MRCP Part II Mock Test
with slides

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http://neurology4mrcp.orgfree.com
We are happy to launch our first MRCP part II mock with slides. A total of 20 questions were written, but with many sub-questions making a total of 66 questions. I'm greatly thankful to the online eye atlas for their wonderful slides (http://www.eyeatlas.com/). Gradually will launch and publish many Mock papers. Please visit us on regular basis to update your questions.

Our objective was not to make small bofs followed by 2-3 pages of explanation for each one. Please read textbooks to enrich you knowledge. Notice that each question has a certain lesson to learn from. The idea was not to "write" certain common scenarios, but to enlighten you about the diverse lines of clinical medicine. These bofs were written for teaching purposes only, not to blindly imitating the MRCP examination. Certain terms and syndromes were deliberately not explained in order to make you read about them in textbooks. Please don’t make the best of fives your ONLY source of reading; you are going to be a physician!

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Q1: A 25 year old man presented with somewhat slow progression of gait difficulty over few years. His mother stated that he has difficulty in hearing them and his vision is deteriorated in a step wise manner. You detected palpable common peroneal nerves and his skin is dry, rough, and scaly. He is not mentally subnormal and his body mass index is 22. His fundoscopic picture is shown below.

1) What is the name of this abnormal retinal appearance?

![Fundoscopic picture]

a. Vitreous hemorrhage.
b. Background diabetic retinopathy.
c. Retinitis pigmentosa.
d. Angiod streaks of the retina.
e. Leopard skin spotting.

2) What is your final diagnosis?

a. Charcot Marie Tooth disease.
c. Friedreich's ataxia.
d. Laurence Moon Biedle syndrome.
e. Refsum's disease.

3) What do you think that his CSF profile may reveal?

a. It should be totally normal.
b. Raised protein with out pleocytosis.
c. Greatly elevated CSF opening pressure.
d. Hemorrhagic looking.

e. A positive PCR testing for mycobacterium DNA.

4) While ordering an ECG for him, his mother asked you about the possible findings that might be detected in his ECG?

a. It should be always normal.

b. You are looking for cardiac dysrrhythmias.

c. You are looking for evidence of right atrial hypertrophy.

d. You are looking for S1S2S3 syndrome.

e. You are looking for evidence of pericarditis.

5) His mother is asking you if it is possible to slow the progression of his illness in general. What is your plan for achieving this objective?

a. Advising a phytanic acid free diet.

b. Giving high dose prednisolone for 6 months and reviewing the patient thereafter.

c. Preparing him for renal transplantation.

d. Prescribing alpha galactosidase enzyme replacement.

e. Reassure the mother that a spontaneous remission is very likely in the near future.
Q2) A 57 year old lady presented with few months history of unsteady gait, incontinence, and slow thinking. Her brain MRI revealed enlarged ventricles without cortical atrophy, and no mass lesion was seen even after contrast administration. You are thinking of normal pressure hydrocephalus but her fundoscopic examination revealed the picture below. How can you explain her abnormal retinal appearance?

![Retinal Appearance Image]

a. This is a normal finding in old people, and is better to be ignored.

b. This is an old choroiditis, and possibly having no association with her current presentation.

c. There are multiple foci of malignant melanoma and her liver should be examined.

d. This is proliferative retinopathy and her blood sugar should be tested.

e. This is a partial ocular albinism and possibly having no association with her current presentation.

Q3: A 60 year old man with long standing diabetes, presented with few hours history of left sided weakness. He has atrial fibrillation and he is taking digoxin, but no warfarin. Examination revealed a normal speech, but a dense left sided hemiplegia and hemi-sensory loss. Fundoscopic examination revealed the following picture in the left eye.
1) What does the picture show?

a. Central retinal artery occlusion.

b. Optic nerve head drusen.

c. Proliferative diabetic retinopathy.

d. Age related macular degeneration.

e. Grade 4 hypertensive retinopathy.

