PREVENTION OF BLINDNESS

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BLINDNESS

- The WHO defines blindness as visual acuity of less than 3/60 (inability to count fingers at a distance of 3 metres), or corresponding visual field loss, in the better eye with best possible correction.Uniocular blindness is not blindness because the other eye is normal.

LEARNING OBJECTIVES

LOW VISION

- Low Vision corresponds to visual acuity of less than 6/18, but equal to or better than 3/60, in the better eye with best possible correction.

- Visual acuity of less than 6/60 with usual spectacle correction (presenting visual acuity), or visual field equal to or less than 20 degree in the better eye .
- Also known as Economic blindness.P
- presenting visual acuity rather than best corrected vision was used since many people in developing countries like India, Pakistan do not have appropriate, if any, refractive correction.

OTHER TYPES

- Preventable blindness:

Which could have been completely prevented by effective measures, such as blindness due to Vit A deficiency, measles, ophthalmia neonatorum, and injuries.Curable blindness: That which is reversed by prompt management eg. Blindness due to cataract.

Avoidable blindness: The sum total of Preventable and Curable blindness. In India, 85-90% of blindness is avoidable.

Economic Blindness: Visual acuity of less than 6/60 with usual spectacle correction or visual field equal to or less than 20° in the better eye.

PROBLEM STATEMENT

- 180 million people worldwide are visually disabled.
- 45 million are blind (4 out of 5 live in developing countries).
- 80% of this blindness is avoidable.
- 1/3rd of the world's blind live in SEAR countries.
- 50% of the world's blind children live in the SEAR.

Prevalance in Pakistan

- Prevalence of blindness-0.7% (2000).No. of blind persons-6,800,000Main causes of blindness-cataract, Refractive error, Childhood blindness, Corneal blindness.
- Prevalence is higher among those above 50 years, females, poor and illiterate, those living in under deserved rural and tribal areas, farmers and labourers.Inaccessibility to eye care services or not availing of services is the major reason for high prevalence of blindness.

Other Causess

- Congenital disorders
- Uveitis
- Retinal detachment
- Tumors
- Diabetes
- Hypertension
- Diseases of the Nervous system
- Leprosy

SOCIAL ASPECTS

- Some common reasons for not availing surgical services for cataract:
- Waiting for maturity
- No one to accompany
- Fatalistic attitude due to very old age
- Fear of operation/complications
- Economic reasons
- Lack of information.

EPIDEMIOLOGICAL DETERMINANTS

- 1. Age : 82% of the blind people are agedabove 50 years, childhood visual impairment represents 4 to 5 % of all visual impairment.
- 2. Sex: 1.5 to 2.2 women for 1 male. The main reason is reduced access of women to eye care services.
- 3. Diabetes : Retinopathy, cataract.
- 4. Tobacco smoking : Macular degeneration and cataract.

- 5. Occupation : Eye injuries, as in welders, agriculturists, soldiers.
- 6. Cultural factors : Festivals.
- 7. Poor Socio-Economic Status.
- 8. Genetic factors : Retinitis Pigmentosa.
- 9. HIV Infection and the eye : Microangiopathy,anterior segmental manifestations as molluscum contagiosum and kaposi's sarcoma; or,posterior segmental opportunistic infections, mainly Cytomegalovirus causing CMV retinitis.

Changing Concepts in Eye Health care

Primary eye care:

Promotion and protection of eye health, on spot treatment for commonest eye diseases like acute conjunctivitis, opththalmia neonatorum, trachoma, superficial foreign bodies, xerophthalmia.

Provided with essential drugs.

Referral –corneal ulcer, penetrating foreign bodies, painful eye conditions, infections

Health education

Final objective –to increase coverage and quality of eye health care through primary health care approach.

EPIDEMIOLOGICAL APPROACH

- Studies at the population levelMeasurement of incidence, prevalence of diseases and their risk factors.Team conceptUse of auxiliary health personnel to fill the ‘gaps’.Recruitment of village health guides, ophthalmic assistants, multi-purpose workers and voluntary agencies.

Establishment of national programmes

- Prevention of blindness from all causesGoal: to reduce blindness in the country to 0.3% by the year 2000.

PRIMARY EYE CARE

- Health Education.
- Upliftment of socio - economic status, general standards of living and general education.
- Nutritional supplementation programmes, especially with vitamin A, Immunization
- .Provision of eye care services.
- Personal protection : personal protection using goggles / eye shields in high risk occupations should be ensured.
- Social actions during fairs and festivals.

SECONDARY EYE CARE

- Early diagnosis and treatment: definitive management of common blinding conditions.Cataract, glaucoma, trachoma, refractive errors and diabetic eye complications and providing early emergency treatment for injuries.
- PHC, District Hospitals, Eye camp approach.

- Health Examinations: Combine eye health.Special Screening Examinations : Retinopathy of Prematurity (ROP) and Retinitis Pigmentosa (RP).

CATARACT

- Surgical removal of the opacified lens followed by intraocular lens implantation or else provision of spectacles is the only way of tackling cataract.

TRACHOMA

- The “SAFE” strategy (Surgery, Antibiotics to control infection, Facial cleanliness and Environmental improvements) has been recommended by the WHO.

GLAUCOMA

Early diagnosis and treatment should be addressed at the PHC level and referral to the District ophthalmologist /apex ophthalmic institutes if required.

DIABETIC EYE COMPLICATIONS

- Early detection of diabetes, including detailed ophthalmologic assessment of diabetics, education regarding eye care, control of blood sugar levels and warning signs of diabetic eye complications.

REFRACTIVE ERRORS

- Optometrists working at the block primary health care level should be equipped to undertake refraction and provide glasses

TERTIARY EYE CARE

- Medical Colleges, Apex Institutes.Retinal Detachment surgery, corneal graftingDisability Limitation: Sonic torches and trained dogs.Rehabilitation : School for blind, Braille script.

NATIONAL PROGRAMME FOR CONTROL OF BLINDNESS

- The overall goal of the program is prevention and control of avoidable blindness in Khyber Pakhtunkhwa.

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  ObjectiveS:

- Upgradation of Eye Departments of 05 Teaching Hospitals.
- Upgradation of Eye Departments of THQ Hospitals.
- Upgradation of Eye Departments of 23 DHQ Hospitals.

CONT

- To reduce the backlog of blindness of blindness through identification and treatment of blind
- To develop comprehensive eye care facilities in every district
- To develop human resources for providing eye care services
- To improve quality of service delivery
- To secure participation of Voluntary Organizations in eye care.

SCHOOL EYE CLINIC PROGRAMME

- 6-7% of children aged years have problem with their eye sight affecting learning at school
- Children are first screened by trained teachers: RE, amblyopia, squint, trachoma etc.
- Children suspected to have refractive error are seen by ophthalmic assistants and corrective spectacles are prescribed or given free for persons below poverty line.
- Taught: principles of good posture, proper lighting, avoid glare, proper distance and angle between books and eyes.

OTHER INTERVENTIONS

- **Vit A supplementation and MMR vaccination to take care of childhood blindness**
- **Vit A Prophylaxis At 9 months**