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ISSUED BY THE DIRECTOR OF PUBLIC HEALTH,
MADRAS.

OUR OBJECTIVES

- (a) Giving departmental information to our Officers.
- (b) Publication of readable articles on Public Health Programmes and principles.
- (c) Incorporating news items relating to the advancements and researches in the field of Public Health.
- (d) Reports on meetings, seminars, workshops etc., which have a bearing on public health.
- (e) Serving as a medium for sharing of thought and experiences among Public Health and allied personnel.

YOUR ATTENTION PLEASE

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- (4) Articles should be typewritten and should ordinarily not exceed 1200 words.

A STATEMENT

By

Dr. M. G. CANDAU

Director-General, World Health Organization

Sight is one of man's most precious possessions. Partial or total blindness will always remain a tragedy although one that can be mitigated by training which in some countries is enabling people to work and earn their living in competition with the sighted. The greater part of the world's blind however—millions of people—still have to suffer the additional distress of being an unproductive burden on their families or communities.

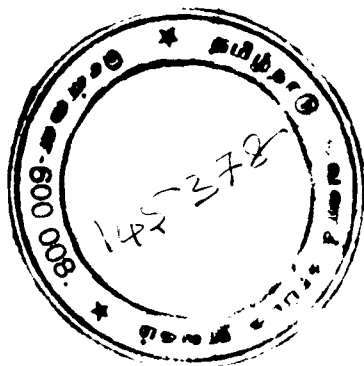
Yet more than half of the world's blindness is preventable. With proper treatment by drugs and surgery, sight could be restored to millions who are now losing it; preventive measures can ensure that in the future the numbers of the blind will be a third or less of what they are today.

There are, it is true, some diseases leading to blindness against which we are powerless, but they affect a minority of sufferers. The great causes of blindness are still, on the one hand, accidents that need not happen, and on the other, preventable diseases such as trachoma, smallpox, and onchocerciasis—the "river blindness" of many parts of Africa. Vitamin deficiencies are still responsible for much loss of sight in some areas. Cataract, found all over the world, can be remedied by surgery, and even glaucoma, a leading cause of blindness in the more developed countries, can often be halted if discovered at an early stage. Research is still needed to increase our knowledge of eye diseases, but the tools and techniques we already possess for preventing blindness can be put to immediate use against most of these causes.

It cannot be repeated too often that the cost of preventive services is only a fraction of the amount that could be saved by reducing the burden which the blind inevitably represent for any country's economy.

On this World Health Day I would urge governments, health administrations and people everywhere to review what is being done and what could be done to prevent needless loss of sight.

The knowledge is there—it remains to apply it on a wide enough scale to protect the sight of millions who, without this help, are doomed to darkness.



Five Hundred Million People—one sixth of the population of the entire world—Suffer from Trachoma.

It is the World's greatest single cause of serious and progressive loss of sight.

In India (for example) a survey, carried out by the Government with the assistance of W.H.O., showed that in the State of Punjab the prevalence of total Trachoma was more than 80 percent and more than 77 percent in Rajasthan. High figures were also recorded in a number of other States.

Need for Public Support of Blindness Prevention Programmes

World Health Day Statement by W. H. O. Regional Director

Dr. C. Mani, Director of the WHO Regional Office for South East Asia has issued the following statement on the occasion of World Health Day—April 7, 1962.

When we talk of the problem of blindness our thoughts turn to the tragic life of those who are condemned to spend their lives in darkness. It is natural that we should be struck by this aspect of the problem because there are no fewer than 10 million blind people in the world. But when we realize that two-thirds of this blindness is preventable it becomes clear that we have a duty not only towards the blind but also towards the risk of blindness either because they do not know to take care of their eyes or because the diseases causing blindness remain unchecked.

That is why the stress in this year's theme for World Health Day is on the *prevention* of blindness. Sight once lost can be restored by treatment in rare cases only and the blind population becomes an economic burden on society. Preventive measures cost less and yield more in terms of human happiness and economic output.

The leading causes of blindness in the South East Asia Region of WHO are trachoma and smallpox, both communicable diseases and both preventable.