2) His brain CT scan revealed a large right sided hypodense area with mass effect and midline shifting, consistent with an occlusion of the proximal portion of right the middle cerebral artery. You detected a left sided homonymous hemianopia, and the patient denies any visual impairment prior to his presentation. Which one of the following statement is true?

a. His homonymous hemianopia is new and possibly caused by his new onset ischemic stroke.

b. His homonymous hemianopia is old and possibly caused by his abnormal retina prior to his stroke.

c. His hemianopia is old and possibly caused by an occult hemispheric tumor.

d. His hemianopia is old and he had Blaint’s syndrome causing unawareness of the defect.

e. His hemianopia is new and possibly caused by rapid progression of his abnormal retinal disease.
3) As a treatment option for his ischemic stroke, what would you choose?

a. Starting full heparinazation followed by oral warfarin.

b. Starting low dose aspirin for the time being.

c. Initiating thrombolytic therapy with r-TPA.

d. Giving dipyridamole.

e. Starting ticlopidine.

Q4: A 53 year old man presented with few months history of numbness with pins and needles sensation in his feet. Examination revealed diminished pinprick and temperature sensations in a stocking pattern, with absent ankle jerks. His blood pressure is 140/80 mmHg, with a BMI of 29. He is on no medications. His fundoscopic picture is shown below.

![](image)

1) What is the cause of his presentation?

a. Vasculitic mononeuritis mutiplex.

b. Hypertensive encephalopathy.

c. Diabetic peripheral neuropathy.

d. Peripheral vascular disease.

e. Cholesterol atheroembolic disease.
2) What is your next investigation?

a. Lower limbs conventional angiography.

b. Fasting blood sugar.

c. Fasting serum lipid profile.

d. ANA.

e. cANCA

3) As a symptomatic treatment for his feet complaint, what would you start?

a. Captopril.

b. Lovastatin.

c. High dose prednisolone.

d. Amitryptilin.

e. Warfarin.

Q5: A 44 year old man presents with 3 months history of progressive gait difficulty. He has a "chronic joint illness" since 10 years, for which he takes certain medications, but he does not know the name of his illness. He has troublesome neck pain since a long time. He admits to some difficulty in using his hands because of some deformity. His gait is spastic, with grade 4 minus pyramidal weakness, exaggerated reflexes, and prominent loss of joint position in his lower limbs. His fingers look funny. His rheumatoid factor titer is high.

1) He has a mild eye discomfort. Look at his eyes, what is the likely name of his chronic joint illness?
a. Chronic idiopathic juvenile arthritis.
b. Adult Still Disease.
c. Relapsing polychondritis.
d. Rheumatoid arthritis.
e. Chronic tophaceous gout.

2) What is the eye condition?
  a. Scleritis.
  b. Posterior uveitis.
  c. Episcleritis.
  d. Acute angle closure glaucoma.
  e. Herpetic keratitis.

3) What do you think the cause of his lower limb weakness is?
  a. Mononeuritis monoplex of the right common peroneal nerve.
  b. Mononeuritis multiplex of his lower limbs nerves.
  c. Peripheral sensori-motor neuropathy.
  d. Cervical cord compression.
  e. Brain vasculitis.

4) What is your investigation to prove or refute your suspected cause of his lower limb weakness?
  a. EMG and nerve conduction study.
  b. Muscle enzymes assessment.
  c. Cervical MRI.
  d. Muscle biopsy.
  e. CT scan of the dorsal spine
5) What would you do regarding his leg weakness?

a. Reassuring him that it is self limited process and no intervention is needed.

b. Giving high dose steroids.

c. Starting low dose steroids.

d. Referring him for cervical spinal fixation surgery and decopression.

e. Encouraging weight reduction.

Q6: A 66 year old man presents with a sudden painless visual loss in his right eye since 12 hours. He has a history of dizziness, headache, and repeated spontaneous nasal bleeds. Examination revealed pallor, hepatosplenomegally, and his funduscopic appearance is shown below. He underwent a battery of investigations:

Hemoglobin 7 g / dl

ESR 100

Blood urea nitrogen 20 mg / dl

Serum calcium 8.9 mg / dl

Urine examination negative for albumin
1) What is the cause of his visual loss?
   a. Acute angle closure glaucoma.
   b. Anterior ischemic optic neuropathy.
   c. Central retinal vein occlusion.
   d. Proliferative diabetic retinopathy.
   e. Vitreous hemorrhage.

