Dr Jayashree VELU from India frcs3 Glasgow delhi
VIVA :

OPHTHALMIC MEDICINE:

EXAMINER 1 -
Pic : diffuse illumination – showing conjunctival congestion : inferior bulbar and palpebral area – with small nodule at 4'O clock hour;
Q : if I tell you this is a picture of a 14 year girl who has presented to you like this what do you think?
.. I asked if there is any cells/ flare in AC, examiner told- no; I gave DD – episcleritis / scleritis / phylectenulosis;
Q : if this is phylectenulosis how will you treat?
I told – will give lubricants and NSAID's;
Q – wont you give antibiotics – I said phylectenulosis is a hypersentivity reaction and I don't find any discharge or matting of eyelashes, so I don't prefer;
Q - if this is presenting repeatedly – then will your Rx change?
– I told I will add topical steroids and I would like to rule out any systemic association in liaise with immunologist.
Q : what about antibiotics ?
– yes sir I would give antibiotic - steroid combination drops (somehow I felt that examiner wanted antibiotics also to be given)

Pic : large disc with CDR 0.6-0.7 and temporal crescent with NRR thinning temporally, no vascular abnormality, no disc hge, no lamina cribrosa sign, no polar notching, My Impression is Myopic disc,
Q- you want to think of any other cause?
– I said no sir, this kind of picture is seen in myopic patients,
Q : is it pathological or physiological, I told I would like to do few other tests to confirm and know if its pathological,
Q : what tests ?
– I told : refraction, Gonio, central corneal thicknes(ccc), perimetry, OCT – RNFL,
Q : how does refraction help?

– to confirm if the patient is myopic if not I would search for other cause
, Q : how do you measure corneal thickness ?
– A : with help of pachymetery
Q : how does that measure ?
A : through ultrasonic waves,
Q : any other instrument which can give you this value?
A: IOL master, corneal topography,
Q : what kind of defect do you expect in perimetry?
– A: enlargement of blind spot or nasal step due to atrophic temporal crescent
Q : how does RNFL thickness helps ?
– to assess progressive thinning quantitatively,
Q : what are the types of cupping you know ?
– physiological / pathological/ neurological;
Q – give me examples ?
– physiological – large disc with healthy neuroretinal rim mimics glaucoma,
pathological – normal tension, poag, pacg; neurological
– temporal pallor in patients with space occupying lesion and primary optic atrophy due to ischemic cause.
Q : How will you confirm if it is large disc?
, A – measuring disc size in slit lamp by 90 D and multiplying with correction factor, what is the correction factor – 60 D no correction factor required, 78D multiply by 1.1 and for 90D by 1.3, if the size is above 2mm then I would consider it as a large disc,
Q – what is the significance in hypermetropic patients?
A – hypermetropic discs are small, a large cup in a small disc is considered significant

EXAMINER 2 -
Picture showing - marked conjunctival congestion bulbar and inferior forniceal with mucopurulent discharge ;
Q – what's your impression ?

: membranous or pseudo membranous conjunctivitis secondary to bacterial infection,

how will you rx ?

– ocular hygienic measures (no touch, frequent handwash, daily disposal of contaminated clothes, cleaning of discharge), topical antibiotic eye drops – day time and eye ointment night time,

Q : will you give steroids ?

– I said no sir,

why you are not giving steroids?

I said this is infective with discharge, I prefer to give steroids only if I peel the membranes to prevent adhesion due to raw areas. (examiner wanted me to tell steroids, he told – there is no harm and you can give steroids under cover of antibiotics)

Case Scenario :

4 year old boy with esotropia 40D for distance, how will you proceed?

, I started from history : onset, nature : constant or intermittent, if other eye also squinting at times, perinatal history, trauma, any systemic association, then I will do refraction – to rule out refractive error and amblyopia, check anterior and posterior segment to rule out causes of sensory squint,

Q – it's a constant squint in one eye take for eg right eye : what is your dd?

– thinking that he told for distance only I told 1st DD as sixth nerve palsy, 2nd DD as accommodative refractive esotropia

examiner frowned – why sixth nerve palsy as first differential?

, I told sir accommodative refractive in one eye is uncommon,

he said.. why cant it be due to anisometropia and amblyopia causing large angle squint in one eye.?

I immediately agreed yes sir (said to myself that there will be deviation for near too then) and when the examiner wanted only that diagnosis I continued with my management, told that I would like to refract, examiner told that it is +6D

, then I told that I will give spectacle correction review at 4 -6wks to check spectacle adaptation and start part time patching for better eye 4-6 hrs /day with at least 1hr of near activity.
Q – how do you advice to patch?
A – with help of an adhesive tape over the better eye and wearing glasses upon it.

