Glomerulonephritis & nephrotic & nephritic syndrome

MCQs

- 18 year old patient presents with periorbital edema, tea coloured urine, with past history of sore throat 3 week ago, the most likely diagnosis is?

Select one:
a. Nephritic syndrome
b. UTI
c. Acute tubulointerstitial nephritis
d. Minimal change glomerulonephritis
e. Post streptococcal glomerulonephritis

- Patient come with loin pain & fever and costovertebral angle tenderness what's your diagnosis :

A. Pyelonephritis
B. kidney stones
C. Nephrotic syndrome
D. Nephriticsyndrome

- signs and symptoms of glomerulnephritis after upper respiratory tract infection,on histopathology of biopsy what is the finding :

IgA nephritis

- In kidney biopsy, linear deposits of IgG were found along basement membrane, diagnosis is:

A. Good pasture's syndrome

- A 25-year-old man has a renal biopsy due to worsening renal function. This reveals linear IgG deposits along the basement membrane. What is the most likelydiagnosis?

A. Systemic lupus erythematous
B. IgA nephropathy
C. Minimal change disease
D. Post-streptococcal glomerulonephritis
E. Goodpasture's syndrome

- one of the following types of glomerulonephritis is most characteristically associated with Goodpasture's syndrome?

A. Diffuse proliferative glomerulonephritis
B. Mesangiocapillary glomerulonephritis
C. Membranous glomerulonephritis
D. Rapidly progressive glomerulonephritis
E. Focal segmental glomerulosclerosis

- case male with URTI infection and gastroenteritis o sar 3ndu hematuria.. Etc i guess

IgA nephritis

- Which one of the following causes of glomerulonephritis is associated withnormal complement levels?

A. Post-streptococcal glomerulonephritis
B. Mesangiocapillary glomerulonephritis
C. Subacute bacterial endocarditis
D. Goodpasture's syndrome
E. Systemic lupus erythematous

- 27- year-old man is diagnosed with Goodpasture's syndrome. Which one of the following does not increase the likelihood of a pulmonary haemorrhage?

A. Smoking
B. Inhalation of hydrocarbons
C. Male gender
D. Dehydration
E. Lower respiratory tract infection

- In Goodpasture syndrome ; anti-glomerular basement membrane (anti-GBM) antibodies are directed against which type of collagen?

A. Type I collagen
B. Type II collagen
C. Type III collagen
D. Type IV collagen
E. Type VI collagen

- which one of the following is least associated with minimal change glomerulonephritis?

A. Hodgkin's lymphoma
B. Goodpasture's syndrome
C. Thymoma
D. Non-steroidal anti-inflammatory drugs
E. Gold therapy

Goodpasture's syndrome is associated with rapidly progressive glomerulonephritis

- A 42-year-old female comes with 2 weeks history of épistaxis and hemoptysis. Urine analysis showed +2 proteinuria and RBC casts. Her PR3 ANCA is highly positive.The most likely diagnosis is:

Select one:
a. Granulomatosis and polyangiitis.
b. Polyarteritis nodosa.
c. Henock-Schonlein purpura. d. Good-pasteur syndrome
e. SLE

- Which one of the following types of glomerulonephritis is mostcharacteristically associated with streptococcal infection in children?

A. Focal segmental glomerulosclerosis
B. Diffuse proliferative glomerulonephritis ?
C. Membranous glomerulonephritis
D. Mesangiocapillary glomerulonephritis
E. Rapidly progressive glomerulonephritis

- A 45-year-old male patient presents with painless gross hematuria. He reports an URTI 2 weeks earlier. He reports a similar episode 2 years ago. BP is 130/75. Urine analysis shows RBC casts with +2 proteinuria. Creatinine is normal. IgA level is elevated. The most likely diagnosis is:

Select one:
a. Interstitial.epi..itis.
b. post-strep ococcal glomerulonephritis.
c. Urinary bladder malignancy.
d. Uretreic stones.
e. IgA nephropathy.