2) You would like to investigate further, choose 2 investigations from the list below:
   a. Serum magnesium.
   b. Serum protein electrophoresis.
   c. X ray of the heels.
   d. Echocardiography.
   e. Bone marrow study.
   f. Temporal artery biopsy.
   g. Osmotic fragility test.
   h. ANA
   i. Anti Smith antibody.
   j. Gastro-esophageal endoscope.

3) What is the likely diagnosis that fits the above clinical picture?
   a. Multiple myeloma.
   b. Waldenstrom's macroglobulinemia.
   c. Idiopathic thrombocytopenic purpura.
   d. Giant cell arteritis
   e. Goodpasture's syndrome.
4) What is the likely cause of his dizziness and headache?

a. An occult malignant glioma.

b. High plasma viscosity and the presence of a paraprotein.

c. Brainstem hemorrhage.

d. Renal failure.

e. Brain vasculitis

Q7: A 66 year old heavy smoker male, presents with few weeks history of headache, abnormal behavior, and hiccough. His wife stated that his cough is becoming worse, and his sputum is now routinely streaked with blood. Examination revealed features of COPD, finger clubbing, grade 4 plus right sided pyramidal weakness, exaggerated reflexes, and bilateral upgoing toes. Both eye fundoscopic examinations revealed the picture below.

![Fundoscope Image]

1) What does the fundoscope reveal?

a. Proliferative diabetic retinopathy.

b. Grade 2 hypertensive changes.

c. Old choroiditis.

d. Choroidal melanoma

e. Optic nerve head swelling
2) Choose 2 investigations that you don’t need in this patient?

a. Chest CT scan
b. Brain MRI
c. CBC
d. ANA
e. Renal biopsy
f. Sputum cytology
g. Bronchoscope.
h. Brain CT scan
i. Plain Chest X ray.
j. FEV1

3) During his hospitalization period, he developed a sudden severe back pain in the mid-dorsal spine with severe weakness in both lower limbs and urinary retention.

Which is the likely cause of this complication?

a. Familial periodic paralysis.
b. Pathological dorsal vertebral fracture.
c. Tuberculous spinal discitis.
d. Bilateral sacroiliitis.
e. Bilateral psoas abscesses
Q8: A 16 year old female presents with intractable seizures. The seizure starts in her left hand, progresses rapidly to involve the whole left upper limb and then culminating into generalized jerking movements and loss of consciousness. Her face is shown below.

1) What is the diagnosis?
   a. Sturge Weber syndrome.
   b. Neurofibromatosis type I.
   c. Usher's syndrome.
   d. Rasmussen encephalitis.
   e. von Hippel Lindau disease.

2) Which one the following eye condition might be associated?
   a. Acute anterior uveitis.
   b. Chronic keratitis.
   c. Glaucoma.
   d. Eyelid melanoma.
   e. Enophthalmous.
3) What is her chance of having an affected sibling?
   a. Zero percent.
   b. 25%
   c. 50%
   d. 100%
   e. 75%

4) During her way of undergoing investigations, she developed sudden clouding of vision in her right eye. This can be ascribed to:
   a. Complex partial seizures.
   b. A bleeding choroidal angioma.
   c. Right lens dislocation.
   d. Hyperglycemic swelling of the right lens.
   e. Optic nerve infarction.

Q9: This fundoscopic picture is from a 71 year old man with a large skull and a bowed right tibia and femur.

1) What does it show?
a. Secondary optic atrophy.
b. Angiod streaks.
c. Anterior ischemic optic neuropathy.
d. Optic nerve head drusen.
e. Bergmeister's papilla.

2) This finding can also be characteristically seen in:

a. Pseudoxanthoma elasticum.
b. Hypertensive retinopathy.
c. COPD
d. Adult polycystic kidney
e. Bacterial endocarditis.