Case scenario:
60 years old gentleman is coming to you with difficulty in opening both eyes?
, I gave 1st DD as dry eyes, examiner agreed, still asked what else?
– I told essential blepharospasm,
how will you manage?
, I told I will ask if it is affecting his quality of life significantly,
examiner told – of course it is disturbing for him that's why he has come to you?
, then I said I will give him the option of botulinum toxin injection and will counsel the patient that it will take 2-3 days for its onset and the effect will stay for a period of 2-3 months as well as tell him that there are chances of ecchymosis, ptosis and diplopia following injection
Q – how does it act?
A – blocks acetylcholine release from nerve terminals
Q – any other drug you will give ?
I got confused if he is asking for oral medication, he told any drug you will give for eyes – I told lubricants. Examiner - A big yes!..

Still Time left.
. examiner 1 – gave a picture – small disc with huge peripapillary atrophy, asked for spot diagnosis ?:
optic disc hypoplasia
, Q – any other differential would you like to give?
: other anomalous condition like disc coloboma and also hypermetropic disc due to the small size.

Examiner 2 (Dr Ahmed Reda): you still have some time, I will ask you regarding the esotropia question (sobbed to myself), thank god BELL RANG ☺

OPHTHALMIC SURGERY :
EXAMINER 1 –
Pic : showing pterygium;
Q – describe ?
: wing shaped fold of fibrovascular tissue in the interpalpebral region situated in the nasal aspect crossing the limbus and encroaching the cornea covering almost half of the visual axis which is suggestive of pterygium
Q – causes?
, A- exposure to uv rays/ sunlight, microtrauma from wind / dust,
Q – how will you manage?
, A – as it covering the visual axis I expect the vision to be less and so will counsel the patient for surgery,
Q – enumerate the surgery you would like to do for this patient naming the instruments which you use?
, I asked if there is a history of previous surgery?
, Examiner asked how does it help you?
I told I prefer to use MMC if it was recurrence
, Examiner told imagine its primary surgery and go ahead with your surgical steps?
A – I prefer to under peribulbar anesthesia and under aseptic precautions eye cleaned/ draped/ speculum, traction suture with 5-0 dacron at superior cornea, remove the head of pterygium with help of crescent blade meticulously form corneal side to conjunctiva
Q – and what's the size of that blade?
A- I told 2.2mm (there are different sizes available, do check them) then continued : scrape the epithelial irregularity with 15No blade and frequent irrigation, remove the pterygium after releasing adhesion from scleral bed
Q – with what you remove, show in the picture till how much you will excise?

, I told with help of conjunctival scissors I will remove till here (pointing to the picture) taking care that I don't injure the medial rectus.

Then I would retract the cornea exposing the area of where I will take conjunctival autograft i.e., superior or superotemp conjunctiva; will inject lignocaine and adrenaline in a 30 gauge syringe will raise a bleb and excise the conjunctival autograft without tenons in it and rotate the graft maintaining the limbus to limbus orientation.

Q – and how do you suture?

I told sir I prefer to do a suture less surgery by autoblood graft fixation or fibrin glue after drying the scleral bed,

Q : and how much do you think is the recurrence rate with this type of procedure

, A – its hardly around 4-7 %, examiner - very good and you are correct ☺

Pic : showing ECCE wound with nylon sutures and the cornea was not clear with hazy ac details; ***Examiner – what do you infer from this picture?***

, A- a picture from a patient who has underwent extracapsular cataract extraction

Q – what do you think the color of cornea is?

A – brownish tinge,

Q – why is it so?

A – corneal blood staining,

Q – yes it is blood stained and what do you think would have happened?

, A – intraoperative injury causing bleeding followed by post op hyphema that has not been managed properly or could be due to trauma causing this picture.

Q – if its due to trauma then how do you manage ?

