Turkana Eye Project
Proyecto oftalmológico en Turkana

2011 Report
Our aim is to achieve a sustainable eye care based on a close collaboration with local health authorities and the training of local personnel, as well as the prevention of blinding diseases in children (xerophthalmia) and in both children and adults (trachoma), that are already extinct in the developed world. To this end, our project is based on four key fronts:

- Assistance in the Lodwar "Eye Unit"
- Mobile clinics
- Formation
- Prevention

### 2011 Surgical campaigns

Once again (the ninth year since its beginning), the annual campaigns of the project were able to get ahead, despite the economic difficulties currently affecting all sectors. This year there have been three surgical campaigns in March, July and November 2011.

**MARCH CAMPAIGN**

This campaign lasted three weeks, one less than in 2010, but as we will see, with similar results due to the increasing involvement in the project of local volunteers and health workers, with a total of 14 Spanish collaborators and more than 20 Kenyans. Among the first, 2 optometrists, 3 nurses, 7 ophthalmologists, an anaesthetist and a technician travelled to Lodwar. Kenyans included 2 clinical officer in Ophthalmology (Samson and Edwin), a clinical medicine (Welly), 3 nurses in ophthalmology (Jonas, Alex and Moses) and 5 ophthalmic assistants (Margaret, Steven Marin, Carlpeters, Jeremiah and Anne). In addition, 10 volunteers participated in the work of translation and consultation assistance. Also, we had the invaluable help of Dr. Hillary Rono, ophthalmologist responsible for the Turkana region.

As the clinical officer Samson Lokele announced before arrival, the "waiting room" of the Eye Unit was full from day one. This reflects how more and more people are aware of the unit, and seek solutions to their eye problems, previously assumed as irremediable.

The consultation room recorded **966 new visits** (not counting revisions and postoperative). Of these, some came on their own (even from remote sites, as Lockichokio) or by organized transport from each mobile clinic. This means around 65 new consultations each day, which is only possible through the coordinated work with the clinical officers, ophthalmic assistants, and volunteers from Lodwar.
We performed **234 surgeries**. As usual, cataracts (leading cause of treatable blindness) accounted for more than two-thirds of the interventions, followed by interventions over the eyelids (trachoma, tumours, reconstructions) and ocular surface (climatic keratopathy, ulcers, trauma). We also want to emphasize the involvement of local health workers in the operating room. Thus, the usual has been found in every operating table a “trilingual” team (Spanish-English-Turkana). Moreover, some patients that in previous years required surgery for capsule opacification (which supports the intraocular lens after cataract surgery), this year have been addressed atraumatically through the implementation of the **Nd: YAG laser** donated by Zeiss.

The schedule of mobile clinics (in operation since 2010 and funded by the project), conducted by local staff during the year and coordinated with the campaigns, has reduced to 8 the outreaches required during the March campaign in 2011 (Lokori, Oropoi, Lokichar, Loarengak, Nadoto, Nakwamoru, Kaikor and Kalemonyang), compared to 14 in 2010. On these mobile clinics, we attended more than 1000 consultations.

As in previous years, the optical workshop was also performed to train local staff and make glasses for patients who required it. It could only deliver 50 glasses due to the failure of the beveller (which happens quite often unfortunately!) at the end of the first week, but the training, which is fundamental, continued.

As always, during the campaign, four patients had to be referred to other centres (such as the Kikuyu Hospital in Nairobi) because of conditions which were beyond the scope of the Eye Unit.

**JULY CAMPAIGN**

This campaign was conducted entirely by the Kenyan team, led by Dr Rono. The team consisted of 12 people: an ophthalmologist (Dr Rono), 3 clinical officer (Mr Samson from Lodwar Hospital, Mr Edwin from Kakuma Hospital and Mr Kemeli), who travelled to Lodwar for the campaign. The rest of the team consisted of three ophthalmic nurses, and five ophthalmic assistants.

The mobile clinics previous to the campaign attended 1,405 patients, of whom 136 were referred to hospital. Of these 95 required surgery, 82 of whom underwent cataract surgery.
NOVEMBER CAMPAIGN

In this expedition we wanted to raise a "vice versa" campaign, in which the Spanish team (five ophthalmologists) would support and learn from the Kenyan team. With a great weight of local health personnel, this campaign is a sign of progress towards sustainability of eye care in Turkana.

It is worth mentioning the proper functioning of mobile clinics in the diagnosis and screening of patients, as well as the work of health workers involved in the Eye Unit. The effort of this small group, alongside the ophthalmic nurses / assistants in consultation and operating room, has allowed to attend 371 selected patients, of which 128 were operated (96 cataracts).

- Kakuma Hospital. It is a hospital without ophthalmology department, but they perform surgical campaigns, in which the Turkana eye project collaborates with other NGOs. This year they conducted a campaign in January in which 95 patients were operated.

"Throughout 2011, more than 8,000 patients were treated at the Lodwar Eye Unit, and 1,056 surgeries were performed, nearly half of them cataracts"
MOBILE CLINICS

These "outreaches" aim to bring eye care to populations with difficult access to Lodwar hospital, assess the specific needs in each area and train local health workers in prevention. This is how health care works in the most remote places of the world where there is no health infrastructure.

