

Definition: cataract is opacification of the crystalline lens. Other definition: it's the loss of the Lens transparency. Causes of cataract: 1. Senile cataract is the most common cause of blindness world wide. Start at the age of forty and becomes significant at the age of sixty. 2. Congenital cataract: maybe due to genetical factors, intrauterine infection e.g. rubella, radiation or drugs. 3. Traumatic cataract: accidental or a blow directed to the eye. 4. Cataract due to systemic disease. eg diabetes mellitus. 5. Cataract due to drugs eg systemic steroids therapy Symptoms of cataract: Blurred vision. Faded colors. Difficulty of vision at night. Glare at bright light. Stages: Early cataract. Immature cataract. Mature cataract Treatment of cataract: The only treatment of cataract is surgery. The conventional surgery for cataract is phaco extraction with intraocular lens implantation. For early cataract proper eye glasses to prevent glare maybe given. Complications of cataract surgery: The most serious complication is bacterial endophthalmitis.

Clinical Ophthalmology II Diseases of the vitreous: Definition of the vitreous: The vitreous body is a transparent gelatinous substance that fills the space of the eye between the Lens and retina. It allows light to pass from the Lens to the retina. Diseases of the vitreous: Posterior vitreous detachment (PVD): It's the separation of the posterior vitreous cortex from the retina. It's the most common cause of vitreous opacity. The vitreous shrinks and becomes more liquid Complications of posterior vitreous detachment: Retinal tear. Retinal detachment. Macular hole. Vitreous hemorrhage. Vitreous hemorrhage: It's due mainly to Diabetes mellitus which is the commonest cause, hypertension, sickle cell anemia. Inflammation of the vitreous cavity (vitritis): Causes: Intermediate uveitis. – Chorioretinitis. Symptoms – Floaters and decreased vision Diseases of the optic nerve Definition The optic nerve is the second cranial nerve concerning the embryology it's an outgrowth of the brain. Diseases of the optic nerve: 1. Papillitis or optic neuritis: Symptoms: Ocular pain. Blurred vision. It's usually unilateral. Affecting the second, third or fourth decade of life. The commonest cause is multiple sclerosis Papilledema It is the swelling of the optic nerve head due to raised intra cranial pressure Causes: Idiopathic intracranial hypertension. Brain space occupying lesion. Congenital hydrocephalus. Treatment: Acetazolamide. Aspiration of the cerebrospinal fluid. Ventriculo peritoneal or lumbo peritoneal shunt procedure. Optic atrophy 2. Optic atrophy: It's the pallor of the optic nerve head due to optic nerve damage. Symptoms: Decreased vision. Faded colors. Restriction of the visual field. Types of optic atrophy Types of optic atrophy: Primary optic atrophy: due to CNS disease. Secondary optic atrophy: optic nerve damage due to papilledema. Consecutive optic atrophy due to eye disease like glaucoma or retinitis pigmentosa or syphilis Investigation of the optic nerve disease: Visual field (perimetry) Colour vision test. Brain CT scan. Brain MRI. Diseases Of Retina Definition of the retina: The retina is the inner sensitive layer of the eye. Diseases of the retina: Vascular diseases: Diabetic retinopathy: It's one of the common causes of blindness. It's a microangiopathy affecting mainly the retinal capillaries. It's classified It's classified as: – Nonproliferative diabetic retinopathy. Proliferative diabetic retinopathy. –Diabetic maculopathy. Symptoms of diabetic maculopathy: Decreased vision and floaters. Complications of proliferative diabetic retinopathy: Vitreous hemorrhage. Tractional retinal detachment. Neovascular glaucoma. These complications may lead to blindness. Retinal inflammation: Symptoms and signs: Decreased vision. – Floaters. Visual field defects. Causes of Retinal inflammation: 1. Viral infections: Cytomegalovirus virus. Herpes zoster virus. HIV infection. 2. Fungal: Candida albicans. Histoplasmosis.

3. Bacterial infection: Staphylococcus aureus. Streptococcus pneumoniae. Retinal detachment: It's the condition of separation of the retinal pigmented epithelium from the neural retina by subretinal fluid. Types: Rhegmatogenous retinal detachment which is due to retinal break. Tractional retinal detachment which is due to vitreoretinal traction. Exudative retinal detachment which is due to tumors or inflammation. Clinical presentation: White pupil (cat's eye). Squint. Fungated tumor. Spread: Local invasion of the orbit or brain. Distal metastasis to the bones, lymph nodes and viscera. Treatment: Radiotherapy. Chemotherapy. Surgery: removal of the eye ball. Or removal of the whole orbital tissue. Ocular manifestation of diabetes Extraocular muscles: Extraocular muscle palsy, leads to squint and diplopia. Adnexa: Bacterial conjunctivitis and blepharitis. The Lens: Cataract. Uveal tract: Intermediate uveitis. The retina: Diabetic retinopathy. The optic nerve: Ischemic optic neuropathy. The orbit: Orbital cellulitis. Ocular manifestation of hypertension: Branch and central retinal vein occlusion. Hypertensive .retinopathy. Extraocular muscle palsy