

MD Exam in Commentary

Code number: OPHT 9007
Time allowed: One & Half Hours

Date: 13 November, 2021
Total Marks: 200

All questions should be attempted

Exam in 2 pages

Q1: Case I: 120 Marks

COMMENT ON THE FOLLOWING CASE

A 87-year-old female patient with a medical history of hypertension who was being followed up 7 months before initial presentation due to paralysis of her left upper oblique muscle. An orbit magnetic resonance imaging (MRI) examination performed at the first visit revealed no obvious abnormality in the brain.

The patient presented at our department after becoming aware of diplopia that was becoming worse. Upon examination, the patient was found to have proptosis, ocular movement limitation (especially, abduction disorder), and conjunctival edema with dilated and tortuous blood vessels in her right eye. She was referred to the department of neurosurgery for a more detailed examination. An MRI examination revealed enlargement of the right-orbit extraocular muscles, yet no expansion of the cavernous sinus. Thus, she was suspected to have a retinal detachment in her right eye and was subsequently referred back to our clinic.

Initial Findings In the patient's right and left eyes, her corrected visual acuity was 0.7 and 1.0, and her intraocular pressure was 14 and 12 mmHg, respectively. In the right eye, we observed proptosis, conjunctival edema with dilated and tortuous blood vessels, and a shallow anterior chamber, although with pseudophakia, yet no inflammation in the anterior chamber and vitreous cavity. Fundoscopy imaging of the patient's right eye revealed retinal vein dilation and marked choroidal detachments in all quadrants. No abnormalities were observed in her left eye.

We used three-dimensional anterior segment optical coherence tomography to measure the anterior chamber depth (ACD) and anterior chamber volume (ACV). In the patient's right eye, the ACD was 2.53 mm, and the ACV was 88 mm³. In her left eye, the ACD was 3.48 mm, and the ACV was 167 mm³. The coronal short-tau inversion-recovery (STIR) sequence of the MRI examination showed thickening of the right-orbit extraocular muscles, especially the lateral rectus and inferior rectus. Moreover, although expansion of the superior ocular vein was observed, there was no abnormality of the vascular network and no expansion of the cavernous sinus.

A general blood examination revealed a $4.3 \times 10^3/\mu\text{L}$ white blood cell count and 0.08 mg/dL C-reactive protein (CRP), yet negative results for thyroid antibody, soluble interleukin2 receptor antibody, IgG4, and collagen disease.

Treatment was initiated with oral prednisolone (30 mg per day). One week after initiating treatment, the visual acuity in her right eye was found to have improved to 1.0. Furthermore, the proptosis had improved, the anterior chamber was becoming a normal depth, and the choroidal detachments were found to have disappeared. Moreover, the ACD and ACV were found to have increased to 3.74 and 178 mm³, respectively.

One month after the initial examination, MRI findings revealed improvement of the thickening extraocular muscle. Two months after the initiation of the corticosteroid therapy, the patient's ocular movement disorder improved, and the diplopia disappeared. The dose of prednisolone was gradually tapered down, and there was no recurrence of inflammation.

----- END OF THE CASE -----

Q2: Case 2: 80 Marks

COMMENT ON THE FOLLOWING CASE

A 61-year-old man with a history of pancreatico-duodenostomy (Whipple's procedure) for papillary mucous neoplasm, presented with a 2-month history of acquired night blindness.

He complained of poor vision in dim conditions over the past 2 months. Specifically, he reported having to turn on his lights in the house during day light hours and giving up driving at night.

His other medical history included diabetes, depression and an episode of severe pneumonia requiring intensive care admission.

On examination, he was cachectic with diffuse skin dryness. Ophthalmological examination revealed visual acuity of 6/9 and 6/6 (both aided), right and left, respectively. He had mild cataracts bilaterally, mild diabetic maculopathy and normal visual fields. Testing of color vision and pupillary responses were normal. Other systems were normal.

Electroretinography (ERG) showed absent rod responses bilaterally. The maximal rod-cone ERG is bilaterally grossly abnormal with substantially reduced a- and b-wave amplitudes. The ERG results confirmed the absence of rod function. The Arden ratios were also substantially reduced for each eye (1.22 (R) 1.32 (L)).

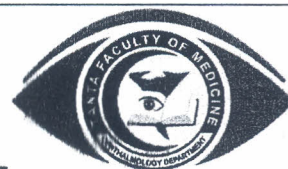
Hematological investigations confirmed the diagnosis.

The patient was given oral pancreatic enzymes and prescribed oral medications. He was monitored with regular ophthalmology and nutritional follow-up to ensure compliance was maintained.