- signs and symptoms of glomerulnephritis after upper respiratory tract infection,on histopathology of biopsy what is the finding :

IgA nephritis

- Normal serum complement levels would be seen in patients with hematuria, abdominal pain, and hypertension resulting from which of the following ?

a. Mixed essential cryoglobulinemia
b. Hepatitis c associated membranoproliferative glomerulonephritis
c. Diffuse proliferative lupus nephritis
d. Henoch schonlein purpura
e. Post streptococcal glomerulonephritis

- 10- year-old boy is taken to see the GP by his mother. For the past two days he has had a sore throat associated with blood in his urine. There is no significant pastmedical history. The GP suspects glomerulonephritis and refers the patient to hospital. What would a renal biopsy most likely show?

A. Proliferation of endothelial cells
B. No change
C. Mesangial hypercellularity
D. Basement membrane thickening
E. Capillary wall necrosis

This boy is likely to have IgA nephropathy. Histological features include mesangial hypercellularity and positive immunofluorescence for IgA & C3

- A 25-year-old woman, known to have systemic lupus erythematosus presents with edema of lower limbs. Laboratory studies showed proteinuria of 1.2 gm/24 hour. On examination she had BP 130/85 with mild pitting edema of lower limbs. Creatinine 0.9 mg/dl. Renal biopsy was arranged and showed: mesangial proliferative glomerulonephritis. The best treatment option for this patient is:

Select one:
a. Increase dose of Hydroxychloroquine
b. Intravenous diuretics alone.
c. Prednisolone 1mg/kg/day. ?
d. Mycophenolate mofetil.
e. Plasmapheresis.

- Most common type of lupus nephritis is:

A. Mesangial glomerulonephritis
B. Focal proliferative glomerulonephritis
C. Diffuse GN
D. Membranous GN

- All the following are recognized complications of Hepatitis C infection Except.

a- diffuse proliferative glomerilonephritis.
b- hepatocellular carcinoma
c- liver cirrhosis
d- chronic hepatitis C infection
e- cryoglobulinemia

- ONE of the following is LEAST common cause of Microscopical hematuria

a-Minimal change disease (lipoid nephrosis)
b-Membranous glomerulonephritis
c-Proliferative glomerulonephritis
d-Membranoproliferative glomerulonephritis
e-Lupus nephritis

- which one of the following types of glomerulonephritis is most characteristically associated with partial lipodystrophy?

A. Minimal change disease
B. Diffuse proliferative glomerulonephritis
C. Mesangiocapillary glomerulonephritis
D. Membranous glomerulonephritis
E. Rapidly progressive glomerulonephritis

Mesangiocapillary glomerulonephritis (membranoproliferative)
• type 1: cryoglobulinaemia, hepatitis C
• type 2: partial lipodystrophy

- Which one of the following types of glomerulonephritis is most characteristically associated with cryoglobulinaemia?

A. Rapidly progressive glomerulonephritis
B. Mesangiocapillary glomerulonephritis
C. Focal segmental glomerulosclerosis
D. IgA nephropathy
E. Diffuse proliferative glomerulonephritis

- one of the following types of glomerulonephritis is most characteristically associated with Wegener's granulomatosis?

A. Mesangiocapillary glomerulonephritis
B. Membranous glomerulonephritis
C. Rapidly progressive glomerulonephritis
D. Focal segmental glomerulosclerosis
E. Diffuse proliferative glomerulonephritis

Wegener granulomatosis - renamed as granulomatosis with polyangiitis is a small-medium vessel necrotizing vasculitis,

- Which one of the following is the most common type of SLE associated renal disease?

A. Class II: mesangial glomerulonephritis
B. Class III: focal (and segmental) proliferative glomerulonephritis
C. Class IV: diffuse proliferative glomerulonephritis
D. Class V: diffuse membranous glomerulonephritis
E. Class VI: sclerosing glomerulonephritis

- 14- year-old boy develops haematuria following an upper respiratory tract infection. What is the likely diagnosis?

A. IgA nephropathy
B. Focal segmental glomerulosclerosis
C. Diffuse proliferative glomerulonephritis
D. Rapidly progressive glomerulonephritis
E. Mesangiocapillary glomerulonephritis

- which one of the following statements regarding minimal change glomerulonephritis is incorrect?