In India, where statistics have been collected in the course of a large scale WHO-assisted campaign against trachoma, it is estimated that 60 per cent of preventable blindness in the country is caused by this disease and infections associated with it. In some of the villages in northern India 80 to 90 per cent of the people, especially children, have been known to suffer from trachoma. Smallpox alone is responsible for 400,000 of India's two million blind. Campaigns against trachoma are based on a mass scale treatment with an antibiotic ointment and prevention of its spread

from person to person by the proper observance of personal hygiene and cleanliness. **Against smallpox, vaccination is an excellent safeguard.** This has been proved by the experience of many countries in the West which had a high incidence of smallpox only a few decades ago and which are completely free from it today. Smallpox vaccination campaigns in various stages of progress are now going on in a number of countries in the Region but this effort needs much greater impetus, better field organization and more money. WHO and UNICEF are assisting countries to become self-sufficient in vaccine production.

The responsibility for carrying out effective programmes for the control and eventual eradication of these diseases rests primarily on the health administrations but very active public support is essential to the success of these plans.

In the efforts to fight trachoma and smallpox, especially the man in the street can make a very effective contribution. Trachoma control is largely a matter of personal hygiene and environmental cleanliness and once people realize the close relationship between insanitary living conditions and this disease, its chances of spreading from person to person will greatly diminish.

A valuable service can be rendered by the better-informed members of the public if they will set themselves to fight the prejudice which still persists against smallpox vaccination.



Etiology and Incidence of Blindness in South India

By

Dr. G. VENKATASWAMY, M.S.D.O.,

and

Dr. A. V. RAJAGOPALAN, M.B.B.S., L.O.,

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Recently a survey was done by the Ophthalmic department of the Government Erskine Hospital, Madurai on the Etiology and incidence of blindness in South India. The term "blindness" implies inability to perceive light. In Great Britain, visual acuity of 3/60 or less in one eye, or alternatively a visual field reduced to a small area around the fixation point is considered as blind for the purpose of including in the blind register. For our purpose, vision of 1/60 or less in each eye was taken as blind. People with tubular fields were not included in the list. Cataract cases are excluded from this survey as this condition is curable.

During the period commencing from the 5th October, 1959 upto 8th January, 1960, 110 blind cases were seen in the out-patient department of the Ophthalmic section of the Government Erskine Hospital, Madurai. During this period, the attendance of new cases in the department was 8566.

TABLE NO. 1
TOTAL NUMBER OF CASES 110

Totally blind	Totally blind	Less than
in	in	1/60 in
both eyes	one eye	each eye
51	24	35

This table gives the incidence of blindness in one or both eyes.

TABLE No. 2
AGE AND SEX GROUP CLASSIFICATION

Age	Male	Female	Total
0- 5 years	6	5	11
6-15 years	2	2	4
15-35 years	22	13	35
36-50 years	27	13	40
51 and above	14	6	20
	<u>71</u>	<u>39</u>	<u>110</u>

This table gives incidence of blindness in various ages in both sexes. This table indicates that there is higher incidence of males (65%). It is difficult to say that this higher incidence of blindness in males occurs in general population also.

- (i) In infants (below 5 years) there are 11 cases of blindness and Table No. 3 gives the causes of blindness at this age

TABLE No. 3
CAUSES OF BLINDNESS IN AGE GROUP
0 to 5 Years

Causes	Male	Female	Total
Microphthalmos	0	2	2
Keratomalacia	3	2	5
Ulcer Cornea	1	-	1
Primary Optic Atrophy	1	1	2
Sec. Optic Atrophy	1	-	1
	<u>6</u>	<u>5</u>	<u>11</u>

- (ii) Table No. 4 gives the incidence of blindness in the age group 6 to 15 years.

TABLE No. 4
CAUSES OF BLINDNESS IN AGE GROUP
6 to 15 Years

Causes	Male	Female	Total
Keratomalacia	1	-	1
Smallpox	-	1	1
Ulcer Cornea & Leucoma	-	1	1
Iridocyclitis	1	-	1
	<u>2</u>	<u>2</u>	<u>4</u>

- (iii) Table No- 5 gives the incidence of blindness in the age of 16 to 35 years.

TABLE No. 5
CAUSES OF BLINDNESS IN AGE GROUP
16 to 35 Years

Causes.	Male.	Female	Total
Microphthalmos	-	1	1
Primary Optic Atrophy	4	4	8
Sec. Optic Atrophy	2	3	5
Papilloedema	1	-	1
Iridocyclitis	2	1	3
Keratomalacia	2	-	2
Complicated Cataract	1	1	2
Glaucoma	2	2	4
Smallpox	2	-	2
Corneal Dystrophy	1	-	1
Eale's Disease	1	-	1
Ulcer cornea with Leucoma	2	-	2
Retinitis Pigmentosa	2	1	3
	<u>22</u>	<u>13</u>	<u>35</u>

- (iv) Table No. 6 gives the incidence of blindness in 36 to 50 years.

