

My Nepalese eye

In October 2014 I underwent cataract surgery at Geta Eye Hospital in western Nepal, performed by eye surgeon Suresh Raj Pant. The reason for choosing this somewhat exotic location for my operation lies in the impressive priority the Government of Nepal has placed on eye health, and a hospital which is an example of successful Norwegian medical cooperation over a period of 30 years.

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Nepal is one of the poorest countries in the world, half the size of Norway with a population of 30 million, one quarter of whom live below the poverty line (1). In 1980–81, the WHO, together with the Nepalese government, conducted an extensive survey of national eye health. They found that 0.84 % of the population were blind and that 80 % of the causes were amenable to treatment. Blindness was caused by cataract and trachoma in 72 % and 2.4 % of cases, respectively (2). Based on this investigation, the Government of Nepal initiated a programme, Vision 2020, for the prevention and treatment of blindness in the western region of the country (3). Geta Eye Hospital, in the village of the same name in the Kailali district, was established with funding from Norad (4, pp. 123–32).

The Norwegian eye surgeon Albert Kolstad (born 1929) took part in the investigation in 1981 and was the principal medical driving force behind the establishment of the hospital. He lived in a tent under rudimentary conditions, using scalpels made from razor blades, locally designed microscope stands and cryoprobes using gas cylinders left behind by mountaineers. He trained local villagers as assistants and later on as surgical operators (4, pp. 123–132). Many of these were later supported financially to become doctors and other professional healthcare workers, and now form the core of the hospital's infrastructure. Albert Kolstad spent ten years living more or less permanently in Geta, built his own house there, and in 1987 was made an honorary member of the Nepal Ophthalmic Society (4, p. 97). He received help from some Norwegian eye surgeons who came to Geta on a three-month rotational basis. Dag Riise (1932–2012) visited four times, providing important support. Pictures of Drs Kolstad and Riise hang in the hospital's meeting room, together with that of Inger



(1912–94) and Finn Lie (1912–99), who donated the entire start-up capital for the InFiL foundation, with the aim of eradicating blindness. The foundation has provided important financial support to this health project.

Nepal's prioritisation of eye health

Geta hospital is now an independent non-profit, self-funded institution under the umbrella organisation Nepal Netra Jyoti Sangh (NNJS) based in Kathmandu, that oversees all eye health projects in Nepal reporting directly to the government. I recently went for a two-week visit to Nepal as a board member of InFiL, mainly to see Geta Hospital and to discuss the financial aspects of improving water and sanitation, and financing maintenance and support to the school for blind children in the nearby village. We started in Kathmandu with a meeting with Sailesh Kumar Mishra, programme director of NNJS. He gave us an insight into the development of national eye health care following the WHO investigation.

Prior to 1980 there was a one-year waiting list for eye surgery and a total of 800 eye operations per year. Now 300 000 people are operated on every year in 14 eye hospitals and 55 eye clinics. Two-thirds of the patients undergoing surgery come from India, and there is no waiting list. The country has 175 eye specialists, 95 % of whom have had their specialist training in Nepal. The government aims to have 800

eye specialists. The incidence of blindness has now been reduced to 0.34 %, of which 53 % results from cataract and 0.6 % from trachoma. The aim is to reduce the incidence of blindness to 0.2 % (1).

The country, religion and population

From both Kathmandu and Pokhara we saw spectacular sunrises over the snow-covered peaks of the Himalayas, rising more than 8 000 metres. From Pokhara we travelled by car over a wild and rugged mountain pass, south to the highway that traverses the whole 884 km length of the country from east to west. We spent the night in Lumbini where Buddha was born in 623 BCE. At the entrance to his birthplace the following quotation is written:

«No one can save us but ourselves
No one will or may
We must ourselves walk the path»

It gives rise to thought that only 11 % of the population are Buddhists, while 80 % are Hindu, 4 % Muslim and 0.2 % Christian in this, the birthplace of Buddha (1). The two main religions do apparently live peacefully together. There have never been religious wars in Nepal and the country has never been colonized. Hinduism was previously the state religion, but now both state religion and the monarchy have been abolished and Nepal is a secular republic. A previous



Woman carrying rice harvest from the field. (Photo Mons Lie)

population growth rate of 2.2 % is now 1.4 %. Contraception is free of charge and abortion legal in the first 12 weeks of pregnancy. The literacy rate is 65 % and life expectancy 66 years (1).