A. Has a good prognosis
B. The majority of cases are steroid responsive
C. Is a common cause of nephrotic syndrome
D. Hypertension is found in approximately 50% of patients
E. Haematuria is rare

Hypertension and haematuria are rare in minimal change glomerulonephritis

- A 45-year-old male patient presents with painless gross hematuria. He reports an URTI 2 weeks earlier. He reports a similar episode 2 years ago. BP is 130/75. Urine analysis shows RBC casts with +2 proteinuria. Creatinine is normal. IgA level is elevated. The most likely diagnosis is:

Select one:
a. Interstitial.epi..itis.
b. post-strep ococcal glomerulonephritis.
c. Urinary bladder malignancy.
d. Uretreic stones.
e. IgA nephropathy.

- 15-year-old girl presents with complaints of discoloration of urine with reduced urine output for the previous 2-3 days, 1 week earlier she had a sore throat, examination reveals that her BP is 150/95, on urinalysis which of the following strongly supports the diagnosis of Glomerulonephritis

Select one:

a. RBC more than 5/HPF
b. Leucocytes more than 10/HPF
c. Presence of Dysmorphic RBCs
d. Proteinuria + on dipstick
e. Presence of Muddy brown casts

- A 40 year old women who has never had significant respiratory disease is hospitalized for hemoptysis. urinary reveals proteinuria and microscopic hematuria, serological findings include normal complement level and negative assay for fluorescent antinuclear antibodies, renal biopsy reveals granulomatous necrotizing vasculitis with scattered immunoglobulin and complement deposits, the most likely diagnosis in this case is ?

a. Mesangial lupus glomerulonephritis
b. Henoch schonlein purpura
c. Microscopic polyarteritis
d. Wegener granulomatosis
e. Goodpasture syndrome

- Normal serum complement levels would be seen in patients with hematuria, abdominal pain, and hypertension resulting from which of the following ?

a. Mixed essential cryoglobulinemia
b. Hepatitis c associated membranoproliferative glomerulonephritis
c. Diffuse proliferative lupus nephritis
d. Henoch schonlein purpura
e. Post streptococcal glomerulonephritis

- Causes glomerulosclerosis :

DM nephropathy

- One of the following doesn't cause secondary nephropathy ?

A. HSP
B. DM
C. congenital glomerulonephritis
D. NSAIDs
E. cryoglobulinemia

- **Patient was diagnosed with rapidly progressive glomerulosclerosis (RPGS), best initial managent:**

A. Prednisolone

TREATMENT — Untreated RPGN typically progresses to end-stage renal disease over a period of weeks to a few months. However, patients with fewer crescents may have a more protracted, not so rapidly progressive course [3].

Many of the older studies examining treatment in RPGN with pulse corticosteroids, cyclophosphamide, and plasmapheresis are difficult to interpret because they were performed at a time before it was possible to distinguish among the different types of RPGN. Nevertheless, these studies demonstrated that conventional doses of oral prednisone, given alone or in combination with azathioprine, usually had little beneficial effect [1].

As a result, the therapy of most patients with RPGN involves pulse methylprednisolone followed by daily oral prednisone, oral or intravenous cyclophosphamide, and, in some settings, plasmapheresis. Early diagnosis with renal biopsy and serologic testing and early initiation of appropriate therapy is essential to minimize the degree of irreversible renal injury.

Empiric therapy may be begun with the above modalities in patients with severe disease, particularly if either renal biopsy or interpretation of the biopsy will be delayed. Empiric initial therapy consists of intravenous pulse methylprednisolone (500 to 1000 mg/day for three days) and consideration of plasmapheresis, especially if the patient has hemoptysis. This regimen will not alter the histologic abnormalities observed with a renal biopsy that is performed soon after initiating empiric therapy.