TABLE No. 6
CAUSES OF BLINDNESS IN AGE GROUP
36 to 50 Years

Causes	Male	Female	Total
Primary Optic Atrophy	11	3	14
Sec. Optic Atrophy	5	2	7
Glaucoma	8	6	14
Iridocyclitis	—	1	1
Leucoma & Ulcer Cornea	3	1	4
	<u>27</u>	<u>13</u>	<u>40</u>

(v) Table No. 7 gives the incidence of blindness in 51 and above years.

TABLE No. 7
CAUSES OF BLINDNESS IN AGE GROUPS
51 and above

Causes	Male	Female	Total
Primary Optic Atrophy	5	2	7
Sec. Optic Atrophy	3	—	3
Trachoma	1	1	2
Total Ulcer Cornea & Leucoma	2	1	3
Glaucoma	3	2	5
	<u>14</u>	<u>6</u>	<u>20</u>

In Table No. 8 the incidence of blindness according to the various causes are given :—

TABLE No. 8

Causes	Male	Female	Total
1. Microphthalmos	—	3	3
2. Keratomalacia	6	2	8
3. Smallpox	2	1	3
4. Corneal Ulcer and Leucoma	8	3	11
5. Trachoma	1	1	2
6. Iridocyclitis	3	2	5
7. Primary Optic Atrophy	21	10	31
8. Secondary Optic Atrophy	11	5	16
9. Corneal Dystrophy	1	—	1
10. Eale's Disease	1	—	1
11. Papilloedema	1	—	1
12. Glaucoma	13	10	23
13. Complicated Cataract	1	1	2
14. Retinitis Pigmentosa	2	1	3
	<u>71</u>	<u>39</u>	<u>110</u>

It will be seen that there are 8 cases of Keratomalacia (about 7%). This is a very high figure and the problem of Keratomalacia is a major one in South India. Mostly, children between the age of 2 and 4 are affected by this disease. Our observations show that all these children suffer from "Kwashiorkar".

Corneal Ulcers and leucomas have caused madness in 11 people. When compared to the Western Countries, this figure is relatively high. The main cause is due to infections of conjunctiva and cornea with or without associated injuries. Villagers getting injured in their eyes while harvesting or occupations, do not have opportunities for proper eye treatment. They either apply irritant remedies or neglect it till a total ulcer occurs.

Smallpox was responsible for 3 cases of blindness. The incidence of smallpox is still very high and still continues to be a major disabling disease in South India.

Trachoma was responsible for blindness in 2 cases. Fortunately the incidence of Trachoma in South India is very less, when compared to certain areas in North India. The incidence of Trachoma in general population may be of the order of 5 per 1000, and the type of the disease is of a mild one.

Other etiological factors like Optic Atrophies and glaucomas are like in any other part of the world.

TABLE No. 9
OPTIC ATROPHY

	0 to 5 years	6 to 15 years	16 to 35 years.	36 to 50 years.	51 & above	Total
Primary M	1	-	4	11	4	20
Optic						
Atrophy F	1	-	4	3	2	10
Sec. M	1	-	2	5	3	11
Optic						
Atrophy F	-	-	3	2	-	5

TABLE No. 10
CAUSES OF OPTIC ATROPHY

Unknown	...	31
Syphilis	...	7
Consecutive	...	6
Post-Papilloedemic	...	2
Toxoplasmosis	...	1
		47

Table No. 9 and 10 will show the causes of Optic Atrophy in various age groups. Out of a total 47 cases, 7 were of Syphilitic origin. According to Breutach, syphilitic optic atrophy was responsible for 10 to 15% of all blindness. In 31 cases causes could not be determined. In 2 cases there was increased intracranial pressure. 6 cases were of the consecutive optic atrophy type; there was one case which we thought may be due to toxoplasmosis in a child.

