

Indian hospitals,—Interiors (as theatre, wards, reception or patients' sitting room), Exteriors ; Cases (Ostomalacia, etc.) ; Methods of conveying patients to Hospitals ; Nurses at work and play ; Indian scenes, etc.

This would make a most fascinating Exhibit for our Annual Conferences, and would speak for itself if carried to the I. C. N. by our delegate—Someone is going you know.

The Associate Editor will gladly compile such an album if snaps and photos are addressed to her for the purpose.

BLINDNESS IN INDIA AND ITS PREVENTION*—(Contd.)

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IN old people Cataract and Glaucoma are the special foes that produce blindness. Cataract is a degenerative change in the crystalline lens which lies behind the iris and which gradually becomes opaque so that light cannot get through the pupil to the back of the eye. Thus blindness results, but vision can be restored in most cases by a successful operation. Cataract is more common in India and in other tropical countries than it is in Europe and America. Again it is commoner in the Punjab and the North-West Frontier Provinces than in the Bengal and Madras Presidencies ; this is due to the excessive dry heat and intense glare of these areas in contradistinction to the more humid and less intense heat of Bengal and Madras. It is also an undoubted fact that Europeans who have served in India are more liable to cataract than those of their own class who have not. Intense light therefore predisposes to cataract, but in the majority of cataract cases there is a definite focus of long continued local sepsis which is most commonly dental or alimentary in origin. This leads to premature senility with its accompanying signs of degenerative changes in the various parts of the body of which cataract forms a part. A further factor frequently accompanying the formation of cataract, if not an active etiological one, is deficiency in certain elements of the dietary. These items have not been determined as yet. The majority of Indian peasants are habitually on the verge of a starvation diet and cataract may be one of the ocular complications of a nutritional disease accentuated by other predisposing causes such as intense sunlight and focal sepsis.

Glaucoma is an eye disease where the tension inside the eye rises leading to destruction of the optic nerves and gradual loss of vision. The

* Paper read at T. N. A. I. Annual Conference, Calcutta, 1931.

disease can be cured most satisfactorily by an expert. It is one of the most appalling diseases that can affect the eye as it is usually painless and leads to complete blindness unless treated surgically and cured by an operation. Even by medical men glaucoma is often diagnosed as cataract, and when the patient comes for operation for the supposed removal of cataract it is often found that the disease is glaucoma and that it is too late to do anything to restore the vision. Like cataract, glaucoma is very common in India, and is nearly always associated with some form of sepsis such as dental or intestinal intoxication. In 1930 and the latter half of 1929 a large number of cases of epidemic dropsy or, as it is incorrectly called by the public, beri beri occurred in Bengal, affecting children, adults, and old people. A very common complication of this disease is epidemic dropsy glaucoma. Many people have lost their sight for ever as a result of this disease but those who submitted to operation on their eyes before it was too late retained or recovered their sight. The causation of this disease is due to a toxin from infected rice.

Knowing the probable predisposing causes of cataract and glaucoma, one has the means of preventing these diseases or of curing them before they are established, and so the path for the prevention of blindness by these two factors can be opened up.

Blindness in the first five years of life forms the main nucleus of the total blind and much of this is preventable. In western countries the most important cause operating in this period is ophthalmia neonatorum more popularly known as "babies' sore eyes" and due to gonorrhoea and is responsible for 8 per cent of the total blind. Gonorrhoea is not less prevalent in India, and with Indian customs of "Dirty midwifery", ophthalmia neonatorum plays an important part in the causation of blindness in this country. Thanks to Crede's prophylactic use of weak nitrate of silver drops put into the eyes of babies immediately after birth and now carried out as a routine by all midwives, the incidence of blindness produced by gonorrhoeal ophthalmia has considerably diminished.

In the Bengal and Madras Presidencies, keratomalacia stands out pre-eminent as the most important causation of blindness in the first five years of life and is more important than ophthalmia neonatorum. Large portions of the poorer people of India are in what may be termed the "twilight zone" as far as their nutrition is concerned and a small change in their dietary due to poverty may precipitate keratomalacia even in adults. It is due to the lack of the fat soluble vitamin "A" in the food, and cod liver-oil is the best all round method of treatment. It is nothing short of marvellous to see an appalling condition of the eyes in young

children clear up under its administration. Here the method of prevention is obvious; it is the poverty of the Indian ryot and the want of vitamins in his dietary that cause this disease. Give him an improved dietary and keratomalacia will disappear. It is an easy preventable disease but it is easier to talk of curing poverty than to accomplish it.