Geta eye hospital

We arrived at Geta hospital just after sunset and in darkness we were let in by the guard through the big twin iron gates leading into

the fenced-in hospital area. A number of small fires under the roof along the hospital wall, together with the electric lamps, threw a dim light over patients and relatives preparing their meals or sleeping under blankets on the concrete floor. Sleeping stray dogs slunk away from our headlights as we drove to our quarters, a three-storey building with flats for visitors. The next morning we were able to obtain an over-



Monkey in the hospital area. (Photo Mons Lie)

view of the whole hospital area, guided by our travelling companion and head of the board of InFiL, Svein Lie, who is the son of Inger and Finn Lie. He has followed this project from its very beginning. In the centre of the hospital grounds is the registration building where several hundred patients each day queue up for surgical treatment without an appointment. They are all given their case history sheet, later kept in the hospital's archives. They then walk over to the new central building with its large waiting hall, examination rooms and a corridor leading to the surgical wing which includes an anaesthesia room with 15 benches where one man continuously gives retro bulbar anaesthesia. In the same building there are two operating theatres, one with four, the other with one operating table. There are also several multi-bed wards where the patients spend one night after the operation, and where they are seen by the surgeon the following morning. Here they are looked after by relatives who also give them food, but who must themselves sleep outdoors by their small fires. The patients can have a separate room where one relative also can spend the night, but that costs 200 Rupees, or USD 2. What is striking are all the monkeys among the patients and relatives, together with the stray dogs, thin and casting begging eyes towards any possible chance of food as they scratch their mangy coats. The monkeys are more versatile, moving with great agility between the ground and the big trees, the females with babies hanging on belly or back, the males majestically walking with great sexual pride. The monkeys are also constantly seeking anything edible among the relatives as they cook. Attempts to keep them out by fixing electric wire to the top of the fence have so far been an unsuccessful Norwegian project.

We began the morning by meeting with the hospital management. They performed surgery last year on 43,768 patients, including those operated on in the district eye clinics. Geta hospital is the second largest eye hospital in Nepal and the only one with the status of a «Centre of Excellence». They have a staff of 140, of whom 90 work in the hospital, and the remainder in the eye clinics. Altogether 60 % of the patients come from India. In addition to cataracts, they operate for glaucoma, squint and trauma, they perform eyelid correction and last year they carried out 39 corneal transplants. They obtain the corneas from a tissue bank in Kathmandu to which they send corneas harvested in Geta. Geta hospital is planning to establish its own cornea bank. The hospital runs 11 eye clinics caring for the poor in the mountainous areas of the region's

nine districts. These all have permanent staff who can diagnose eye diseases and send the patients who can afford it to Geta. At Geta hospital patients are charged 2400 rupees, or USD 24 for fixed lenses, 6400 rupees, or USD 64 if phacoemulsification with foldable lens implantation is used. Patients who cannot pay are also operated on. Two to three times a year, eye surgeons from Geta go out to the eye clinics with complete surgical teams, operating either in nearby district hospitals or schools. Here the operations are free of charge (6).

The operating theatre

After the morning meeting we spent time in theatre where two surgeons that day performed cataract surgery on 112 patients. At the end of that week there was a national holiday and the whole country took the day off. That was why they had so few patients that day. Normally they operate on two to three hundred patients a day, the record being 500 (personal communication Suresh Pant). Working hours are from 9 a.m. to 5 p.m. six days a week, but they do keep going until all patients have been operated on. Some days it may be 10 or 11 p.m. before they finish the programme for the day. The doctors are not paid overtime or given time off in lieu, unlike the rest of the surgical staff. We saw both phacoemulsification with implantation of foldable lens and small incision cataract surgery with implantation of fixed lens. Both operations are suture-free. Where phacoemulsification was used, there was only one operating table. In the other theatre there were four tables, two for each surgeon where they could swing the microscope from one to the other. An assistant at each table organised the changeover of patients and preparation of the surgical field. Operation time was 3 to 5 minutes for each patient. All the surgical equipment was modern and of a high standard. I watched Dr Suresh Ray Pant for quite some time, and was impressed by his economy of movement, the relaxed way in which he cooperated with the assistant nurses and his careful handling of the ocular tissue. The majority of the patients had mature cataracts with white lenses and were probably blind. He himself, 39 years old, was born in a small village in the nearby mountains almost two hours' walk from the nearest road. He studied medicine in Bangladesh and specialised in eye surgery in Nepal. He has operated on 60 000 eye patients and serves as deputy director of the hospital.