It will be seen that 42% of the cases was due to optic atrophy. Most of the cases came quite late for treatment, because of two factors namely the poverty of the people and the non-availability of qualified Ophthalmologists in their nearby places. Lots of cases of tuberculous meningitis, which used to be fatal, some years back, unfortunately live, but with blindness. The incidence of syphilis as a cause of optic atrophy (6% of blindness) is relatively a high number. They are all adults between 35 to 60 years, 4 being males and 3 females.

Glaucoma forms the next common cause of blindness which is responsible for about 21% cases of blindness.

Table No. 11 gives the incidence in various age groups.

TABLE No. 11

	16 to 35	36 to 50	51 & above	Total
Male	2	8	3	13
Female	2	6	2	10

It will be found that in the younger age group of 16 to 35 years there were 4 cases of blindness and there are 14 cases, between 36 to 50 years: There is no incidence of that type of glaucoma which occurs in Bengal due to mustard oil (Epidemic Dropsy).

There were 5 cases of blindness due to Iridocyclitis where the cause could not be detected.

PROSPECTS:— This part of India is getting industrialised rapidly. In our series, we have never had cases of blindness due to industrial injuries and accidents. In future we have to expect cases of blindness due to injuries. In the preventable cases, Keratomalacia, smallpox and irritant remedies are the important ones. Proper nutrition of children during post weaning period is very essential for the prevention of keratomalacia which occurs at such a high percentage (7%).

Syphilis which was responsible for blindness in 7 cases is also preventable.

References:—

(1) Breutach W. L. B. (1953) Syphilitic Atrophy, Blackwell Sc. Publications, Oxford.



There are estimated to be at least "Ten Million" Blind People in the world. Some researchers put the figure at 15,000,000.

There are 2,000,000 Blind People in India alone.

Of these almost one-third (30 percent) lost their sight before reaching the Age of 21.

Six Hundred Thousand young people in one country
.....Blind.

Blindness

By

DR. S. P. SUBRAMANIAN, M. S., D. O.,
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MAJORITY OF THE CASES IN BLINDNESS IS PREVENTABLE:

The handicaps and the sufferings of a blind person cannot be adequately described. In day to day life, his sufferings are more compared to those of deaf and dumb or people who have lost the use of limbs. Even though, of late much is being done to rehabilitate the blind, and much more might be done in future, still a blind person cannot enjoy life fully and has to take a philosophical view about his disability. It is all the more pitiable, when it is seen that in majority of cases the blindness is preventable.

NUTRITION DEFICIENCY:

Of the different conditions which cause blindness, some require special mention. In this part of the country the commonest cause of blindness in children is Xerophthalmia and Keratomalacia. The children show a dry, white area on either side of cornea, in the early stage of this disease with a history of night blindness. Later on the cornea also becomes dry and ulceration takes place, and even if healing takes place at this stage of the disease, there is a permanent corneal opacity left behind and the child becomes blind. Blindness due to Keratomalacia can be prevented if the children are given adequate amount of Vitamin A daily. Regular supply of Cod Liver Oil to all children will go a long way in preventing this type of blindness.

SMALLPOX:

Next in importance comes small-pox. During an attack of small-pox, the cornea also may be involved, with ulceration and later on with a permanent opacity of the cornea and blindness. This is also preventable blindness if only the attack of small-pox was prevented by adequate prophylactic vaccination against small-pox.

INJURIES TO THE EYE :

Another cause of corneal ulcer leading on to blindness is injuries received by children while playing with sharp instruments or toy guns. Cracker injuries during festivals like Diwali also contribute their share in this type of blindness. Hence the necessity of being very careful when crackers are lighted and also not allowing children to play with sharp instruments has to be brought to the notice of the parents to avoid blindness in children that might be caused by injury to cornea.

GONOCOCCAL INFECTION :

Fortunately now-a-days Gonococcal infection of the eyes of new-born babies has become a rare incident, probably because of good ante-natal care of pregnant women and partly because most of the deliveries take place in institutions. Otherwise, due to Gonococcal infection of the eyes of new born baby infected during delivery of the baby may lead on to ulceration and later opacity of cornea leading on to blindness.

The above four causes, namely Keratomalacia, Small-pox, injuries and Gonococcal infection are responsible for blindness in a majority of children, and all the above conditions can be prevented if adequate preventive measures are undertaken early.