3) Regarding its effect on vision, which one of the following statements is true?

a. Can cause severe tubal vision.
b. It is the precursor of retinitis pigmentosa.
c. It is totally asymptomatic in 30% of cases.
d. Usually associated with acute glaucoma in the majority of cases.
e. If left untreated, can produce severe secondary optic atrophy.
Q10: A 30 year old man married since 5 years, presents with distal weakness of both hands. He had difficulty in swallowing to both solids and liquids, and is being investigated for infertility also. You noticed a long lean face, with bilateral partial ptosis but without frontalis overaction. His fasting blood sugar was 170 mg / dl on 2 occasions. A close look at his eye revealed this abnormality.

1) Which one of the followings would fit his clinical picture?
   b. Motor neuron disease.
   c. Multiple sclerosis.
   d. Polymyositis.
   e. Myotonia dystrophica.

2) What does the presence of absent frontalis over-activity indicate?
   a. Severe bulbar weakness.
   b. Myopathic cause of ptosis rather than neuropathic.
   c. Neuropathic cause of ptosis rather than myopathic.
   d. Does not indicate anything.
   e. Malingering.
3) His swallowing difficulty is ascribed to:

a. Post-cricoid tumor.

b. Brain stem stroke.

c. Myotonia of pharyngeal and upper esophageal muscles.

d. Myasthenia gravis.

e. Lower esophageal rings.

4) He is infertile because?

a. He is too weak to practice sex.

b. He has testicular atrophy.

c. He is depressed and avoiding sex.

d. He is homosexual.

e. He has sex phobia.

Q11: A 30 year old woman with a diagnosis of SLE since 3 years comes to see you. She was given certain medication from that time. She is fully compliant with that medication, although having infrequent relapses. Recently she reported some impairment in her vision.

This is her right fundus:
1) What is the retinal condition she is having?

a. Retinal vasculitis.

b. Vitreous hemorrhage.

c. Chloroquin retinopathy.

d. Age related macular degeneration.

e. Retinal hemorrhages due to methotrexate toxicity.

2) What is your next step?

a. Start iv methyl predisolon 1 g / day for 3 days.

b. Start iv cyclophosphamide 1 gm once.

c. Stop her daily medication.

d. Add Colchicine to her daily medication.

e. Add cyclosporine to her daily medication.

Q12: A 50 year old heavy alcoholic man, presents with an agitated confusional state. His friend said that his illness started as severe upper abdominal pain and vomiting. Examination reveals a blood pressure of 70 / 40 mm Hg and pulse rate of 130 beats per minutes regular. His oxygen saturation is 81%. He is jaundiced, short of breath and with his flank ecchymosed. His serum amylase was very high. His fundus is having this picture.
1) All of the followings might be responsible for his agitated confusional state, except 2:

a. Adult respiratory distress syndrome.

b. Severe hypotension.

c. Acute pre-renal failure.

d. Subdural hematoma.

e. Hypoglycemia

f. Hepatic encephalopathy.

g. A prolonged post-ictal phase.

h. Hypokalemia.

i. Brain stem listeria meningo-encephalitis.

g. Hyperkalemia.

2) In the context of his severe abdominal pain, vomiting, ecchymosed flanks, and the very high serum amylase, what is the name of his abnormal fundal appearance?

a. Cholesterol embolization.

b. Purcher's retinopathy.

c. Roth's spots.

d. Retinitis pigmentosa.

e. Cherry red spots.
Q13: You have been asked to examine the fundus of this 10 year old boy with poor vision. This is his fundus:

1) What is your first impression?
   a. This is a cupping of the optic disc seen in glaucoma.
   b. This is proliferative diabetic retinopathy on the disc.
   c. This is the aftermath of an old central retinal artery occlusion.
   d. This is a severe optic nerve head drusen.
   e. This is a normal optic disc.

2) His vision is poor since long time, having a superior visual field defect, and he is on no medications. His intra-ocular pressure is normal. What is your impression now?
   a. Normal tension glaucoma.
   b. Severe posterior uveitis.
   c. Early primary optic atrophy.
   d. Severe old toxoplasma choroiditis.
   e. Morning glory anomaly.