- **Each of the glomerular lesions listed below can cause Nephrotic syndrome . Which of them may be found in all the following conditions : non – Hodgkins lymphoma , hepatitis B, hepatitis C , and infective endocarditis ?**

a) Focal and segmental glomerulosclerosis
b) Minimal change disease
c) Membranous nephropathy
d) Type I membranoproliferative glomerulonephritis (with subendothelial deposits)
e) Type II membranoproliferative glomerulonephritis (dense deposit disease)

- **A 10- year-old boy is taken to see the GP by his mother. For the past two days he has had a sore throat associated with blood in his urine. There is no significant pastmedical history. The GP suspects glomerulonephritis and refers the patient to hospital. What would a renal biopsy most likely show?**

A. Proliferation of endothelial cells
B. No change
C. Mesangial hypercellularity
D. Basement membrane thickening
E. Capillary wall necrosis

This boy is likely to have IgA nephropathy. Histological features include mesangial hypercellularity and positive immunofluorescence for IgA & C3

- 54- year-old woman with a history membranous glomerulonephritis secondary to systemic lupus erythematous is admitted to hospital. Her previous stable renal function has deteriorated rapidly. The following blood tests were obtained:

Na^+	139 mmol/l
K^+	5.8 mmol/l
Urea	44 mmol/l
Creatinine	867 µmol/l
Albumin	17 g/l
Urinary protein	14 g/24 hours
Urine dipstick	protein +++ blood ++

What has likely caused the sudden deterioration in renal function?
A. Exacerbation of SLE
B. Renal vein thrombosis
C. Bilateral hydronephrosis
D. Acute interstitial nephritis
E. Analgesic nephropathy

Nephrotic syndrome predisposes to thrombotic episodes, possibly due to loss of antithrombin III. These commonly occur in the renal veins and may be bilateral. Common symptoms include loin pain and haematuria

- A 6- year-old boy presents is diagnosed as having nephrotic syndrome. Apresumptive diagnosis of minimal change glomerulonephritis is made. What is the most appropriate treatment?
A. Cyclophosphamide
B. Supportive treatment as an inpatient
C. Plasma exchange
D. Renal biopsy followed by prednisolone
E. Prednisolone

- 45- year-old woman with nephrotic syndrome is noted to have marked loss of subcutaneous tissue from the face.

What is the most likely underlying cause of her renal disease?

A. Mesangiocapillary glomerulonephritis type II
B. Focal segmental glomerulosclerosis
C. Minimal change glomerulonephritis
D. Renal vein thrombosis
E. Membranous glomerulonephritis

Membranoproliferative glomerulonephritis (mesangiocapillary)
* type 1: cryoglobulinaemia, hepatitis C
* type 2: partial lipodystrophy
This patient has partial lipodystrophy which is associated with membranoproliferative glomerulonephritis type II

- Which one of the following is least recognised as a cause of membranous glomerulonephritis?

A. Streptococcal infection
B. Penicillamine
C. Hepatitis B
D. SLE
E. Lymphoma

- Which one of the following causes of glomerulonephritis is associated with low complement levels?

A. IgA nephropathy
B. Membranous glomerulonephritis
C. Minimal change disease
D. Post-streptococcal glomerulonephritis
E. Focal segmental glomerulosclerosis

- A 40 year old female known to have Membranous GN came to OPD with 24 hour protein 4 gm/24 hours , Cr 1.0 mg/dl , Urea 40 mg/dl . Her Bp 160/100 , she was started on Enalapril 20 mg 1x1 . The desirable Bp reading in such a lady should be :

a) 140/90
b) 130/85
c) 120/75
d) 130/80
e) 135/85

- Which of the following is true with respect to proteinuria?

a. All proteinuria is secondary to glomerular disease with 2 g/24 h mean nephrotic syndrome
b. Is always abnormal and indicative of serious renal disease
c. It may be normal for an individual to have <=150 mg per day of proteinuria
d. If a patient has 1.5 g of protein in 24 h they must have tubular-interstitial disease
e. Can be caused by prolonged fasting

- A65 year-old male with back pain, nephrotic syndrome and anemia present to the ER. Ultrasound shows normal kidney size.His creatinine is 500. Which diagnosis best fits the scenario?

a. Polycystic kidney disease
b. Chronic GN
c. Multiple myeloma
d. Diabetic nephropathy
e. Analgesic abuse