CATARACT AND GLAUCOMA :

Blindness in older people is mainly caused by cataract, glaucoma and optic atrophy. Cataract is a condition where the lense in the eye becomes opaque. Blindness caused by cataract can be cured by removing the opaque lens from inside the eye and wearing spectacles after operation. Glaucoma is a more serious condition than cataract and unfortunately in a particular type of glaucoma called chronic simple glaucoma, the patient has no pain, or redness of the eye and also there is no severe headache. But due to an increase in the pressure inside the eye, the nerve fibres are destroyed beyond recovery, unless diagnosed early and treated. Due to destruction of nerve fibres permanent blindness results. Many a patient with glaucoma are diagnosed as having early cataract and are advised to wait till the cataract is

ripe enough for operation. Unfortunately, during the waiting time, there is a gradual destruction of nerve fibres and gradual loss of vision which is wrongly attributed to cataract, and by the time, the patient comes again for cataract operation, the destruction of a nerve fibres inside the eye is so complete, that even after removal of the opaque lens, the patient does not get any vision. **This error of diagnosing a case of glaucoma as one of early cataract can be avoided if a thorough examination like taking the field of vision and fungus examination is done at regular intervals of about three months.**

THE DANGER IN COUCHING :

The only treatment of cataract is removal of the opaque lens from inside the eye, and the operation for cataract must be done in well equipped ophthalmic departments, by fully qualified surgeons. It is a pity, even though it is an offence punishable by law, still quacks in villages and even in towns operate on cataract patients. The quacks, instead of removing the opaque lens from the eye, push it into the eye itself, the operation being called couching. Even though the patient may have good vision just after couching operation, the lense which is pushed inside the eye later on produces complications and vision is permanently lost. Infection of the couched eye is very common as the operation is not done under strict aseptic precautions. Many eyes are lost due to this complication also. Hence it is important to educate the people especially in villages, about the dangers of getting operated by these quacks.

CONGESTIVE GLAUCOMA :

There is a type of glaucoma called Congestive glaucoma, wherein the eye becomes red, there is pain in the eye and its surroundings and sudden diminution of vision. There may be severe headache and vomitings in some cases. Usually such patients seek medical advice immediately and if treated promptly the vision may be saved. If, on the other hand, the patient neglects the condition, taking it lightly and goes to a doctor after a few days, the vision may be so much reduced, due to damage of tissues inside the eye, that it may not be possible to get back vision in spite of treatment. So the importance of early treatment

in a case of congestive glaucoma cannot be over-emphasised, as with early treatment, there is always the likelihood of getting back the vision and with late treatment, losing the vision permanently.

OPTIC ATROPHY :

Optic atrophy is a common condition causing blindness ; and once the atrophic stage is reached, no treatment is of any use and the only result is permanent blindness. There is first an optic neuritis or oedema of optic nerve head, which if not treated early and properly, may lead on to atrophy of nerve fibres causing permanent blindness. Syphilis, Tuberculosis meningitis, which if not treated properly, may lead on to optic atrophy and blindness. Oedema of optic nerve head is caused by intracranial tumors, and there will be usually a history of headache and vomiting but in the early stage the vision will be normal. If diagnosed early and treated, the oedema will subside and the vision will be maintained. If, on the other hand, the condition was not diagnosed in time and treated early, the nerve fibres get atrophied and vision may be lost for ever even though the intracranial lesion may be treated successfully. Thus it will be seen that it is absolutely necessary to diagnose intracranial tumors at an early stage and treat them. Otherwise if treated at a later stage, even though the tumor is treated successfully, the patient becomes blind because of optic atrophy.

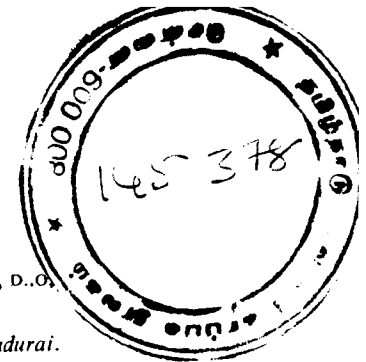
Some patients lose their eye sight permanently due to consumption of methylated spirit. Unfortunately, patients who consume spirit, though seek medical aid early, the initial damage done to the optic nerve is so severe, that in spite of energetic treatment, they lose their eye sight permanently.

Thus, it will be seen that majority of cases of blindness are preventable, if prophylactic treatment is given as in the case of Keratomalacia, small-pox and Gonococcal infection or if proper diagnosis is made at an early date and treatment given as in Glaucoma, optic neuritis and intracranial tumours.