A – control the Intraocular pressure and treat intraocular inflammation with steroids and will consider drainage in case if there's blood staining,

IOP >50mmhg for 2 days,

Iop > 25mmhg for 5 days in total hyphema,
Iop >24mmhg >24hrs in sickle cell patients,
Q – ok that it is stained what will you do ?
- I told DSEK
examiner asked almost 80% of corneal thickness is involved then?
A – penetrating keratoplasty
Q – when will you do it?
- immediately or you will wait,?
A – I will wait,
Q- for how long?
A – at least 6 months

EXAMINER 2 –
Case scenario :
2 year old child is brought by her mother noticing white reflex in one eye nearly 3 months, what its your impression?
A – dd of leucocoria (congenital cataract, retinoblastoma, PHPV, toxocara, ROP, coat disease
),
how will you proceed?
, A – will ask history of fever during perinatal period, any preterm delivery, complications during birth and postnatal, will examine the corneal clarity, dilate the pupil and check if the white reflex is lenticular or retrolental, if no view of fundus will do us b-scan to know the status of posterior segment;
Q – if you have find a mass in the vitreous cavity how will you proceed?
, A – then my probable diagnosis is retinoblastoma, will ask for family history (siblings) and will counsel the mother the need for Examination under general anesthesia for further intervention,
Q – what are the things you will record in EUA, I told corneal diameter, axial length, IOP, status of A/s with handheld slitlamp to look for rubeosis, if lens is clear then fundus examination with indirect ophthalmoscopy and scleral depression and record all my findings and stage as per ICRB classification, Examiner interrupted –

wont you examine other eye, yes sir I would examine other eye as well,

Q – what do you do then?

, A – if it's a small mass with no vitreous seeding then focal therapy with transpupillary thermotherapy/ triple freeze cryo; if the mass is more than 3mm with vitreous seeding will refer the child for chemotherapy and follow up in 3-4 weeks to watch for chemoreduction and proceed with focal therapy;

Q – you see a large mass obscuring the optic disc and vitreous seeding with neovascularization of anterior segment?

, A : this is a unilateral tumour and my primary goal is to save life I will explain the mother the need for enucleation,

Q : what's the important precaution you would consider while enucleating?

A – to obtain a large optic nerve stump around 12-15mm

Pic : showing enucleated eye with a large mass; examiner - said this is the eye which was enucleated and the histopathology confirmed the diagnosis as optic nerve glioma, can you tell what can be found in histopathology?

.. A – presence of pilocytic astrocytes that are spindle shaped and glial filaments

Q – how will the clinical presentation be like?

A – presence of proptosis with or without dystopia and sometimes there can be optociliary shunts in the fundus with choroidal folds if the proptosis is marked.

Q – can you do anything to support your diagnosis?

, A – this tumour is intrinsic in optic nerve so Ct scan will show fusiform enlargement of optic nerve

Q –if this is present in a child with mild proptosis and vision is 6/9, how will you proceed?

A – I will reassure the parents that this is a benign condition and would like to observe with follow up on regular basis,

Q – do you know any systemic association of this tumour?

A - neurofibromatosis -1

Q – if the same tumour is present in a 40yr adult and the vision is same 6/9, how would you proceed?

A- as this tumour is more likely to undergo malignant transformation in adult I will counsel the patient regarding the need for radiotherapy and enucleation and will refer to an expert for further intervention

Examiner 1 returned to me

… showing a picture of cornea with DM folds and guttae, examiner : this is picture taken from a women who complains of decreased vision after waking up and getting better with later part of day, your spot diagnosis ?

A- fuchs corneal endothelial dystrophy,

Q – she is concerned with her cataract causing decreased vision, how will you proceed?

, A – I will check the BCVA, record IOP, assess the corneal thickness and do specular microscopy to assess endothelial counts, if the corneal thickness is more than 640 microns and the endothelial count are less than 1500 then will explain the need for triple procedure as there is likely chance of endothelial decompensation following cataract surgery alone; and if the thickness is normal around 520 – 550 microns and if the endothelial counts are good would advise for simple cataract extraction and explain that there are chances of corneal decompensation in the future and will refer the patient to senior person for phacoemulsification,

(Examiner said – its very good that you refer in such cases) and if the patient is not particular about sutureless surgery and if I have to do I prefer an open procedure like Extracap/ small incision cataract surgery

Q - what are the precautions that has to be considered during cataract surgery in this patient?

A – frequent coating of the endothelium with dispersive viscoelastic and keep the phaco power less to prevent endothelial damage and finish the surgery in the minimum possible time without much manipulation.(soft shell technique

)

examiner : again very good ☺ BELL RANG .. I was totally contented with this station with no if/but/ controversies..