- Typical feature of the nephrotic syndrome include one of the following:

a) Bilateral renal angle pain
b) Generalized edema and periorbital edema
c) Hypoalbuminaemia and proteinuria & gt ;2g/day
d) Hypertension and polyuria
e) Elevated serum creatinine

- Wrong about nephrotic:

Answer: Cause of hyperlipidemia due to decrease loss of LDL and VLDL

Actually, in nephrotic syndrome, hyperlipidemia is often caused by increased hepatic synthesis of lipoproteins due to loss of plasma proteins, particularly albumin, rather than a decrease in loss of LDL and VLDL.

- which of these is not a primary cause of nephrotic syndrome ?

Amylodosis

The primary causes are usually conditions affecting the kidneys directly, such as minimal change disease, focal segmental glomerulosclerosis, membranous nephropathy, and membranoproliferative glomerulonephritis.

On of the following is true regarding to nephrotic syndrome
(increase HDL". decrease LDl ..derease lipoprotein .....glomerular basemt membrane injury)

- patient with Mutiple Myloma & nephrotic ;

membranoproliferative

- Wrong about nephrotic syndrome;

a. More than 2.5 gm is called nephr(i)tic range proteinuria
b. Range from 0.5-1.5 gm is more likely to be glomerular than tubular
c. Rnage >2.5 gm is most likely to be glomerular
d. ?
e. ?

Answer: A? The question could have a spelling mistake of "nephirit range" instaed of nephrotic range. Don't statements b & C contradict each other?

- All of the following are complications of nephrotic syndrome, except:

a. Hypercholestrolemia
b. Renal vein thrombosis
c. Recurrent infection
d. Polycythemia
e. ARF

- All the following are true about nephrotic syndrome Except:

a- dietary sodium restriction is initial treatment.
b- high protein diet (120-150 gram) daily is recommended ?
c- prolong bed rest should be avoided as thromboembolism is common.
d- Sepsis is the major cause of death
e- hyperlipdemia is responsible for increase risk of ischemic heart disease.

- Causes of nephrotic syndrome include all the following Except.

a) SLE
b) DM
c) Amyloidosis
d) Membranous glomerulionephritis
e) Autosomal-dominant polycystic kidney disease

- all are mechanisms of increase risk of infections in minimal lesion nephrotic syndrome , except:

a.Loss of immunoglobulin
b.Loss of Properdin factor B
c.Decreased perfusion of the spleen
d.Loss of opsonization factors
e.leukopenia

- Which one of the following is the most common cause of nephrotic syndrome in children?

A. Minimal change disease
B. IgA nephropathy
C. Focal segmental glomerulosclerosis
D. Chronic pyelonephritis
E. Infantile microcystic disease

- year-old man presents with nephrotic syndrome thought to be secondary to amyloidosis. A renal biopsy is taken. Which one of the following stains should be applied to the tissue?

A. Rose Bengal
B. Pearl's stain
C. Congo red
D. Periodic acid Schiff
E. Cresyl blue

- one of the following is a recognised complication of nephrotic syndrome, except:

A. Hyperlipidaemia
B. Acute renal failure
C. Increased risk of infection
D. Hypercalcaemia
E. Increased risk of thromboembolism

- A 45-year-old female with nephrotic syndrome develops renal vein thrombosis. What changes in patients with nephrotic syndrome predispose to the development of venous thromboembolism?

A. Reduced excretion of protein S
B. Loss of antithrombin III
C. Reduced excretion of protein C
D. Loss of fibrinogen
E. Reduced metabolism of vitamin K

- Which one of the following types of glomerulonephritis is associated with fusion of podocytes on electron microscopy?

A. Membranous glomerulonephritis
B. IgA nephropathy
C. Focal segmental glomerulosclerosis
D. Mesangiocapillary glomerulonephritis
E. Minimal change glomerulonephritis

- which one of the following is least associated with focal segmental glomerulosclerosis?