BLINDNESS

By

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A. Etiology : We did a survey on the etiology of blindness, in the Government Erskine Hospital, Madurai in the later part of 1959, and a summary of it is herewith attached.

B. PREVENTION OF BLINDNESS

1. Nutritional blindness

In no other part of India, perhaps there is such a high incidence of nutritional deficiency causing blindness (7%) as in Madras State. Most of the cases were due to Keratomalacia in children between the ages of 1 and 3. During the post-weaning period, the child does not get milk or other sources of vitamin A. It lives mainly on cereals. In our survey we found that plenty of these cases develop Kwashiorkor complicated by Keratomalacia. The only way to prevent the occurrence of Keratomalacia in this age group, is to give a free supply of milk. Now arrangements are made to give milk to the school going children throughout the State. The scheme must be extended to cover the pre-school going children throughout the State. Vigorous propaganda is necessary among the public to make them realise that milk is an absolute essential food for the children and rice alone will lead to complications like Keratomalacia and blindness. The present production of milk in the Madras State is very inadequate. Compared with State like Punjab where the average milk consumption per head per day is about 30 ounces, in Madras it is less than 4 ounces. We have found that in the rural as well as in urban population of areas around Madurai, about 60 percent of the people are unable to get milk or milk products.

Riboflavin deficiency is a common cause for defective vision in this area. Sometimes it produces corneal ulcer leading to

blindness. The only way to solve the problem of Riboflavine deficiency is to make available milk and milk products to pregnant and lactating women. Protein deficiency leading to Kwashiorkor can also be tackled only by giving plenty of milk to the children.

Vitamin B1 :—(Thiamine) deficiency is a frequent occurrence and they report to the eye department with defective vision. A few injections of thiamine cure them but they again come back to the hospital with recurrent trouble. **As most of the people are taking highly polished rice, thiamine deficiency is increasing in numbers.** Propaganda is necessary for the increased use of hand-pound rice by the people.

Because of the poor nutrition of the people, the healing power in their tissue is poor. • Simple ulcers of the cornea which are quite common in the agricultural population take a serious turn with a resultant loss of the vision due to want of proper treatment in early stages, and poor nutritive state of the people.

2. Cataract :

In our eye camps, we found plenty of villagers blind due to cataract. Cataract though is an easily curable condition, the patients are unable to attend an eye hospital because of their economic status. The eye hospitals are very few and it will be practically impossible for them to give relief to the whole population. Till the time when more qualified ophthalmologists are available in all the areas the only way to give relief to these people in the rural areas is by increasing the number of eye camps in the village areas. An eye camp once a year in every taluk will be necessary. If the place and time of operation are fixed as some of the festivals, then people will make the best use of the camps.

3. Ulcers of the Cornea :

In our survey we found that ulcers of cornea to be responsible for 10% of blindness. The reasons for this are irritant remedies applied by the patients and absence of proper treatment in rural hospitals. All facilities for treatment of corneal

ulcer must be provided in rural hospitals. Clear instructions should be given to the Medical Officers preferably through a printed pamphlet. Some of these cases of bad leucoma can be treated by corneal grafting. Donor material for the corneal grafting is scarcely available here. We find bodies hanged to death in the Central Jail go unclaimed by the relatives and they are disposed of by the Municipalities. Whenever a relative is not available at the time of hanging in the Jail, the Government must permit the removal of the "deadman's" eyes for the Eye Bank. In medico-legal post mortem cases also the Professor of Forensic Medicine must have the permission to remove the eye wherever feasible for the Eye Bank.

— o —

Out of India's **Two Million** Blind, no fewer than 600,000 lose their sight before their 21st Year.

Most of these 600,000 became blind in **The First Five Years of life.**

Have you ever thought what this means ?

Prevention of Blindness

By

Dr. T. T. RAMALINGAM, M. B., M.S., D. O.,

Superintendent, Government Ophthalmic Hospital, Madras.

It is estimated that the incidence of blindness in India is about twenty lakhs and on investigation by Ophthalmologists regarding the cause of blindness, **it is felt that about seventy to eighty percent of them are preventable.** Even among these diseases, which cause blindness, those diseases which cause blindness in children are to be particularly stressed, as these children when they go blind, have to lead a life of blindness for a long period, whereas the diseases which cause blindness in older age groups may have to lead a lesser time of blind life.