Also important in the list of preventable causes comes the application of irritant remedies to the eye in cases of eye disease. These are a terrible curse in India. The travelling hakim and the kaviraj have a lot to answer for in this connection as have the couchers of cataract known in Bengal as the "mal" and in the Punjab as the "rawal".

In the eighteenth century in England ambulant eye quacks including couchers were common, and toured the country accompanied by all the apparatus of shameless advertisement including monkeys. Their operations were frequently attended with brilliant immediate but disastrous after results. They were here today and gone tomorrow and so were able to escape the consequences of their handiwork.

These charlatans still abound in the villages of India, and in the Eye Infirmary of the Medical College, Calcutta, it is a daily occurrence to see patients with eyes ruined beyond repair by the work of these rascals. Many of these patients arrive in excruciating agony and all that can be done to relieve pain is by taking out the eye. Like every other occupation, couching in India is hereditary, the principles of the craft being handed down from father to son by word of mouth and by practical instruction. By tradition and ancestral habit the coucher is a wanderer on the face of the earth and, like a gypsy, he carries his wares, such as they are, to the very doors of the people's homes. Until crude and violently irritant remedies for conjunctivitis and similar affections cease to be hawked about the bazaars of India and legislation is introduced to deal with couchers much preventable blindness will ensue.

Small-pox is a disease in which the eyes frequently become involved and this could all be prevented by the rigorous enforcement of vaccination and re-vaccination. "Good vaccination saves more eyes than all the eye hospitals put together" says Col. Wright and it is deplorable that the rules and regulations with regard to efficient vaccination in infancy in India are being restricted.

In the first half of the nineteenth century in Great Britain $\frac{1}{2}$ to $\frac{3}{4}$ of the indigent blind who applied for relief had lost their sight from small-pox, and in 1922, a century later, the Departmental Committee on the causes and prevention of blindness could only discover six cases in the blind asylums that could be attributed to small-pox.

Syphilis, both acquired and congenital, is responsible for an enormous amount of blindness in a large city like Calcutta, yet little is being done to

treat and prevent it. The elimination of syphilis from a community may seem to many an unthinkable proposition but we have the advantage of knowing how in the majority of cases the transference of disease takes place. One has only to study how the fight against this disease is progressing in Great Britain. In 1913 a National Council for Combating Venereal Disease was formed and has concentrated for the past ten years on securing ample facilities for treatment of those infected and enlightening the public on its prevention. The decrease in the number of cases has fallen from 105,000 in 1920 to 74,000 in 1923. In Belgium the Government supplies every doctor with a free supply of specific arsenical preparations, and that is what is wanted in this country as hospitals cannot afford to purchase large quantities of these preparations which are expensive.

Trachoma has from ancient times been an important cause of blindness, but with the advance of civilisation its treatment has passed into the hands of the public health worker who has dealt with it by segregation and with excellent results. In this disease many eyes are lost through the application of too irritant remedies and this group consequently overlaps the primary disease. The comparison between the spread of trachoma in Napoleon's army in Egypt in the early part of the nineteenth century and the absence of any outbreak amongst the British Expeditionary Force in Egypt during the late war is very remarkable and speaks for itself.

Trachoma is very rife in Northern India, but in Bengal it is of interest to know that trachoma for the most part is found amongst the people from other provinces of India who live on her soil, notably the Marwaris from Rajputana and the Mohammedans from Northern India and the North-West Frontier Tribes, and so it is not such an important cause of blindness as in other parts of India. Col. Elliot, after a long experience in the treatment of trachoma, states :—"Trachoma should never be permitted to cause the slightest diminution in the acuity of a patient's vision if treated from the first". Unfortunately in India the patients do not come for proper treatment until the disease is well advanced.

In Leprosy the eyes in 10 per cent. of cases come affected and the sight destroyed. It is of interest to note that a very large proportion of blindness occurring in Leprosy is due to an accompanying syphilis, and owing to the lowered state of vitality brought about by these two diseases, the ocular complications are difficult to treat. Largely due to the work of Muir and his methods of early diagnosis and thereby treatment, this cause of blindness is on the downward grade.

Cholera is still very common in India and is responsible for a considerable amount of loss of sight.

(To be continued)