

JULY 1999

OPHTHALMOLOGY PAPER 1

QUESTION 1

Give an account of the symptoms, signs, differential diagnosis and management of Idiopathic Macular Hole.

QUESTION 2

Discuss the ophthalmic manifestations of the Acquired Immunodeficiency Syndrome (AIDS).

QUESTION 3

Discuss the general and specific risk reduction strategies for cataract surgery against a medico-legal challenge.

QUESTION 4

A 55 year old woman presents with a two week history of ptosis and ocular motility dysfunction consistent with a diagnosis of a left third nerve palsy. Give an account of your management with emphasis on the clinical features that you would look for and how these features would affect your approach to the management of this patient.

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OPHTHALMOLOGY – PAPER 2 - PART A

QUESTION 1

Refer to Figure 1 and answer the following five questions:

- A. Describe the ocular motility signs present.
- B. What is the most likely diagnosis?
- C. When is surgical treatment indicated?
- D. What are the aims of surgical treatment?
- E. What surgery is appropriate?

QUESTION 2

Describe the ophthalmic manifestations and give a classification of carotid-cavernous fistulae.

QUESTION 3

A 60-year-old man presents with vision of 6/18 right, 6/6 left. Two years before he had had right cataract surgery with insertion of an IOL. The photograph is of the right macula during a fluorescein angiogram. There is no other pathology of the right fundus other than that shown in the photograph. The left fundus is normal.

- A. Describe in detail the pathological signs seen in the fluorescein angiogram
- B. What ocular abnormality accounts for these changes?
- C. How could this ocular abnormality be related to the cataract surgery'?
- D. What is your management?

QUESTION 4

- A. List the symptoms and signs which differentiate macular from optic nerve dysfunction. Exclude fundoscopic and angiographic signs.
- B. List the macular and/or optic nerve signs from toxicity of the following:  
ethambutol, tamoxifen, thioridazine, canthaxanthine, intravitreal amikacin, hydroxychloroquine.

### QUESTION 5

A 55-year-old male presents with proptosis and decreased vision in the left eye.

- A. What are the features of this which would make you diagnose thyroid eye disease?
- B. What are the mechanisms of optic neuropathy in thyroid eye disease?
- C. What is your treatment of optic neuropathy in thyroid disease?
- D. What is the other major cause of decreased vision caused by thyroid eye disease and what is your treatment?

### QUESTION 6

Describe the nature, causes, classification and prevalence of epiretinal membranes.

### QUESTION 7

Discuss aberrant regeneration of the oculo-motor nerve. Include in your discussion the causes, clinical features and pathology of this condition.

### QUESTION 8

Discuss primary ocular calcification, and list the systemic diseases which secondarily cause ocular calcification.

### QUESTION 9

Write briefly on choroidal hemangioma.

### QUESTION 10

Give an account of the assessment of the function of the seventh cranial nerve. Discuss ocular complications of paresis or paralysis of the seventh nerve.



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## PATHOLOGY

### QUESTION 1

- A. Describe the optimal specimen and laboratory handling required for temporal artery biopsy to exclude giant cell arteritis (GCA).
- B. List histopathological findings in classical GCA.
- C. What changes would one see in a biopsy in a patient with GCA who has been on high dose corticosteroid therapy for one week?
- D. Indicate recent advances in pathogenesis of GCA.

### QUESTION 2

Plaque radiotherapy for posterior uveal melanoma with 1-125 is associated with a number of late ocular complications. List six of these and discuss the pathophysiology.

### QUESTION 3

Discuss recent advances in the molecular genetics in the four autosomal dominant corneal dystrophies (lattice, granular, Avellino & Reis-Buckler's)

### QUESTION 4

- A. Discuss the pathophysiology of choroidal neovascular membranes. Do not limit your answer to age-related macular degeneration.
- B. How has ICG (indocyanine green) angiography improved our understanding of the pathophysiology of the development of choroidal neovascular membranes.

**QUESTION 5**

Discuss the pathological events involved in wound healing in the cornea following PRK (photorefractive keratectomy) and LASIK (laser in situ keratomileusis), including the role of specific cytokines and growth factors.

**QUESTION 6**

A 30-year-old Indian male presents with bilateral serous retinal detachments and features of bilateral granulomatous panuveitis. His hearing is diminished.

- A. What is the most likely diagnosis.
- B. What ancillary clinical investigations would you recommend?
- C. What is the presumed pathogenesis of this condition?
- D. What are the distinguishing histopathological features of this disorder?

**QUESTION 7**

Discuss the pathological features and pathophysiology of two cicatrizing ocular surface disorders, including the diagnostic laboratory tests and immunological findings.

**QUESTION 8**

In recent years, a single molecular structure has been implicated in the causation of the vascular changes in diabetic retinopathy.

- A. What is the name of this structure.
- B. Please give a brief summary of what has been discovered in animal and human studies.

**QUESTION 9**

A. A 76-year-old man with no previous medical or ocular history presented with progressive fullness of the L upper lid. Examination showed a mass in the upper outer orbit and CT scan showed diffuse expansion of the lacrimal gland with extension beyond the orbital rim, and posteriorly a straight-line appearance, where the lesion abutted orbital fat. Discuss the differential diagnosis and what investigative procedure(s) that you would undertake, including any special requests to the pathology laboratory.

- B. Briefly describe the histopathological findings of your preferred diagnosis.

**QUESTION 10**

Discuss the pathological findings in the lens with a senile cataract and comment on the pathophysiology of these changes.

**QUESTION 11**

Describe the pathology of the Iridocorneal Endothelial (ICE) syndrome. Include in your answer the mechanism of glaucoma and how this may influence surgical management.

**QUESTION 12**

A 60-year-old male had a major abdominal operation for suspected carcinoma of the pancreas. He weighed 40 kg and was on intravenous hyperalimentation. Six weeks postoperatively, he noticed gradual increasing blurred vision and pain in one eye. Examination revealed a red eye with panuveitis and multiple white chorioretinal lesions.

- A. What is the most likely ocular diagnosis and the two most likely causative microbiological organisms?
- B. How does the clinical course and visual outcome (with optimal treatment) of these two organisms differ? Do not discuss treatment.
- C. Discuss the staining methods commonly used to identify these organisms in the laboratory, with a brief comment about advantages and disadvantages of these methods.
- D. What is the likelihood of a positive blood culture for these organisms in this man?