KERATOMALACIA, MAJOR CAUSE OF BLINDNESS IN SOUTH INDIA: The incidence of these diseases, which cause blindness varies according to the various regions in India. For example, Trachoma is much more common in North India, **whereas in South India, Trachoma is not a major disease, but Keratomalacia caused by Vitamin 'A' deficiency is the major cause of blindness here.** In South India we have to stress particularly on Keratomalacia, which is caused by Vitamin 'A' deficiency. This Vitamin 'A' deficiency in children is mostly due to not taking enough food containing Vitamin 'A' like Milk, Butter, Egg etc., due to economic causes. So, Socio-economic factor plays a prominent part in the cause of this disease. In these children with Vitamin 'A' deficiency, the earliest sign is night blindness. During the early stages, if they are given Vitamin 'A' injections, they could be cured within a few days and later they could consume food rich in Vitamin 'A'. Otherwise the condition may recur. Free distribution of milk to the poor children may help to a certain extent in eradicating this disease, but to successfully solve the problem the State must make arrangements to have adequate supply of milk and its derivatives at a cheaper price and within the limits of the poorer classes. The public must be impressed on

the need of these food stuffs, to maintain good health. The money spent in the form of extra diet to these children is not a liability in the sense that if these children go blind for want of Vitamin 'A' deficiency, they have to be supported directly or indirectly by the State for the rest of their blind life and there is also the wastage of man power in addition to maintaining them. From this point of view, small amounts spent in feeding these poor children and providing food rich in Vitamin 'A' at cheap prices, will be an asset to the nation in the long run. By these measures, we can bring down the incidence of blindness in children by more than fifty percent.

VENEREAL DISEASES: The other common cause of blindness is due to Venereal Diseases like Gonococcal infection and Syphilis. Gonococcal infection may affect the eyes of a new born baby and make it totally blind. Fortunately after the advent of Sulpha Drugs, Penicillin etc., and with the prophylactic treatment given in the hospitals, the incidence of Gonococcal infection in new born babies have more or less disappeared, excepting for a few stray cases, where delivery is conducted at home etc. So this is not a major cause of blindness now-a-days.

In the case of Syphilis, though we have potent drugs to cure the condition, still we find that the incidence of Ocular Syphilis has not come down. This is due to inadequate treatment. By doing propaganda work and impressing on the patients that they should have complete course of treatment, we can bring down the incidence of syphilitic affection of the eye. When syphilis is detected in a child, the parents as well as other children must be examined and if they have syphilis, they should also be adequately treated and then only we can eradicate the disease completely.

SMALL-POX: Small-pox is used to be another common cause of blindness in children, but after the advent of primary vaccination, the incidences due to blindness by this disease is very low. But still there are many cases seen with eye affections, who had no primary vaccination. Here people should be impressed by propaganda etc., about the beneficial effects of vaccination and thus completely eradicate this disease.

TRACHOMA: Trachoma is not so common in South India, but still the recent Trachoma Survey has shown that very young children are affected before the school going age with Trachoma. Mass treatment with Antibiotics in areas where Trachoma is prevalent, has to be done to wipe out this disease.

IRRITANT REMEDIES: Blindness caused by irritant remedies used to be common. This is due to want of medical relief to remote villages and so villagers resorting to quack remedies, using strong drugs, which could not be tolerated by sensitive eyes. Here, medical relief should extend to the village level and propaganda should be done to point out the harmful effects of caustic remedies, and once the public learns about the beneficial treatment given in hospitals etc., they may not resort to such caustic remedies. In modern days, people are resorting to Eye Hospitals more and more in number and the incidences due to this has come down or is negligible.

INJURY TO THE EYE: There are certain types of injuries, which are unavoidable, like injury to the eye with sharp pencil etc., but we would like to stress upon the injuries caused to children while playing with bow and arrow, crackers like Aeroplane Bomb, atom Bomb etc., used during festivals like Deepavali etc. Propaganda must be done to educate the public that they should not leave such destructive weapons in the hands of the children.

REFRACTIVE ERROR AND EYE STRAIN: Children, who have poor vision should be tested for glasses and advised to wear them constantly. In those cases, where the power of the glass increases, as in progressive Myopia, they should be advised regarding the proper illumination, the position while reading etc., and they should also be put on good diet, Codliver Oil etc. They should be periodically examined and advised to change the glasses, if necessary.

