

families and institutions, especially in depressed areas where hygiene is poor. Current World Health Organization estimates indicate that more than 400 million people throughout the world suffer from this disease. The disorder can be cured by drugs, but there is a lack of natural immunity and frequent reinfection is common.

Much more research is needed to find an effective vaccine for prevention, and therapy for permanent cure, before trachoma can be eradicated. Diagnosis of early trachoma has always been a problem. The development of an immunofluorescent technique, however, has been a major diagnostic advance.

This is an area where the ophthalmologic community can make substantial contributions toward the eradication of disease not only in a portion of our own population, but in the undeveloped areas of the world which are looking toward our technology for help.

Under the leadership of the Neurology Institute, the first broad-scale scientific survey on the prevalence, causes, and possible means of prevention of trachoma is under way in Egypt. This study of the world's most prevalent blinding disease is expected to yield a store of knowledge. A random sampling of 10,000 of 250,000 inhabitants in two large areas has now been tested for visual acuity and subjected to study, in the survey which will continue for several years.

Although trachoma blinds many people in most parts of the world (the U.S.A. is relatively free of it save among the Indians of the Southwest), Egypt was chosen for the study because trachoma occurs there in epidemic proportions.

Attempts to eradicate trachoma through mass public health programs have been successful only in the more highly developed nations. In other countries such campaigns have either failed to cure or there has been a high percentage of relapsed cases and reinfection. This is true even among Indians in southwestern U.S.

Uveitis

The underlying causes of some types of uveitis (inflammation of the iris), which strikes people in their most productive years, has been found in some cases to be toxoplasmosis, syphilis, or tuberculosis, but the cause of the majority of cases is still unknown.

Several hundred uveitis patients have been admitted to the Clinical Center for close observation and treatment with drugs. Institute scientists were among the first to discover that the infection, toxoplasmosis, is a major cause of uveitis. They concentrated their studies this year on a concerted attack on the disease with use and evaluation of a group of drugs. A new antibiotic was found to be effective when used in combination with the usual treatment for uveitis. The effects of chemotherapy on presumably toxoplasmodic uveitis and the usefulness of antimetabolite treatment on specific types of uveitis appear to hold great promise.

The role of hypersensitivity to disease-producing microorganisms or to altered tissues needs much more intensive study. Animals have been inoculated to produce similar lesions, and such studies should be continued. Extensive epidemiological studies are needed and uveitis clinics are necessary for research.

The Institute's Collaborative Perinatal Project, which studies 60,000 pregnant women and their offspring, has revealed evidence of toxoplasmosis in 1 out of every 2,000 babies. A series of controlled epidemiological studies, to demonstrate more precisely how this infection is transmitted, may do much toward eliminating it.

Exophthalmos

New information on the nature and treatment of dysthyroid (endocrine) exophthalmos and recent advances in surgical treatment for the condition will bring new hope to victims of this disease, which is characterized by abnormally prominent eyeballs with lid retraction and an excessive accumulation of fluid in tissue spaces.

In two related research projects, Institute grantees succeeded in (1) establishing the site and nature of the changes which take place in ocular muscles in cases of dysthyroid exophthalmos, and (2) tested the chances of success to be expected in this disease. The investigators concluded that surgery is indicated only in the acute phase of the disease, where the cornea and optic nerve are threatened and where other measures appear inadequate.

Antithyroid drugs proved effective in one study of 129 patients whose cases were controlled over a period of years with the drugs. In none of these cases was ocular surgery required nor did the ophthalmology significantly worsen.