3) The child’s visual field defect is static since long time. You’ve been told to look carefully at his iris at the same side and you found this:
What is your final diagnosis now?

a. Severe proliferative diabetic retinopathy with rubeosis iridis.

b. Severe normal tension glaucoma with an old laser iridotomy.

c. Severe old central retinal artery occlusion with iris hamartoma.

d. Coloboma of the optic nerve head and iris.

e. Primary optic atrophy with iris Lisch nodules.

Q14: You have been asked to see this funny looking fundus. Your colleague said that this old patient is complaining of impairment of his visual acuity since some time and is not corrected by lenses:
What is your diagnosis?

a. Choroidal melanoma.
b. Macular hole.
c. Normal looking fundus.
d. Age related dry macular degeneration.
e. Macular star.

Q15: A 20 year old typewriter woman presents with 4 months history of disabling shaking movements in both hands that interfere with her job. She has low mood and early morning insomnia. Examination revealed a resting tremor with prominent postural and a mild intention components. She had an episode of hepatitis virus negative acute hepatitis before 1 year. She is on no medications, and no family history of similar problem. Her lab investigations revealed:

Serum Na 137
Serum K 2.8
Serum HCO3 15
Serum Cl 115
Blood urea nitrogen 15 mg/ dl, serum creatinin 1.1 mg/ dl

1) What does serum electrolytes imply?

a. Renal tubular acidosis.
b. Acute aspirin poisoning.
c. Chronic renal failure.
d. Chronic obstructive uropathy.
e. Normal findings.
2) Slit lamb examination revealed the following picture:

![Eye Image]

What does it show?

a. Mature cataract.

b. Ectopia lentis.

c. Hyphemia.

d. Lisch nodules.

e. Kayser Fleisher ring.

3) What is your diagnosis?

a. Neurofibromatosis type I.

b. Marfan's syndrome.

c. Traumatic iridoplegia.

d. Wilson's disease.

e. Myotonia dystrophica.
4) Which one of the followings is against your diagnosis if detected clinically?
   a. Blue lunulae.
   b. Jaundice.
   c. Axillary freckling.
   d. Spider naevi
   e. Pallor.

5) The presence of which one of the followings would cast a doubt on your diagnosis?
   a. Dysarthria.
   b. Wing beating tremor.
   c. Bilateral upgoing toes.
   d. Facial dystonias.
   e. Axial dystonia.

Q16: A 10 year old girl was brought to you, having a funny look while talking which causes an extreme embarrassment. Her past medical history is totally unremarkable.

1) Your first impression upon inspecting the face:
a. There is left sided lower motor neuron facial palsy.

b. There is right sided mild partial ptosis.

c. There are old zoster lesions in both sides of the forehead.

d. Bilateral nasal polypi.

e. Lip swelling due to angiodema.

2) During cranial nerve examination, you asked her to open her mouth and you saw this:

![Image of patient with opened mouth]

What is your diagnosis?

a. Crocodile tears.

b. Marcus Gunn jaw winking syndrome.

c. 3rd nerve misdirection syndrome.

d. Right sided tongue atrophy.

e. Palatal palsy.
Q17: A 37 year old man presented with a double vision. His girl friend stated that his neck seems to be in spasm as he is always tilting his head towards the left side like this:

He denied any pain or spasm in his neck muscles. Your colleague who is sitting beside you told him to tilt his head towards the right side, and you noticed something:

1) What did you notice?

a. Dropping of the left eye brow.

b. Dropping of the right upper eye lid.

c. Contraction of the frontalis muscles.

d. Slight elevation of the right pupil.

e. Excessive tearing.
2) What is the name of this positive sign upon head titling?
   a. Beilschowsky sign.
   b. Rossalimo’ sign.
   c. Hoffman's sign.
   d. Mayer's sign.
   e. Romberg's sign.

3) After this head titling, what question would you ask him?
   a. Do you feel any pain in your neck?
   b. Does your double vision become worse?
   c. Did you feel any drowsiness?
   d. Do you see any flashes of lights?
   e. Did you develop palpitations?

4) You asked him to look downward and to the left. What is your diagnosis?
   a. Left sided abducens palsy.
   b. Right sided internuclear ophthalmoplegia.
   c. Right sided superior oblique overaction.
   d. Right sided superior oblique palsy.
   e. Left sided gaze paresis.
Q18: This is the eye fundal picture of 64 year old man.