A. Alport's syndrome
B. Heroin
C. Sickle-cell anaemia
D. Sarcoidosis
E. HIV infection

Mini-OSCE

Q2

A female pt visited your clinic complaining of bilateral leg swelling & peri-orbital edema. She is a known case of DM which was controlled until 3 months ago. She developed HTN 3 months ago, but was not controlled even with 2 drugs. On examination she has mild respiratory distress & large edema in her legs.

A- What is your most likely Dx?

Nephrotic syndrome

B- Mention confirmatory test:

Urinalysis

Station 1

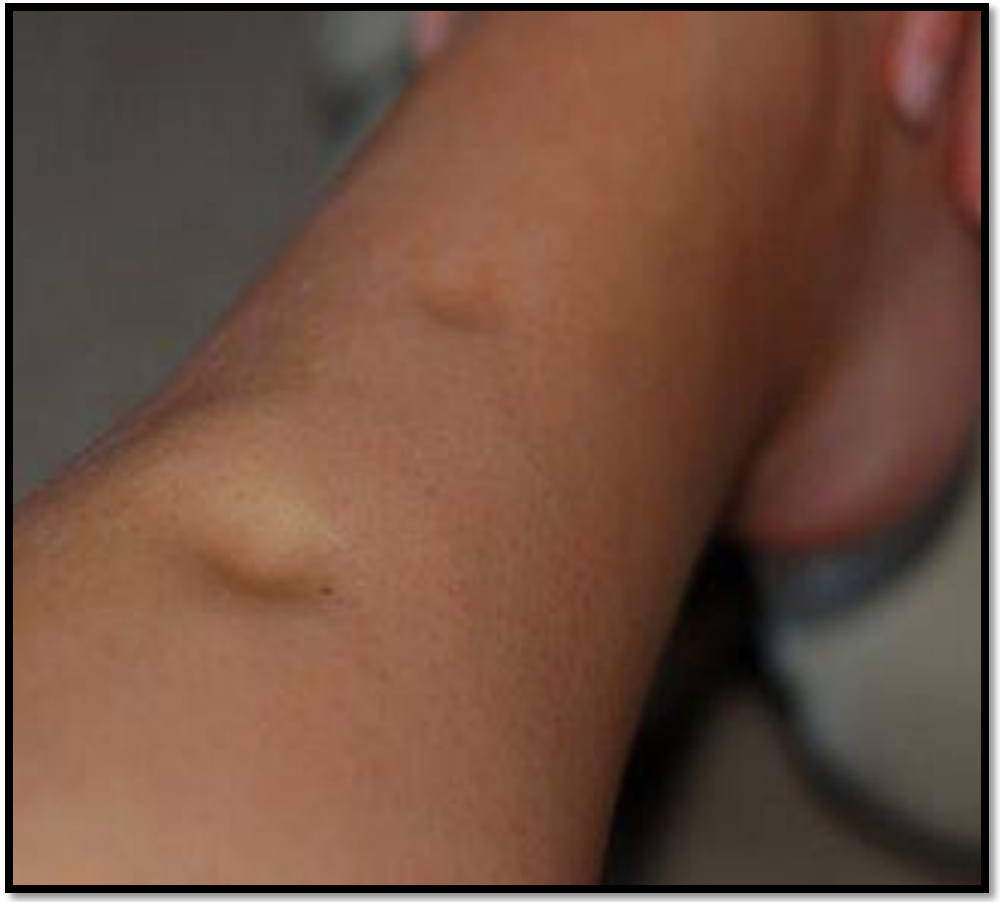
A 50-year old diabetic patient developed the following:

Q1 : what do you see

Pitting edema

Q2 : diagnosis

Diabetic Nephropathy (nephrotic syndrome)