The patient's symptoms improved within 2 months of treatment. The ERG was repeated, showing a significant improvement with the Arden ratios being within normal ranges for each eye (3.03 (R) 2.69 (L)). There was a significant improvement in amplitude for the rod ERG and maximal rod-cone ERG.

----- END OF THE CASE -----

**END OF EXAM
GOOD LUCK**



MD Ophthalmic Surgery Exam

Code number: OPHT 9008

Date: 6 November, 2021

Time allowed:

Total Marks: 260

All questions should be attempted

Exam in: 3 pages

Part I:

Write in the following 8 items (20 Marks each)

1. Causes of recurrent retinal detachment after scleral buckle surgery and its management.
2. Multifocal and extended depth of focus IOL.
3. Diode cyclophotocoagulation for the treatment of Glaucoma.
4. Complications of silicone oil used in retinal detachment surgery.
5. Intrastromal corneal rings.
6. Management of anophthalmic socket
7. Surgical management of A & V patterns of strabismus
8. Management of lacrimal upper passage obstruction

Part II:

20 MCQs (4 marks each):

Choose only one most appropriate answer

1. What method is used to repair retinal detachment due to cytomegalovirus (CMV) ?
 - a. Cryopexy and intraocular gas bubble
 - b. Vitrectomy and endolaser
 - c. Vitrectomy and silicone oil tamponade
 - d. Scleral buckle with drainage of subretinal fluid

ϣ. The risk of developing cataract after vitrectomy surgery within ϣ years is

- a. 90%
- b. 80%
- c. 70%
- d. 50%

ϣ. Which peripheral retinal lesion has the greatest risk of retinal detachment

- a. cystic retinal tuft
- b. asymptomatic retinal hole
- c. senile retinoschisis
- d. lattice degeneration

ϣ. A patient presents for review one month post trabeculectomy for primary open angle glaucoma. On examination IOP is 4 mmHg and anterior chamber is shallow. The bleb is cystic and avascular. The Siedel test shows sweating. What treatment options most likely to be effective ?

- a. bleb needling
- b. autologous blood injection
- c. oral acetazolamide
- d. 5-FU injection

ϣ. Glaucoma implant surgery (aqueous shunt devices) would be indicated in the following circumstances except:

- a. previous failed filtration surgery with antimetabolites
- b. uveitic glaucoma
- c. congenital glaucoma patient with poor visual potential
- d. glaucoma patient with previous vitrectomy with scleral buckle

7. Which of the following concerning polar cataract is correct?

- a. anterior polar cataract usually cause more visual disturbance than posterior polar
- b. posterior polar cataract has been associated with remnant of the tunica vasculosa lentis
- c. both anterior and posterior polar cataracts can be sporadic or recessively inherited
- d. posterior polar cataract invariably progress to complete cataract

8. A patient has with the rule astigmatism. During uncomplicated cataract surgery, a one piece toric PC-IOL is placed into the capsular bag and aligned with the astigmatism. The day following surgery, the lens appeared rotated 90 degree. Which of the following statement is most accurate?

- a. lens explantation is necessary because the lens is not stable
- b. the measured astigmatism has increased
- c. the lens should have been placed in the ciliary sulcus
- d. rotation of the lens can be done anytime after the first 3 months

9. Which of the following is the least common expected complication following Nd:YAG laser capsulotomy?

- a. Iritis
- b. B. cystoid macular edema
- c. C. corneal edema
- d. D. elevated IOP

10. Argon laser iridoplasty is useful for all of the following except:

- a. treatment of plateau iris syndrome
- b. treatment of acute angle closure attack when corneal clouding prohibits iridectomy and medical treatment fails
- c. treatment of goniosynechia
- d. treatment of primary open angle glaucoma before argon laser trabeculoplasty, when the angle approach is too narrow for direct trabecular treatment

10. All the followings are true about anterior lamellar keratoplasty except:

- a. Deep anterior lamellar keratoplasty is effective in patients with keratoconus.
- b. It is used as a tectonic graft for structural support.
- c. It carries a higher risk of endothelial rejection than penetrating keratoplasty.
- d. Complications are less serious than penetrating keratoplasty

11. If globe perforation occurs during a lamellar keratoplasty:

- a. Convert to penetrating keratoplasty.
- b. Suture the perforation site.
- c. Glue the perforation site.
- d. Proceed as planned, but begin administering high doses of topical and systemic antibiotic to the patient.

12. Which of the following complications of lamellar keratoplasty is least common?

- a. Perforation of recipient graft.
- b. Interface scarring.
- c. Persistent epithelial defect.
- d. Allograft rejection.

13. The following are true about intrastromal corneal rings except:

- a. It can be used to treat myopia.
- b. It can be used to treat hypermetropia.
- c. It is made up of PMMA.
- d. It is a reversible procedure.