1) What is your diagnosis?
   a. Central retinal vein thrombosis.
   b. Grade IV hypertensive retinopathy.
   c. Advanced retinitis pigmentosa.
   d. Pre-proliferative diabetic retinopathy.
   e. Age related wet macular degeneration.

2) The presence of which one of the followings is compatible with your diagnosis?
   a. Cupper wiring.
   b. Morning glory anomaly.
   c. Bull's eye maculopathy.
   d. Venous loops.
   e. Tufts of blood vessels on the disc.
3) **What is your next step?**

a. Reassure him and ask him for frequent visits.

b. Start mycophenolate mofetil.

c. Refer him to neurosurgery.

d. Refer him to an ophthalmologist.

e. Look for evidence of renal failure.

Q19: A 27 year old woman presented with a 2 months history of early morning pain and stiffness in her hands, wrists and feet that lasts for at least 3 hours and then becomes better. She has small palpable nodules at the back of her forearms. Her rheumatoid factor is positive at a high titer. Plain X ray of the hand revealed periarticular osteoporosis and marginal erosions. She has seropositive rheumatoid arthritis. She is now receiving sulphasalazine and methotrexate.

1) She is having pins and needles in both feet since 2 weeks. Her ankle jerks are lost. **What is the cause of this presentation?**

a. Mononeuritis simplex of the left posterior tibial nerve.

b. Entrapment neuropathy of the right common peroneal nerve.

c. Peripheral sensori-motor neuropathy.

d. Mononeuritis multiplex of median and ulnar nerves.

e. Atlantoaxial subluxation.
2) After 2 months, she presented with a sudden diplopia, and eye inspection revealed this picture:

What is your response?

a. Her diplopia is not caused by this eye condition.

b. Her diplopia is likely caused by entrapment of the 3rd cranial nerve in the eye.

c. Her diplopia is unrelated to the sensory complaints in her feet.

d. Her diplopia is likely to be associated with cauda equina disease.

e. Her diplopia is usually irreversible.

Q20: A 20 year old man sustained a road traffic accident before 6 months with a blunt head injury, and he make an uneventful recovery at that time. Now he is presenting with a buzzy noise in his head. Look at his eye:
1) What do you think he is having?
   a. Superior sagittal sinus thrombosis.
   b. Carotico-cavernous fistula.
   c. Orbital pseudotumor.
   d. Tolosa Hunt syndrome.
   e. Ophthalmic artery aneurysm.

2) What do expect to see upon doing fundoscope?
   a. Macular star.
   b. Attenuation of the retinal vascularity.
   c. Deep cupping of the optic nerve head.
   d. Optic nerve head swelling.
   e. Temporal disc pallor.

3) What is your next step?
   a. Reassure him that this is a self limited event.
   b. Give high dose steroids.
   c. Measure the CSF opening pressure.
   d. Order a conventional angiography of both carotids.
   e. Start anti-TB medications.

End of Questions….please see answers below.
The constellation of ataxia (cerebellar and ataxic hypertrophic peripheral neuropathy), sensory neural deafness, retinitis pigmentosa, ichthyosis, and palpable peripheral nerves are highly suggestive of Refsum's disease, due to abnormal phytanic acid accumulation in tissues. Retinitis pigmentosa is almost always the presenting feature, cardiac dysrhythmias might be seen, and the CSF should be totally normal apart from raised protein. The progression of systemic and ocular findings may be slowed or even arrested by advising a phytanic acid free diet, and plasma exchange has been shown to be of benefit in this regard.

"Leopard Skin" retina is one of the earliest features of pseudo-xanthoma elasticum. Alpha galactosidase enzyme replacement therapy is given in Gaucher's disease.

Q2: Answer:

b

This case clearly illustrates the presence of co-existent unrelated findings. She is having a normal pressure hydrocephalus as evidenced by her clinical picture and brain imaging study. Old choroiditis may be encountered frequently if your are performing fundoscopic examination for every patient, and may confuse the clinical picture, and may truly have an association with current presentation; but with out keeping the possibility of a coexistent unrelated pathology, you may subject the patient to unnecessary investigations, besides making a wrong diagnosis.