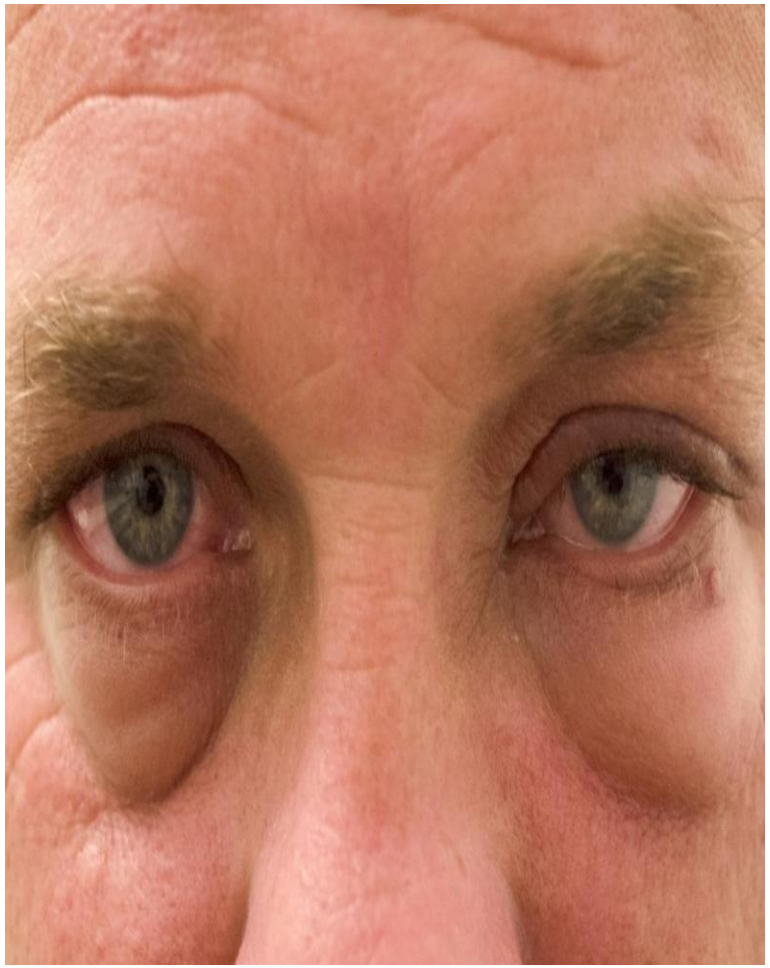
NEPHROLOGY SECTIONS

Q1 : Diabetic patient , wake up with this peri-orbital edema , what is your diagnosis ? And the most possible complication ?

- Nephrotic syndrome , DVT (Hyper-coagulable status)

The options were :

HF , acute renal failure , peripheral vascular disease



A 15 years old child present with periorbital edema

A case of nephrotic syndrome

Q1 \ how to diagnose?

1- 24 houre protein urine collection

2- serum albumin level & protein-albumin ratio

3- kidney function test

Q2 \ mention 3 physical finding could you seen in this patient?

1- ascites

2- lower limb edema

3- crackles in auscultation

Q3 \ mention one line of management?

Steroid

Q4 \ Mention 2 complication of the drug prescribed?

