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Trachoma Rapid Assessment and Planning for Intervention

A Pilot Study in Fayoum Governorate, 2003

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Research Problem:

According to the international initiative "Vision 2020 – The Right for Sight" adopted by the WHO and a group of international organizations, every five seconds one person goes blind and every one minute one child goes blind. It is projected that the number of blind people internationally by the year 2020 will exceed 80 million. The developing countries, including Egypt, suffer even more from this situation, as more than 80% of the total cases of blindness exist in developing parts of the world.

A major percentage of blindness can be averted through the use of certain preventive and curative interventions. And indeed, the preventative approach has been adopted globally to target the *causes* of blindness within their social and ecological context.

Almost all the causes of preventable blindness are closely related to public health standards, including the quality of water and sanitation sources, the level of community awareness, the behavior of individuals, and the local standards of environmental hygiene.

Trachoma is the main cause for preventable blindness worldwide. Trachoma is a common communicable disease that prevails in underprivileged communities with poor living conditions. The disease process starts with external inflammation of the eyes, particularly the eyes of children. It then spreads widely by direct contact. Particularly vulnerable to the rapid spread of trachoma are communities with a high density of flies and poor personal and environmental hygiene. With frequent exposure over a long period of time, the disease results in lid deformity and severe biological changes that can lead to blindness among adults.

It is evident that trachoma has a definite socio-ecological pattern and is closely linked to conditions of poverty and deprivation. For the last three years, a group of interventions to control trachoma have been in place in the rural Menofiya and Menia Governorates. However, data from Upper Egypt has been absent.

The behaviors and environments that permit trachoma to exist are in need of better understanding. Also, the specific educational messages for communities in Egypt are not well defined and are in need of further refinement.

Objective of the Study:

The study focused on the following questions: is trachoma eye disease a public health problem in Fayoum? If so, what are its characteristics and how can it be eliminated?

The study aimed to function as a pilot project to assess the epidemiology of trachoma within its ecological and community patterns and also to assess the validity of a plan to control the disease.

Methodology:

Through a two-stage selection process, a sample population of 1500 people was created. In the first stage, a group of 15 villages were selected for study. Criteria for the village selection included high population density, low health services and low sanitation and law water services. These villages are Markaz Fayoum, Bani Saleh, El Edwah and Hawara El Maktaa; Markaz Ibshway, Tobhar, Al Agamyieen, Abokassa; Markaz Itsa, Menyiat El Heet, Qalamshah, Al Gharak Bahary; Markaz Tamyia, Menshat El Gammal, Kassr Rashwan, Dar El Salam; Markaz Senoures, Fedymeen, Terssa, Matartars. In the second stage, 100 people from each village were chosen randomly from two age groups: Children between the ages of 2 and 10, who are the most vulnerable population for the active disease, and adults above the age of 18, a population that would exhibit the complications of the disease.

Two sets of data were collected. The first was a set of quantitative data. It included the characteristics of the included villages and households as well as data regarding the prevalence of the disease. The second set was qualitative data collected pre- and post-intervention regarding the community perception and knowledge of the disease and community behavior related to the disease process. This data was utilized to define an appropriate health education message that could target the most at risk communities.

Training:

The local manpower of Fayoum Governorate provided the field teams for the project. 12 doctors were trained and 6 of them administered the field medical examination. 15 health workers were trained for and participated in enumeration. 14 female health visitors and nurses were trained for and participated in interviewing and data collection.

Field-examination:

Two field teams were assembled after training and standardization. The WHO grading scale for trachoma was adopted. The field teams collected data on the characteristics of villages, households and families. The examination was done door-to-door within the enumerated sample. Active cases were treated immediately on the spot. Discussion with family members about preventive measures were initiated and instructions for proper medication use were given.

Health education:

A community-based health education campaign was set in place to target the four most at-risk villages. Group meetings were conducted. As women constitute the most vulnerable population, these meetings were mainly amongst groups of women. Those in attendance were educated on the environmental and social factors that contribute to the disease process.

Results:

Coverage rate for the sample was 90.2%. Prevalence of the active disease among the group of children was estimated at 47.8 %. No gender significance was detected for the prevalence of the active disease. The variation in the figures between the included villages is remarkable compared to other governorates (namely Menofiya in Delta Nile). The highest prevalence for active trachoma among the group of children was 85.2 % in the village of Mensheit El Gammal, while the lowest prevalence was 15.9 % in the village of Terssa. Prevalence of trichiasis (adult blinding complication) is 37.7 %.

Only 6.4 % of the included households have access to a general network for sewage. 44.9 % of the households have poor-quality latrines located outside the house. 2.6 % of the households have neither latrines of any sort nor any specific method for sewage.

Household water usage is greatly limited by the availability of sewage systems at the household level. As water is in fact a burden to dispose of after use, many water-related house tasks are avoided, with water used only for more high-priority tasks such as cooking and drinking.

Community knowledge of the eye diseases and the processes by which they spread were very low. Less than 40 % of interviewed community members had a fair amount of knowledge about either the eye disease or its relationship to the environment and hygienic practices. More than 65 % of the interviewed persons were engaged in harmful water, sanitation, and garbage disposal practices that exacerbate the disease process.

After the provision of health education, the percentage of interviewees who understood trachoma to be an infective disease had increased to 78 %. However, perception of the mode of infection had not improved as an outcome of the intervention. Pre-intervention, nearly 54 % of people erroneously believed that infection could be spread via use of the patients' clothes; post-intervention, nearly 48% still believe this to be true.

The community's understanding of the correlation between successive trachoma infections and trichiasis (the deformity in upper lid resulting in late-blindness among adults) improved from 33 % to 49 % after community health education. The correct causal relationship between trachoma and trichiasis was understood by 66% after education interventions as opposed to 38 % before.

Conclusion:

Trachoma is a public health problem in Fayoum Governorate with a higher prevalence rate and more remarkable variations than in the Delta Nile.

Pre-school children are the group with the highest risk of catching the active communicable stage of trachoma. Households lacking proper sewage drainage systems are at a greater risk of having the active disease and spreading it among the village population.

The way water is used and disposed of at the household level is a greater determining factor in the spread of the disease than is the availability of water.

Most aspects of the community-based health education were perceived in a positive light. However, a greater part of such educational interventions should be dedicated to highlighting the ways by which trachoma is spread within the community. Community members must learn that the active disease is spread via touch, close contact with patients, and by flies. The efficacy of the preventive measures taken by community members against trachoma depends upon their proper understanding of the disease and the manner in which it is spread.

Services:

A total of 1353 persons (475 adults & 878 children) underwent medical examination for trachoma eye disease. Out of this population, 420 people received direct medical treatment on the spot. A total of 150 community members attended the sessions for health education; of this 150, nearly 90 % were female.

Study applications and impact:

Findings from the medical eye examination guided the delivery of medication in the field for the active cases. Findings from the anthropological research were utilized to refine the educational message provided in the most at-risk villages. Final findings and recommendations will be utilized in advocacy with the decision-makers, MOH, WHO and other interested bodies in order to create a national plan for trachoma control in Egypt.

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About the Program

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