SQUINT: Children developing squint should be immediately brought for examination by the Ophthalmologists for necessary treatment. Neglect to take proper treatment at a young age results in loss of vision in the squinting eye.

There are certain diseases, like Retinitis, Pigmentation, Retinoblastoma etc., which have a hereditary tendency. In case of Retinoblastoma, early treatment may save the life of the child and in other hereditary diseases, marriage among close relations may pre-dispose to increase in the number of such cases and hence they should be advised not to marry among the close relatives. Here propaganda work is very essential.

In adults, most of the diseases, which occur among children is equally applicable, like Venereal diseases, Small-pox, Irritant remedies, Injuries to the eye and so on.

The diseases, which particularly occur at the older age group and cause blindness are Glaucoma, Cataract, Ulceration of the cornea, as a result of lacrimal obstruction etc. Strictly speaking, Cataract is not a blinding disease, because after operation, they can regain normal sight. **But there are quacks in our country, who do an operation for Cataract in the villages, called Couching. This leads to eye complications and the loss of vision in that eye.** Though this is punishable by law in our State, yet these quacks operate and always move from place to place and so they are not easily traceable and punished. Here medical relief and eye camps in the village level and propaganda among these villagers will go a long way in eradicating the blindness due to this operation.

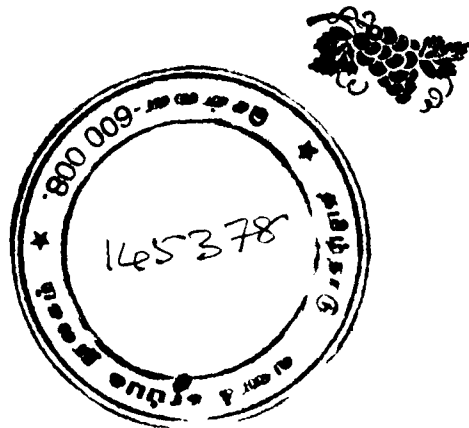
GLAUCOMA: This occurs mostly in the older age groups and this is due to accumulation of fluid inside the eye ball. Here the vision gradually and steadily deteriorates without any pain. This gradual loss of vision is mistaken for Cataract and the patient do not seek medical advice till the vision is completely lost. In Glaucoma, operations can be done to arrest the disease, but there are no means to regain the lost vision. Propaganda must be done to impress on the public that whenever a patient complains of loss of vision, he should seek the advice of an Ophthalmologist and get proper treatment. Then only we can minimise the blindness caused by Glaucoma and other diseases, which are peculiar to the older age groups.

INDUSTRIAL INJURIES: Now as the country is getting more and more industrialised, the industrial injuries are seen

more frequently. Here proper illumination of the workshop, protective goggles etc.. will minimise the instances of such injuries. Such cases should be brought to the notice of Ophthalmologists immediately and proper treatment must be given. By doing this, vision lost as a result of Industrial Injuries may be avoided.

Propaganda on the preventive aspect of blindness may be carried out in various ways :

Lectures on the subject may be given in schools and colleges: Radio talks and Film shows on this will educate the public regarding the care of eyes and prevention of such diseases. Further, exhibition of posters on the subject in all Health Exhibitions will be helpful in educating the public on these subjects. So by these propaganda on the preventive aspect of blindness and by the proper medical relief, about seventy five percent of the blindness in India could be preventable.



Material Section of the Health Education Bureau

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FILM LIBRARY

The following titles are available on "eyes".

Title : Care of the eyes *Tamil 20 minutes 16. m.m. Sound*

This film gives an exposition of the various causes of eye disorders and diseases and the methods by which they can be avoided. The film covers the activities of the village Health clinic, Mobile Eye Hospitals and other agencies in preserving the eye sight of village folk in India.

Title : Your eyes *Tamil 11 minutes 16 m.m. sound*

Eye Care and its different ailments are described in this film which also puts in a plea for helping those unfortunate millions who do not have the use of their eyes. The film also shows a cataract operation and corneal grafting one of the miracles of modern eye surgery.

All the above films are for hire.

**TWO Cases of Blindness out of
Every THREE could have been
prevented or cured.**

VACCINATION CAN ERADICATE
SMALLPOX AND INDIA IS TODAY
PREPARING FOR A NATION-WIDE
VACCINATION CAMPAIGN.



Madras State Health Education Bureau, Office of the
Director of Public Health, 81, Mount Road, Madras-6.