Q3: Answers:

1) c
2) a
3) b
The overall picture is of a cardioembolic stroke in an old diabetic man with longstanding diabetes and asymptomatic proliferative retinopathy. Notice the tufts of blood vessels on the disc and its surroundings; the absence of visual symptoms prior to his stroke is not against this picture, because proliferative retinopathy can be totally asymptomatic until a devastating event occurs like a vitreous hemorrhage causing a profound visual impairment. The presence of such a large infarcted area with a mass effect and midline shift would make r-TPA use out of question, and anticoagulation use would be very risky, because of the high risk of hemorrhagic transformation. Giving a low dose aspirin, and waiting for 1-2 weeks before starting warfarin would be a reasonable option for the time being. This case illustrates one of the commonest daily dilemmas in clinical neurology of whether or not starting anticoagulation in some one with a high risk of subsequent cerebral embolic events.

Q4: Answers:
1) c
2) b
3) d

This case illustrates one of the modes of presentations of type 2 diabetes mellitus. There is a peripheral sensori-motor (predominantly sensory) neuropathy in an old man with no other complaints; the typical fundal appearance of backgroun diabetic retinopathy had suggested the cause of his presentation. Ordering a fasting blood sugar and giving amitryptilin for his pins and needles would be a reasonable next step. Remember that type 2 diabetes may be "silent" for many years and might present with one of its complications.

Q5: Answers:
1) d
2) c
3) d
4) c
5) d
This long term rheumatoid arthritis patient is having episcleritis (which is mildly symptomatic, unlike scleritis), "hand deformity", neck pain, and upper motor neuron signs in the lower limbs suggesting cervical cord compression secondary to atlanto-axial or subaxial cervical vertebral subluxation. Full extension and flexion lateral plain X ray films would dangerous here because the cervical spine seems to be unstable with signs of cord compression. He should undergo an urgent MRI of the cervical spine, and be referred for a cervical spinal fixation surgery and decopression.

Q6: Answers:
1) c
2) b, e
3) b
4) b

The overall picture is of headache, dizziness, recurrent nasal bleeds, and central retinal thrombosis with a high ESR, anemia, normal serum calcium and blood urea nitrogen, hepatosplenomegally and pallor; Waldenstroms macroglobulinema would fit the above scenario, and it is worthy to perform serum protein electrophoresis and a bone marrow study; besides checking the plasma viscosity would be reasonable. His headache, dizziness, epistaxis, and central retinal vein thrombosis are likely caused by his high serum paraprotein and high plasma viscosity.

Q7: Answers:
1) e
2) d, e
3) b

He is a heavy smoker, with increasing cough, hemoptysis, and having clubbing. All of these are pointing to a possible bronchogenic carcinoma. His Altered mentation, right sided pyramidal signs, and upgoing toes with bilateral disc swellings (papilloedema) all are pointing to intracranial metastasis. All of the listed investigations are useful in assessing his overall picture. The sudden onset back pain with paraparesis and sphincteric dysfunction are suggestive of metastatic dorsal spine vertebral fracture with secondary compressive myelopathy.
Q8: Answers:
1) a
2) c
3) a
4) b

She has Sturge Weber syndrome, which is sporadic, not inherited. Notice the "portwine" stain over her right side of the face, with apparent overgrowth of tissues. She might have glaucoma, buphthalmous, choroidal angioma (30%) that might bleed, and optic atrophy.

Q9: Answers:
1) b
2) a
3) c

Notice the dark grey streaks with irregular edges that seem to be underlying the retina. These are due to breaks in the Bruch's membrane of the retina. It is symptomless in 30% of cases; however 70% are having reduction in the visual acuity due to involvement of the fovea by the streaks per se, a choroidal rupture, or a hemorrhagic detachment of the fovea, or choroidal neovascularization and its complications. It is seen in Paget's disease of the bone, sickle cell disease, Ehler Danlons syndrome, and pseudoaxanthoma elasticum. Up to 50% of angiod streaks are idiopathic.