1- osteoporosis

2- cushing syndrome

3- immunsupression

Station 18

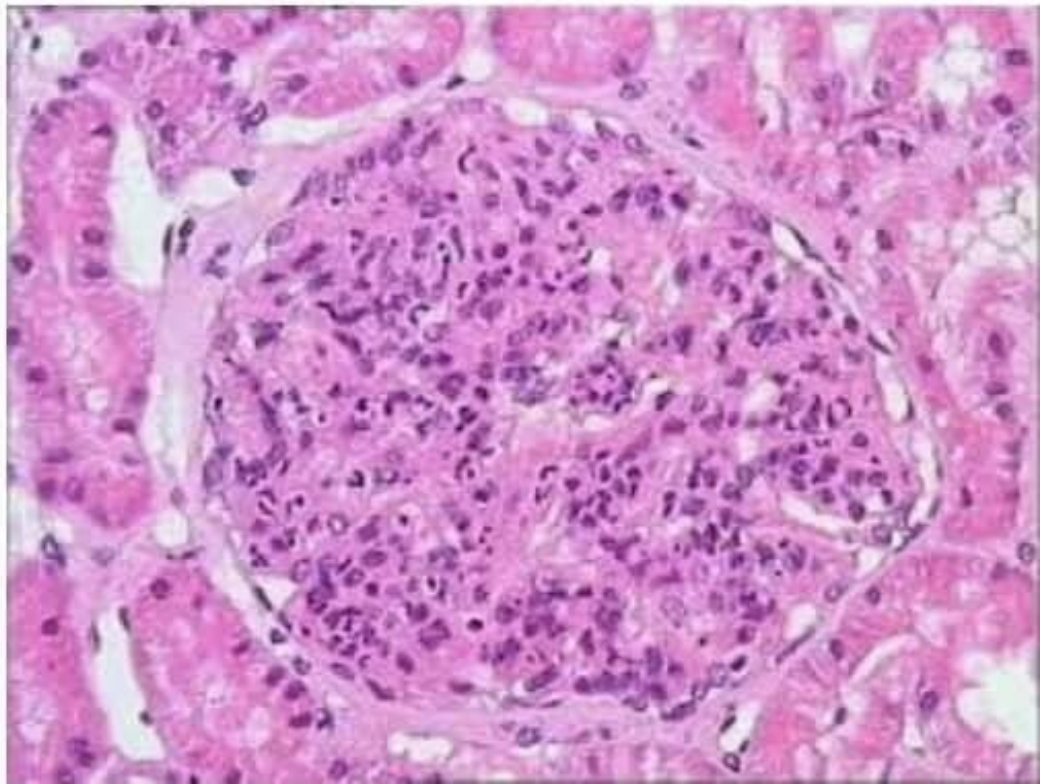
Q1 : Dx?

Diffuse proliferative GN

Q2 : mention 2 lines of Tx ?

1- methylprednisolone

2- mycophenolate



Q 3 , 4 , 5

Blood test result showing very high blood sugar and elevated Creatinine .

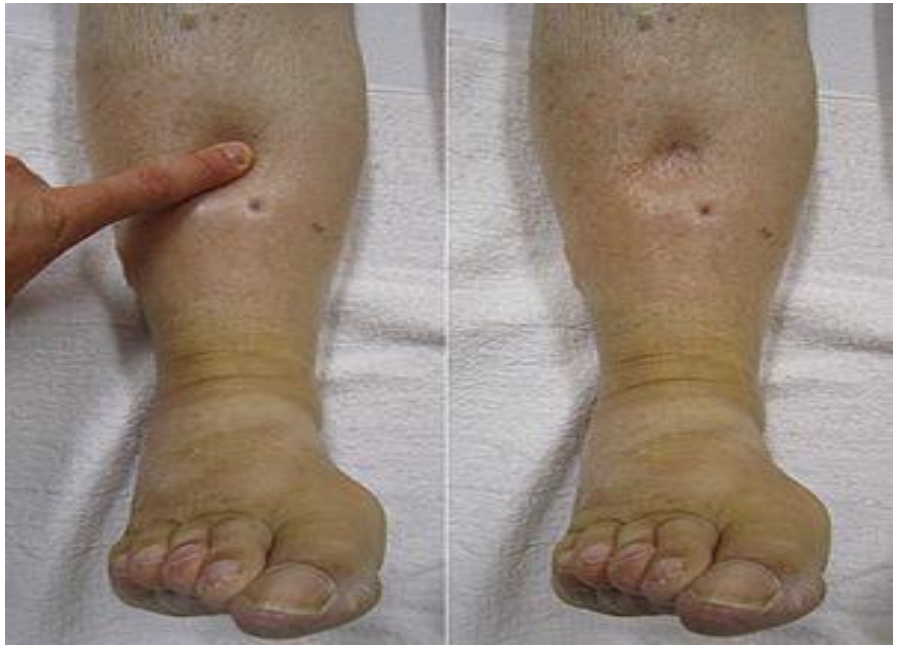
•What are abnormal findings in this test ?
Very high blood glucose and creatinine .

•What is the diagnosis ?
Diabetic nephropathy

•After 10 years the patient comes with this pic (1) , what is the diagnosis ?

•After 15 years the patient comes with this pic (2) , what is the diagnosis ? And what is the treatment ?
I guess nephrotic , control DM by hypoglycemic agent and insulin , fluid restriction , diuretics , steroid and albumin

pic (1)



pic (2)