Visit to eye clinics in the mountains

The next day we drove up into the mountains on a narrow winding road cut into the

cliffs with a sheer drop of several hundred metres; a wild and rugged landscape with rice field terraces all the way to the top of the mountains, cultivated by hand or in some places using bulls or buffalos. Everywhere on the steep hillsides there were small villages and dwellings with only footpaths leading to them. Along the road women were carrying tremendous loads on their backs with weight-bearing bands round their foreheads, huge bundles of rice from the fields, firewood, sacks of flour or pitchers on their heads. Everything was carried and always by women, never a draught animal or a tractor. There were schoolchildren in uniform along the road, amongst the buses, full of passengers inside, on the roof and clinging to the sides of the vehicles, heavily loaded trailers on far too narrow



Suresh Ray Pant. (Photo Mons Lie)



Suresh Pant examining Mons Lie with a slit lamp. (Photo Svein Lie)



Mons Lie newly operated together with a satisfied surgeon. (Photo Svein Lie)

roads crowded with goats, cows and children. It was here, in these mountains, that Suresh Ray Pant was born. We visited two eye clinics, four and six hours' drive from Geta, spending the night in a small village hotel.

That evening we were joined by the administrative staff of Geta eye hospital. They were having a meeting with the builders of a new eye hospital planned to serve the surrounding district, and staffed by eye surgeons from Geta. Suresh Pant also accompanied us and asked if we would join him in the temple before visiting the eye clinic. Together we climbed the stairs to the temple, lined on both sides with all manner of strange figures bearing human and animal heads. We took off our shoes and entered the temple, which had a Swastika painted on the wall by the entrance, this thousand-year-old symbol of happiness that has been so irrevocably disgraced for us in Europe. In the small incense-filled room a priest blessed us and painted a red mark on our foreheads. There was no service or sermon. All the figures are of gods – «we have hundreds of them,» Suresh said with a smile. «To us the soul is immortal and born again in animal or man. If you have lived a just life, your soul is given a favourable dwelling in the next life. When we die, we must be burned by the riverside and the ashes cast into the waters. Regardless where in Nepal we live, this is important. The aim of religion is to help us differentiate between good and evil. We must fight the corruption so abundantly found in our politicians. We must bring health service to the poor.» Hindus have great respect for animals, which may be the dwelling of ancestors, and they are reluctant to eat them. «The monkeys were here before us,» as Suresh said when we suggested methods of getting rid of them. In addition, some believe that they are former Gurkha warriors. The hospital staff are not opposed to getting rid of the monkeys from the hospital grounds; as such they are a menace, but the staff remain rather passive towards Norwegian attempts to get rid of both the monkeys and the stray dogs.

The operation

At the eye clinic, where they demonstrated ocular examination with a slit lamp, I asked

Suresh Pant to take a look at my left eye which had become progressively clouded for some time. My right eye was operated on for cataract ten years ago at Ullevål hospital in Oslo. He confirmed that I had a grade 2–3 cataract and said he could operate on me on our return to Geta. We travelled in two cars down the narrow, winding mountain road from an altitude of 2000 metres down to Geta which lies at sea level. We stopped to drink sweet tea with milk at a restaurant by the roadside. I then told Suresh that I had considered his offer and would like him to operate on me. He looked at me for some time before he asked: «Do you have a passport?» When I confirmed this, he said: «Give it to me so that you won't run away.» Back in Geta we agreed that he would operate on me the next morning. It was the day before the holy day, and there were few patients.

The next morning I was in the Geta hospital registration queue. My Norwegian travelling companions became my relatives and caringly accompanied me as I waited among the other twenty patients and their relatives. I had my eyesight tested, eye pressure registered using Schiøtz tonometry, blood pressure was checked and finally slit lamp examination by Suresh Pant after dilatation of the pupil. Suresh Pant then looked at me seriously and said: «Here we only have lenses made in Nepal. The lens you would get in Norway is too expensive for us. There is no documentation for this, but perhaps that lens is better. We have only one phaco machine. If it breaks down, which has happened, we will have to change the operation, make a bigger incision and extract the lens manually, and you will get a fixed lens. In two days you are flying back to Norway. During the flight you will have no access to medical treatment in case of complications. I also do have complications. I feel that perhaps you should have your operation in Oslo.» I answered that I had considered all this, and I still wanted him to operate on me. The fact that he now showed me an emergency exit so that I could withdraw with neither of us losing face only increased my confidence in him. With a smile he thanked me for the confidence I showed and said he would operate. It clearly made an impression on him that I was the hospital's first

foreign patient, apart from the patients from India. To experience his and his team's warm concern and care, their joy when all went well, their pride when the hospital received its well deserved recognition, was a great experience for me.. It was easy to accept when the hospital asked for permission to publish this on their Facebook page the day after the operation, when my eye test showed that my sight was, if anything, better in the left than in the right eye. It was announced on the local evening news that a Norwegian surgeon had successfully undergone surgery at their beloved hospital. The Geta eye hospital was congratulated, and they expressed their thanks for the confidence shown in their hospital (7).

Mons Lie (born 1938)

MD, PhD, specialist in general surgery, vascular surgery and cardiothoracic surgery. He is now retired. He is a board member of InFiL (for Inger and Finn Lie).

The author has completed the ICMJE form and reports no conflicts of interest.

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