Q10: Answers:
1) e
2) b
3) c
4) b
Only myotonia dystrophica would fit the above scenario. In any case of ptosis you should look for frontalis overaction, which if not present, usually indicates a myopathic cause of ptosis. Dysphagia (and even dysarthria) might be seen due to myotonia of tongue, pharyngeal, and upper esophageal muscles. Testicular atrophy may be seen causing infertility. Notice that he is also diabetic.

Q11: Answer:
1) c
2) c

The history of SLE, being on regular treatment for it, and the typical bull's eye maculopathy, all are consistent with chloroquin retinopathy. She should stop its intake and regular follow up is indicated. Notice that chloroquin retinopathy is both dose dependant and duration dependant. Hydroxychloroquin is said to have a much lower risk of this complication. All patients on these medications should have a regular ophthalmologic follow up, including visual acuity.

Q12: Answers:
1) h, g
2) b

This heavily alcoholic man is presenting with an agitated confusional state, and although his clinical picture is suggestive of a severe hemorrhagic pancreatitis, all other options in question 1 must be looked for carefully and treated accordingly if present; alcoholic persons are liable for confusion for long listed reasons. His retina is showing Purtcher's retinopathy, which is seen in acute pancreatitis cases.

Q13: Answers:
1) a
2) a
3) d
Optic nerve head coloboma, usually seen in association with colobomas of the iris, ciliary body, and choroid, is a rare condition resulting from incomplete closure of the fetal fissures. Most are sporadic, 50% are unilateral, might have systemic associations like chromosomal anomalies (Patau's, Eduard's, and Cat eye syndrome). The visual acuity is often decreased, and a superior visual field defect together with this fundal appearance and normal IOP might be easily mistaken for normal tension glaucoma. Apart from other colobomas in the eye, it may be associated with microphthalmos and retinal detachment.

Q14: Answer: b

This is the typical appearance of a macular hole. This can be idiopathic, or associated with blunt trauma, solar retinopathy, and high myopia. It is frequently unilateral resulting from spontaneous, often abrupt, contraction of the perifoveal vitreous cortex that elevates the retinal in the foveolar region.

Q15: Answers:

1) a
2) e
3) d
4) c
5) c

This case highlights the presence of 3 types of tremors with depression in one patient, with renal tubular acidosis, and KF ring. Only Wilson's disease would cover all of these. Notice that the presence of prominent upper motor neuron signs is against the diagnosis of Wilson's disease.

Q16: Answers:

1) b
2) b

This girl has Marcus Gunn Jaw winking syndrome; Notice the mild right sided partial ptosis in the primary position of gaze, and the prominent right upper lid retraction upon mouth opening ie retraction of the ptotic lid upon stimulation of the ipsilateral pterygoid muscles; it can be easily confused with an old facial palsy and facial synkinesis.
Q17: Answers:

1) d
2) a
3) b
4) d

This acquired head tilting, with positive Beilschowsky sign (ie slight elevation of the pupil upon tilting the head towards the ipsilateral side), with an increase in double vision, is highly characteristic of 4th cranial nerve palsy causing weakness of superior oblique muscle. He has right sided 4th cranial nerve palsy.

Q18: Answers:

1) d
2) d
3) d

This is the classical pre-proliferative diabetic retinopathy. Apart from multiple large blot hemorrhages and cotton wool spots, others features of this stage are: Venous beadings and loops, arterial sheathing, and atrophic looking retina. Notice that this stage indicates neovascularization is an imminent yet a potentially preventable event, and you should refer him to an ophthalmologist.

Q19: Answers:

1) c
2) a

This seropositive rheumatoid arthritis patient is receiving inadequate treatment as evidenced by the development of 2 neurological complications. The peripheral sensori-motor neuropathy, and the mononeuritis simplex affecting one of the orbital motor cranial nerves causing diplopia. She has also a nodular scleritis. She should receive more aggressive treatment.

Q20: Answers:
1) b
2) d
3) d

He is having a post traumatic carotico-cavernous fistula. Notice the prominent proptosis and engorgement of the globe vessels. There is papillodema and engorgement of the retinal vessels. Angiography will confirm the diagnosis.

End....