14. What is the treatment of stage 4 diffuse lamellar keratitis?

- a. Flap manipulation.
- b. Starting topical corticosteroid drops.
- c. Observation and reassurance.
- d. Lifting the LASIK flap, irrigating and starting corticosteroid drops.

10. What is the appropriate treatment of a buttonhole in a LASIK flap?

- a. Application of mitomycin C.
- b. Removal of the flap followed by photorefractive keratectomy (PRK).
- c. Replacement of the flap and a bandage contact lens.
- d. Removal of the flap followed by PRK at 1 weeks.

11. Gold weight is placed pretarsally in the upper lid in :

- a- ankyloblepharon
- b- involutional ectropion
- c- lagophthalmos VII nerve palsy (Bell's palsy)
- d- spastic entropion of upper lid

12. In a patient with laceration to the upper lid, choose correct answer:

- a. the presence of fat herniation indicates the orbital septum is penetrated
- b. the orbital septum should be resutured if penetrated
- c. in the presence of ptosis, exploration should be delayed for at least 24 hours to avoid retrobulbar haemorrhage
- d. ptosis is usually caused by damage to the oculomotor nerve

13. Dehiscence of levator aponeurosis

- a. Is typically associated with poor levator function
- b. Is associated with an abnormally high or indistinct upper eyelid crease.
- c. Occurs in 1% of patients after cataract surgery.
- d. May be caused by contact lens wear.

19. Conjunctivo DCR is indicated for relief of epiphora due to:

- a. Nasolacrimal duct obstruction.
- b. Punctal agenesis.
- c. Medical lower eyelid ectropion.
- d. Common canalicular obstruction.

20. Orbital excentration involves removal of the:

- a. Eye, orbital soft tissue and periorbita.
- b. Eye only.
- c. Contents of the globe, leaving the eye undisturbed.
- d. Bone adjacent to the orbit such as paranasal sinuses.

21. In blow-out fracture, choose the correct answer:

- a. ocular movement is limited in all direction
- b. Surgical emphysema is a recognized feature
- c. Immediate treatment is mandatory
- d. Decreased sensation at the tip of the nose is common

22. A superior rectus Faden suture is used for the treatment of which condition?

- a. Duane's syndrome
- b. Dissociated vertical deviation
- c. Brown's syndrome
- d. Double elevator palsy

٢٣. The inferior oblique muscle is weakened most by which procedure?

- a. Disinsertion
- b . Recession
- c . Myotomy
- d . Anteriorization

٢٤. In the treatment of a superior oblique palsy, Knapp recommended all of the following EXCEPT

- a . SO plication
- b . Recession of the contralateral IR
- c . IO weakening
- d. Resection of the contralateral SR

٢٥. Surgical treatment of intermittent exotropia include which of the followings?

- a. Always includes lateral rectus muscle surgery.
- b. Yields equivalent results whether symmetric lateral rectus muscle recessions or monocular recess-resect procedures are performed.
- c. Yields final alignment about ٧ days after symmetric lateral rectus muscle recessions are performed.
- d. May be the initial form of treatment.

END OF EXAM
GOOD LUCK



MD Ophthalmic Medicine Exam

Code number:
Time allowed: Three Hours (3 hours)

Date: 30 October, 2021
Total Marks: 260

All questions should be attempted

Exam in : two parts : Part I 8 long questions & Part II 25 MCQs

Part I

Write in the following 8 items (20 Marks each)

1. Management of a patient with Thyroid Eye Disease (TED)
2. Glaucoma hypotensive medications which improve aqueous outflow .
3. Ocular complications of AIDS
4. Differential diagnosis of Choroidal mass
5. Iridocorneal endothelial syndrome
6. Bechet's disease
7. Tests for binocular single vision
8. Differential diagnosis of optic nerve head swelling

----- **END OF Part I** -----

Part II:
25 MCQs (4 marks each):
Choose only one most appropriate answer

- 1. Which bacterial conjunctivitis causes prominent lymphadenopathy? :**
 - a. Pneumococcus
 - b. Staphylococcus
 - c. Gonococcus
 - d. C. diphtheriae

- 2. Regarding Interstitial keratitis which of the following is false :**
 - a. It is commonly seen in syphilis, tuberculosis and leprosy
 - b. It is an inflammation involving the full thickness of the cornea
 - c. Salmon patch is a pathognomonic finding
 - d. Treatment involves topical steroids, cycloplegics and specific etiological treatment

- 3. Brawny scleritis is :**
 - a. Anterior necrotizing scleritis with inflammation
 - b. Anterior non-necrotizing scleritis –nodular variety
 - c. Anterior non-necrotizing scleritis –diffuse variety
 - d. Posterior scleritis