As mentioned above, a schedule of mobile clinics is running since last year. These are conducted by local health personnel, in coordination with the campaigns. Furthermore, with the ophthalmic assistant training, it is intended that in future patients with eye problems would be able to go to their health dispensaries for treatment, although these dispensaries only cover a portion of the population. During 2011 there have been 16 mobile clinics, with a duration of one week, four around each campaign (apart from the eight carried out during the March campaign by the Spanish team). They have treated over 20,000 patients. Of these patients, about 1,000 were referred for inpatient treatment or surgery.

The mobile clinics can also be used for screening purposes (xerophthalmia, trachoma, refractive errors, etc.) as well as awareness through talks at schools and clinics. We could verify that the prevalence of xerophthalmia in children (a major preventable cause of childhood blindness) remains well below what we saw a few years ago, thanks to the periodic distribution of vitamin A. However, trachoma and climatic keratopathy are still very frequent. In the near future we expect to see also a reduction in these cases due to the ongoing plan of prophylaxis with azithromycin and sun protection measures.

FORMATION

The basis of a project to become self-sustaining is the formation of trained and sensitized staff to continue the work in our absence and over the years. People like Samson, Alex, Welly or Jemester, who have already completed their studies, and continue actively engage with the work of the hospital and our unit. During the March campaign, several Ophthalmic Assistants came to lend a hand, showing a good preparation, and an encouraging interest and ability. These are the highlights of this pillar in 2011:

- Ophthalmic assistant. This 3-month course is offered to nurses already working in dispensaries in Turkana. It allows them to have basic knowledge in ophthalmology, in order to treat or refer eye diseases that they see in their workplaces. In 2011 six new people have completed this training.
The results of their work are not only in their contributions during campaigns, but in their workplace, where every month they send a report on the patients they have seen: 22,000 consultations on eye problems have been attended by this people during 2011.

- **Graduated nurse.** Mary Akichim is in her degree in Nursing, ending in 2012.
- **Clinical officer.** Welly Mohamed is on his year of practice, after 3 years of study in the hospital, after which he will begin his studies in ophthalmology for another two years.
- **Clinical Officer in Ophthalmology.** Michael Samal finished his studies in 2011. He is very interested in refraction, and is now a few months in Kitale, for further training in this field.
- **Update courses**, offered to staff working in the Eye Unit. This year courses have been funded for 5 people
- **Resident in Ophthalmology.** Dr. Peter Situma Wanyama, a Kenyan doctor, wants to become a specialist in ophthalmology and we have an agreement with him to fund the 4 years of specialization. After that, he is committed to work 4 years in Turkana as ophthalmologist. His specialization began in October 2011.

In addition, we continued with the daily clinical sessions on basic topics in Ophthalmology. These are intended to spread the key points in eye care to all the people involved in the campaign and in the health area. Open to all hospital staff, this year has been more crowded than ever due to the incorporation, among others, of the Lodwar’s nursing school.

**Prevention**

**Trachoma**

After the survey conducted in 2010 in collaboration with the Kenyan government and various NGOs, it was found that over 40% of children younger than 9 years had active trachoma. Following the WHO guidelines, this implies the need to treat all people with azithromycin once a year for 5 years, if we want to eliminate trachoma as a major cause of blindness.

The College of Physicians of Madrid and Vision Mundi Foundation committed to finance the distribution of the antibiotic (donated by Pfizer through the International Trachoma Initiative, ITI) to almost 900,000 inhabitants of Turkana in 2011. The first massive distribution campaign was conducted in December 2011, in which azithromycin was administered to 661,084 people, representing 71% coverage. This percentage is a fantastic result considering the difficulties in the area and the nomadic character of the Turkana.
Vitamin A

In recent years there have been meetings with the department of nutrition at the hospital, and they have committed to continue covering the administration of vitamin A twice a year in children under 5 years. This is the way to combat the leading preventable cause of blindness in children: xerophthalmia. Jemester is a nutritionist (whose studies were funded by our project) that is responsible for this program in collaboration with the Kenyan government and UNICEF. In May 2011 the first dose was distributed to 93,000 children and the second was distributed in November.
Patients’ referral

- Throughout the year there are complex cases requiring ophthalmological referral to other centres such as Nairobi or Eldoret for diagnosis and treatment. They are mainly young children. This year we have derived 8 cases, 5 of them infants under 1 year.

- Moreover, we often cover other medical cases that come for help to the Mission of Lobur, in northern Turkana, who can not afford their treatments. The missionaries from the Missionary Community of Saint Paul also facilitate transport, and everything else they need.

This project is carried out in collaboration with the Kenyan Ministry of Health, the Diocese of Lodwar and the Missionary Community of St. Paul the Apostle (MCSPA). The MCSPA has been working in Turkana for 25 years and our project is included in the activities that the missionaries held in this region.

Our dream is to create a sustainable health infrastructure in order to give eye care to a population of nearly 900,000 Turkana, who had no chance of being cared for when we first arrived in 2003. Little by little we are laying the foundation in an attempt to prevent blindness, which is another heavy burden for this disadvantaged population of the planet.

Thanks to all who make it possible for small initiatives like ours come true.