Saving sight in Saudi Arabia

Opened only four years ago, a new eye hospital has already become a think-tank for solving serious eye problems in Saudi Arabia, and represents a breakthrough in the age-long struggle against blindness

by Ihsan Badr

During the last 20 years, the Kingdom of Saudi Arabia has seen major improvements in many aspects of people's lives. But the authorities have long recognised that eye diseases pose a problem for the country and for the region as a whole. The number of blind people in the Eastern Mediterranean region stands at around 7.5 million out of a population of 250 million; in the trachoma endemic areas of many countries there is a blindness rate of around four per cent.

Until recently, there were no studies available on the prevalence of blindness in Saudi Arabia, but rough estimates by WHO indicated a blindness rate of 3,000 per 100,000 inhabitants. We also considered that, on average, more than 60 per cent of the cases of blindness in the region could have been prevented, since blindness and visual impairment are mainly associated with communicable eye disease. With the development of health care systems in Saudi Arabia it became obvious that, to solve the problem of blindness in a systematic manner, a multi-disciplinary approach had to be taken.

The Ministry of Health has been making great efforts for many years to build up preventive medicine departments and to organize primary and secondary health care. In the past, large numbers of patients were referred abroad for specialised surgery because skilled manpower was lacking in the field. So some years ago the government built the King Khaled Eye Specialist Hospital (KKESH), named after the late King Khaled. The 250-bed facility in the capital Riyadh, was opened in December 1982 and officially inaugurated by his brother, King Fahad, in November 1983. It has already attracted many international experts, including more than 30 ophthalmologists as well as residents and fellows engaged in the KKESH training programme.

One of the major objectives of the hospital is the prevention of blindness in Saudi Arabia. Under the direction of the Ministry of Health, the hospital organized a national survey to identify eye diseases throughout the country. In February 1984, a caravan of about 40 staff members, including doctors, nurses, epidemiologists, technicians and supporting staff, started a tour of the country's five regions.

In addition to the population samples selected from the 75 metropolitan and non-metropolitan communities in the kingdom, more than 2,000 bedouin nomads living in areas outside the boundaries of the communities were selected for the study. The communities selected were sub-divided into segments or geographic areas, each of them with 50 housing units, or some 225 individuals. Each team...
Saving sight in Saudi Arabia

included one fully trained ophthalmologist who carried out a detailed examination in every household including slit lamp examination, fundus examination, eye pressure and tests for glasses.

Altogether 16,810 Saudis were examined and the data was entered in a small portable computer. The data was then analysed upon completion of the survey by a scientific board having links with the international Centre for Eye Health in London. Preparation for the survey took over a year, and the actual field work, in spite of the large size of Saudi Arabia, took about five months.

Use of the computer by field researchers and at the hospital significantly simplified the process of data reduction, and enabled them to analyse all the relevant data within weeks. On the strength of the valuable data obtained, the Research Council recommended a national programme for blindness prevention, many aspects of which have already been implemented.

The overall blindness rate has been reduced during the last few years from an estimated three per cent to a national average of 1.5 per cent, and the main causes of blindness are now well-defined. For instance, cataract, an opacity of the lens which is curable by surgical technique, proved to be responsible for almost 55 per cent of all blindness, while trachoma caused ten per cent of blindness among the older age groups. Corneal scars, refractive errors, failure of medical or surgical treatment, and glaucoma are the other main causes of blindness, all of them either curable or preventable.

Today the prevalence and severity of trachoma has fallen remarkably, even though it still accounts for some ten per cent of blindness in the older age groups. In the most endemic areas, the Central and Eastern Provinces, trachoma once affected more than 90 per cent of the people with moderate to severe intensity. The present national average of active trachoma has dropped to only six per cent, while inactive trachoma affects about 16 per cent.

Trachoma prevention programmes in regions with a high incidence have already begun, the emphasis being placed on high risk
groups. At the same time, efforts are also underway to protect the younger generations from this infection. It is interesting to note how in a short time a tertiary centre has made considerable progress in preventive medicine and education. This centre has already developed an excellent training programme, involving both the King Saud University and KKESH, which accepts some ten post-graduates each year for a three-year period and will be able to contribute a great deal of paramedical training and research to the field of ophthalmology. Emphasis is placed on topics related to the prevention of blindness.

Children await their turn for an eye check-up in Saudi Arabia.
Photo WHO/I. Badr

In only a few years the KKESH has become a well-known facility in the field of ophthalmology. Its present and future significance for research and medical education has won the hospital recognition from WHO as a collaborating centre in the field of blindness prevention.

The success of this institution in the areas of prevention of blindness, patient care, medical education and research, and as a national "think-tank" for solving problems in ophthalmology, is remarkable. In many ways it is likely to constitute a long-wished-for breakthrough in the struggle against blindness, lack of training, lack of curative facilities and lack of direction. The cost of setting up such an establishment has been significant, but already it has proved to be an excellent investment.