- 9 by Fieke van den Boomen.*