GENERAL MEDICINE
Examiner 1
65 year old Nigerian male is coming to you with vitreous hemorrhage in one eye and when you examine his other eye you found this, then handed me the picture to explain?
; A - fluorescein angiography photo showing sea fan neovascularization,
Q - give your diagnosis?
, A – sickle cell retinopathy,
Q – pointing to areas behind neovascularization asked me what are these?
A –capillary non perfusion areas,
Q - What investigation you would like to do to support your diagnosis?
A – peripheral smear,
Q – anything else ?
A – seriously I didn't know .. I started to
fumble saying complete blood count, ESR.. Examiner – quite unsatisfied.. what is the diagnostic investigation of choice, A - sorry sir I don't know, examiner – trying to help me asked where is the pathology here, I told it's the abnormal hemoglobin HBs causing sickling and distorting the shape of RBC, Examiner – so what will you do to know this, I had to give up at this point I said I don't know.. **Hemoglobin electrophoresis** is the diagnostic investigation of choice you didn't know this! Sorry sir I couldn't recollect,
Examiner : ok what will you do for this patient?
A – I would like to observe as there is spontaneous resolution due to autoinfarction, Examiner – you want to observe, ok I agree, but the patient is concerned about his vitreous hge in the other eye and wants you to do something to save this eye?
A – I told laser photocoagulation

Q – asked me to point out the areas that has to be lasered in the picture and I showed
, Q – how does that work?
, A – it converts hypoxic retina to anoxic retina
Examiner – pointing to the pic tell me how is the perfusion in this picture, which is hypoxic / ischemic/ anoxic, A – I told anoxic in the region pointing to capillary non perfusion areas and hypoxic pointing to areas of sea fan new vessels;
Q – tell me the types of this disease?
A – sickle cell disease and trait, can be mutant variants like S and C
Examiner – awaiting my response to continue still.. A – I stumbled for words saying SS is disease, Ss is sickle cell trait and also there can be variants like HBsC
Q – so this kind of picture is seen in patients with disease or trait, I told both, examiner corrected me saying .. its seen only in patients with disease and not in trait

Pic : showing multiple nodular neurofibroma,
Q – what is your impression?
, A – neurofibromatosis type -1,
Q – if this patient comes to your clinic what ocular features will you look for?
, A - S shaped lid deformity due to eyelid plexiform neurofibroma, lisch nodules in iris, ectropion uvea, glaucoma, pulsatile proptosis due to sphenoid bone hypoplasia, optic nerve glioma, meningioma causing proptosis;
Q - what are lisch nodules ?
A – iris hamartomas,
Q – what are hamartomas?
A – abnormal cells in normal location;
Q – what is choristoma then A – normal cells in abnormal location, good example is dermoid cyst,
Q- what are the systemic features in these patients?

, A – café au lait spots, axillary and inguinal freckling, nodular neurofibromas in skin, intracranial tumours like meningioma/ schwannoma,

Q – does it affect vertebral column?

, A – yes sir it can cause spinal deformities Q - what is neurofibromatosis, A – it is a type of phacomatosis affecting eye/ skin/central nervous system

Q – name other phacomatosis?

, A – tuberous sclerosis, Von Hippel lindau, Sturge weber, Louis bar, Wyburn mason syndrome… sorry sir there are 9 types I can't recollect all

Q –that's ok, can you tell the inheritance of Sturge weber : Sporadic

Examiner 2 :

Pic : fundus photo showing hmg in 4 quadrants, cotton wool spots, hard exudates in macula, no NVD/ no NVE, Q – what's your most probable diagnosis ?

A – severe NPDR

Q – how will you proceed in such patients?

A – ask H/o duration, status of glycemic control, associated conditions like hypertension, nephropathy, hyperlipidemia, check BCVA and stereoscopic fundus examination in slit lamp

Q – how does that help you ?

A – stereoscopic examination helps me to identify if there is a clinically significant macular edema to plan further management

, Q – anything else you will do apart from this?

, A – OCT and if there is macular edema then will do FFA to rule out ischemic maculopathy and identify focal leaking points if I plan for laser,

Q – how does OCT helps in your management ?

A – to record quantitatively the amount of edema as well as to follow up and assess the rx response,

Q – what systemic investigations you will do?

, I told the routine stuff : FBS/ PPBS, urea, creat, electrolytes, Hba1C, lipid profile etc,,

Q – what is Hba1C and why do you want to do it A – glycosylated hemoglobin, which gives the glycemic status of past 2-3 months if the value is less than 6 it shows a good glycemic control and above 6.5 reflects irregular control

Q – what is the drug of choice to Rx hypertension in diabetic patients with renal failure?

A – ACE inhibitors

Q – why is it good, I kept mum, examiner said it is good for nephropathy as well,

Q – is systemic control something to do with your management, will it affect your Rx?

