

Ophthalmology - Paper 1 - Winter 2001

QUESTION 1

Discuss acute non-infective orbital inflammation in adults. Include a classification and list identifying features on history, examination and investigation. Include principles of management.

QUESTION 2

Discuss the general principles for use of antibiotics in ophthalmic disease. Give specific details on antibiotics in current use, including indications, concentration, dosage, delivery, toxicity and complications.

QUESTION 3

A 65 year old male presents with loss of vision in his left eye over the preceding month. He has some periocular pain and trouble adjusting from bright light to relative darkness. On examination he has early rubeosis iridis and in the retina dilated veins and mid-peripheral fundus haemorrhages. What is the likely diagnosis, and differential diagnosis? What investigations would you undertake to confirm the diagnosis? Describe your short and long-term management.

QUESTION 4

Discuss the presentation, differential diagnosis, and management of hereditary retinoblastoma.

Ophthalmology - Paper 2 - Winter 2001

QUESTION 1

A footballer suffered a blow to his head two weeks previously. He was unconscious for five minutes but suffered no other injury. Since the injury he has adopted a right head tilt of 30 degrees to see more comfortably.

Discuss your diagnosis and management.

QUESTION 2

A three and a half year old child presents with a left esotropia of 30 prism dioptres, which has been present for 3 months with visual acuity of R 6/12 L 6/36. A cycloplegic refraction shows the following retinoscopy at your working distance of one metre:- R+4.00 dioptre sphere; L +6.00 dioptre sphere.

Q2a What is your immediate management?

Q2b What are the possible results of your management and how would you manage these both in the short and long term?

QUESTION 3

A healthy 60 year old patient presents with a sudden onset of an inferior field defect in the right eye caused by an upper balloon retinal detachment with a single horse-shoe tear at 11 o'clock. The vision is still 6/6.

Q3a Mention additional features in the eye and the patient in general which would lead you to favour pneumatic retinopexy.

Q 3b Having chosen pneumatic retinopexy, describe how and when you would use cryotherapy or argon laser?

Q3c Which gas would you choose and why?

Q3d Describe in detail your technique of gas injection and immediate management in this particular case.

Q3e Describe your advice to the patient on leaving and follow-up arrangements.

QUESTION 4

Outline the management of pseudophakic cystoid macular oedema.

QUESTION 5

A 30 year old presents with visual blur and is found to have perivascular sheathing of the retinal vessels with staining of the vessel walls on fluorescein angiography. Discuss the differential diagnosis and investigations.

QUESTION 6

Your patient with a right ptosis requires a Tensilon test. Outline how you would do this test.

QUESTION 7

Write briefly on choroidal haemangioma.

QUESTION 8

Two days after a routine trabeculectomy for open-angle glaucoma the anterior chamber is found to be flat and the intra-ocular pressure 35mmHg. Write notes on the possible causes and the management of each.

QUESTION 9

A 30 year old woman presents with a six week history of blurred vision in both eyes and headache. Vision best corrected is 6/36 in both eyes. There is ocular pain, redness and photophobia. There are keratic precipitates. In the posterior segments there are cells in the vitreous and there are exudative retinal detachments and retinal haemorrhages.

Q9a Your diagnosis is?

Q9b. Systemic clinical signs that you would look for include?

Q9c If in addition to the above history, the patient had had a penetrating injury to one eye three months previously, what would you change your diagnosis to?

Q 9d What cell types predominate in these two conditions?

Q9e How does the pathology in the choroid differ in the two conditions?

QUESTION 10

Discuss the complications associated with the use of alloplastic implant materials for repair of an orbital blowout fracture?

Pathology - Winter 2001

QUESTION 1

- Discuss the pathogenesis of nutritional optic neuropathy.
- What optic nerve fibres appear most susceptible?
- How does this manifest clinically?
- What factors contributed to the Cuban epidemic of nutritional optic neuropathy in 1991-1993 which was widely reported in the literature and affected thousands of individuals?

QUESTION 2

Discuss the histopathological changes of the angle in the following glaucomas

- Primary open angle glaucoma
- Pseudoexfoliation glaucoma
- Angle recession glaucoma
- Neovascular glaucoma
- Phacolytic (lens induced) glaucoma

QUESTION 3

- Discuss the histopathology of acute ocular toxoplasmosis involving the posterior segment.
- Discuss the pathogenesis of this disorder at the molecular level.
- What has been learnt recently from studies of outbreaks of toxoplasmosis in Brazil and Canada?

QUESTION 4

Discuss the histopathology of the following conditions

- Pterygium
- Conjunctival intraepithelial neoplasia
- Discuss what is known about p53 expression in the development of these conditions.

QUESTION 5

Discuss tumour suppressor genes in relation to

- Tuberous sclerosis (TS)
- Adenomatous polyposis coli (APC)
- Indicate how the tumour suppressor genes in TS and APC alter the cell cycle.

QUESTION 6

- Discuss precisely how the prostanoid, Latanoprost (Xalatan) lowers intraocular pressure (IOP) by enhancing uveoscleral outflow.
- Discuss the histopathology and presumed pathogenesis of increased iris pigmentation that may occur following prostanoid use.

QUESTION 7

- Discuss the evidence for the role of viral antigen in the pathogenesis of herpetic stromal keratitis.
- Discuss the pathogenesis of corneal neovascularisation after herpetic stromal keratitis.
- Discuss the histopathology of a corneal button removed from a patient for visual rehabilitation (not perforation) with a history of long standing herpetic stromal keratitis.

QUESTION 8

- a. Discuss the specific ocular and periocular infections caused by the organism *Strep pyogenes*.
- b. Discuss the Gram stain characteristics, culture requirements and likely antibiotic sensitivities of *Strep pyogenes*.

QUESTION 9

The clinical diagnosis of sebaceous carcinoma of the eyelid is frequently delayed. The correct histopathological diagnosis may also be missed.

- a. Discuss the reasons why sebaceous gland carcinoma may not be diagnosed histopathologically.
- b. What laboratory techniques may improve the likelihood of a correct diagnosis of sebaceous gland carcinoma?

QUESTION 10

Discuss the adaptive immune response to adenoviral conjunctivitis in a healthy individual.

QUESTION 11

- a. Discuss the slit lamp appearance of keratoconjunctivitis sicca associated with Sjogren's syndrome following staining with fluorescein and rose bengal.**
- b. Why does this staining pattern occur?
- c. What is the histopathology of the lacrimal gland in Sjogren's syndrome?
- d. Why are accessory salivary glands of the lip sometimes biopsied in a suspected case of Sjogren's syndrome?

QUESTION 12

- a. Discuss how Vascular Endothelial Growth Factor (VEGF) may be involved in the alteration of vascular permeability and the neovascular response in Diabetic Retinopathy?
- b. What other ocular diseases involve VEGF in the pathogenesis?