- 4. Sjögren's syndrome has all the following except :**
 - a. There is a generalized fibrosis and atrophy of the lacrimal and salivary glands
 - b. Filamentary keratitis is common
 - c. Electrophoresis of tears shows raised lysozyme level
 - d. It shows stringy discharge

- 5. In " Cystoid macular edema " fluid accumulates in which layer at the macula :**
 - a. Outer plexiform layer
 - b. Inner plexiform layer
 - c. Ganglion cell layer
 - d. Nerve fiber layer

- 6. The normal degree of anterior chamber angle is :**
 - a. 15 - 25°
 - b. 25 - 35°
 - c. 35 - 45°
 - d. 45 - 55°

- 7. Juvenile-onset open-angle glaucoma, all of the following are true except :**
 - a. Develops during the first two decades of life
 - b. Is strongly associated with myopia
 - c. Maybe caused by a gene located on chromosome 1q23
 - d. Can be inherited as an autosomal recessive trait

8. A young child , presents with sudden loss of vision and proptosis of the right eye . On examination , the direct papillary reflex is absent , but the consensual papillary reflex is present . He is having :
- Optic nerve glioma
 - Optic nerve meningioma
 - Retinoblastoma
 - Optic nerve angioma
9. In nuclear cataract which pigment accumulates :
- Adrenochrome
 - Melanin
 - Lipofuscin
 - Urochrome
10. True about Mooren's ulcer are all *except* :
- It is a superficial ulcer starting at the corneal margin
 - Pain is absent
 - It has advancing border
 - Treatment is with topical steroids
11. The most common cause of unilateral proptosis in children is : :
- Metastatic tumor
 - Retinoblastoma
 - Orbital cellulitis
 - Hemangioma
12. which of the following statements is *false* :
- Commonest cause of neovascular glaucoma is CRVO
 - Pigmentray glaucoma is more common in men
 - Side effect of Xalatan is iris hypopigmentation
 - Primonidin has a vasoprotective action for the optic nerve
13. A child with healed central choroiditis in one or both the eyes should be investigated for :
- Histoplasmosis
 - Toxoplasmosis
 - Entamoeba histolytica
14. Which of the following mucocele causes secondary optic nerve atrophy ?
- Ethmoid sinus
 - Frontal sinus
 - Sphenoid sinus
 - Maxillary sinus
15. Which of the following is suggestive of unilateral proptosis with bilateral sixth nerve involvement?
- Pseudotumor of orbit
 - Cavernous sinus thrombosis
 - Retinoblastoma
 - Optic nerve glioma

16. In a case of recurrent anterior uveitis , the most important investigation is :
- X-ray sacroiliac joint
 - X-ray chest
 - Mantoux test
 - Dental checkup
 - Tuberculosis
17. The earliest color deficit in glaucoma is loss of :
- Yellow – green axis
 - Red - green axis
 - Red – blue axis
 - Blue – yellow axis
18. All the following are true of Eale's disease *except* :
- There is no sex predilection
 - Retinal perivasculitis picture is present
 - That it may result in neovascularization
 - That bilaterality is common in majority of cases
19. Which statement about carbonic anhydrase inhibitors is *false* :
- Aqueous production in the eye is not significantly reduced until more than 90% of the carbonic anhydrase activity is inhibited
 - Carbonic anhydrase inhibitors cause reduced excretion of urinary citrate or magnesium , therefore predisposing to formation of kidney stones
 - Carbonic anhydrase inhibitors may cause idiosyncratic and transient acute myopia
 - Metabolic acidosis is greater with oral acetazolamide than intravenous injection of acetazolamide
20. Essential atrophy of the choroid is a consequence of disordered metabolism of :
- Phenylalanine
 - Ornithine
 - Cysteine
 - Arginine
21. Which of the following systemic antibiotics has good intraocular penetration :
- Penicillin
 - Moxifloxacin
 - Gentamicin
 - Erythromycin
22. Which of the following medications increases uveoscleral outflow? :
- Apraclonidine
 - Pilocarpine
 - Epinephrine
 - Atropine

23. All of the following are potential ocular side effects of Sildenafil *except* :

- a. Photophobia
- b. Decreased color vision or changes in color perception
- c. Conjunctival hyperemia
- d. Miosis

24. Spherocytes are most commonly observed in :

- a. Hb SC
- b. Hb S thal
- c. Hb SS
- d. Hb SA

25. Regarding fungal keratitis which of the following statement is *false* :

- a. Most common cause is aspergillus species
- b. These are frequently preceded by ocular trauma with vegetable matter
- c. Symptoms are more than signs
- d. Satellite nodules are commonly seen

----- END OF Part II and the EXAM -----
GOOD LUCK