, A – yes sir, strict systemic control reduces the risk of retinopathy, neuropathy and nephropathy

Q – is there any study to support your statement A – I mentioned DCCT – Diabetes control and complication trial (I couldn't recollect the percentage of prevention) and also examiner didn't ask further about it,

Q – what is given to control hypercholesterolemia, A – statins and fenofibrates

Case scenario :

24 year female is coming to you with malar rash and small joint pain of extremities, what do you think this patient is having?

A – systemic lupus erythematosus,

Q - how sure are you when Iam giving you the history of joint pains also?

, A – the most common presentation in females is rheumatoid arthritis but it is usually elderly female and unlikely to present with malar rash, acne rosacea can present with rash in face but again unlikely to present with joint manifestations

, Examiner said with a smile .. yes I agree to you the diagnosis is SLE and tell me the ocular manifestations?

A – madarosis, dry eyes, uveitis, scleritis, puk, vasculitis.

Q – what about systemic features ?

A – alopecia, malar rash, oral ulcers, Raynauds phenomena, arthritis

Q - what is the investigation of choice?

A – antinuclear antibodies and antibodies to double stranded DNA

Q – any other blood tests you would do ?

A – complete blood count

Q – what do you expect these patients have ?

A – thrombocytopenia

Q – what else A?

– anemia

Q – what happens to WBC?

I didn't know … I first told lymphocytosis if there is infection then told lymphopenia, examiner asked me repeatedly is it increased or decreased I also got confused as I wasn't sure, but the answer is decrease in number of all counts… (anemia, thrombocytopenia, leucopenia and lymphopenia)

Q – what is the type of anemia you see in these patients?

, I kept silent, he gave clue : what is the type of anemia in chronic diseases, I doubtfully told iron deficiency anemia (but I don't know the answer, please refer incase if I was wrong).. BELL RANG!

CLINICAL STATION

Oculoplasty :

1st - pthisis bulbi in right eye, myopic glass in left; asked about causes and management of pthisis bulbi?

I told chronic uveitis or multiple surgeries

Q – and that causes?

A – ciliary shutdown

Q – and that causes?

A - low intraocular pressure

Q – and that causes A – hypotony .. examiner wanted this word : **hypotony,** then questions on cosmetic management?

(Artificial prosthesis, eviscerate then implant/ or enucletation), if the patient wants to avoid surgical procedure will give option of cosmetic contact lens

2nd case- unilateral proptosis (non axial) with inferior displacement, asked dd?

(thyroid with restrictive myopathy causing inferior dystopia/ intraconal/ extraconal mass), what examination you will do?
: proptosis measurement/ pupils / EOM, question about optic nerve functions

3rd case – right eye : permanent tarsorrhaphy scar, left eye : minimal proptosis (lateral orbital bony deformity on palpation), - why do think this bony deformity is?
A - thyroid patient who had already underwent orbital decompression

Anterior segment :

1st : Young male : right eye had prosthesis left eye had – two patent PI with glaucoma drainage device, with superonasal subluxated cataractous lens with zonules visible in a dilated pupil and conjunctival cyst nasally, asked about most probable cause?
, I said congenital glaucoma,
why there is prosthesis in other eye?
– enucleation following absolute glaucoma..
2nd : bilateral Haabs striae with elevated bleb and patent pi; Questions on DM tears, its orientation?
.. (birth trauma – vertical; congenital glaucoma – linear)
3rd : bilateral post lasik, with ectasia in left eye: I told clear graft with interface visibly made out and there was thinning in left eye in central region; I told this interface is seen due to lamellar keratoplasty , Examiner told if I tell you this patient underwent lasik before 10 yrs and is presenting like this, then I said post lasik ecatsia,
Q – what do you think that has caused this ectasia?
, I told misdiagnosed keratoconus prior to refractive surgery

Post segment :

1st : Retinitis pigmentosa, questions on atypical variants?

, ocular and systemic association in specific to deafness?

2nd : PDR with s/p PRP, questions on investigations (oct & FFA)
3rd : high risk PDR, asked about when to laser, when is vitrectomy indicated

Neuro ophthal / squint :

1st : 4th nerve palsy, demonstrated park 3 step test, no further question

2nd : young girl, examiner asked if I tell you this patient had 7th nerve palsy, describe the methods to test?
: I did almost everything, the girl hardly had any sign (may be she was in recovering phase), then asked about causes and management

3rd : young boy with glasses and marked esotropia in right eye, examiner told to examine – I started with ocular motility and showed inferior oblique overaction (I realized that I should have done cover – uncover first because when I wanted to do bell rang) quickly asked - the patient is having diplopia that is present even with glasses what will do you, I told sx (LR resection and MR recession)