**Acute Glomerulonephritis**

**Definition:**It is a syndrome which is characterized by inflammation in glomeruli which is manifested as hematuria, red cell cast in urine, oliguria, mild to moderate hypertension.

**Clinical or cardinal presentation of AGN:**

* Hematuria
* Proteinuria
* Hypotension
* Edema & generalized fluid retention
* Temporarily oliguria & uremia

**Histological/spectrum of AGN:**

1. Minimal change nephropathy
2. Focal segmental glomerulosclerosis
3. Membranous nephropathy
4. Amyloid
5. D.N (diabetic neuropathy)
6. Messing capillary glomerulonephritis
7. Post streptococcal glomeruli nephritis
8. Small vessel vasculitis
9. Anti GBM disease
10. IGA nephropathy
11. SLE

**Membranous nephropathy is common in adult**

**Causes of AGN:**

1. Post infections
2. Bacteria: group A β hemolytic streptococcus
3. Virus: Hepatitis B, C & HIV
4. Hemoglobin A Nephropathy
5. GN of unknown source:
6. Membranous proferative glomerulonephritis
7. Rapidly progressive glomerulonephritis
8. Collagen muscular disease

**Pathophysiology:**Acute glomerulonephritis (GN) comprises a specific set of renal diseases in which an immunologic mechanism triggers inflammation **and proliferation of glomerular tissue** that can result in damage to the basement membrane, mesangium, or capillary endothelium.

**Clinical Features:**

Symptoms:

* Low grade fever
* Lethargy
* Anorexia
* Nausea
* Vomiting
* Generalized body swelling
* Abdominal pain
* Standing micturition
* High colored urine

Sign:

* Edema
* Scratch mark in the skin
* BP increased
* Ascites

**Investigations:**

1. Urine analysis (RBC,RBC cast, Mild proteinuria)
2. CBC (polymorphonuclear lymphocytisis Normocytic normochromic anemia)
3. Serum CT level decreased
4. Evidence of streptococcal infection
5. Throat swab culture test
6. Renal biopsy may be required
7. Streptozine test

**Complications:**

1. Acute renal failure
2. Electrolyte & acid base disturbance
3. Hyperkalemia
4. Metabolic acidosis
5. Hypertensive encephalopathy
6. Left ventricular failure

**Treatment:**There is no specific treatment mainly supportive & symptomatic treatment

**Mild cases:**

1. Bed rest & careful monitoring of B.P
2. Potassium containing food restriction
3. Fluid & salt restriction
4. Diuretics may be given if edema is massive

**In severe cases:**

1. ARF: fluid restriction, protein restriction
2. Electrolyte acid base abnormality
3. Hyperkalemia:
4. 10 ml of 10% calcium gluconate over 10 weeks
5. Inhale β 2 antagonist
6. Glucose insulin infusion
7. Diuretics – frusemide
8. Hyponatremia: NACL solution
9. Metabolic acidosis: NAHCO3
10. Hypertensive encephalopathy

**Prevention:**

* Eat a healthy, unprocessed food.
* Manage high blood pressure with a low salt diet, exercise and medication.
* Prevent infections by practicing good hygiene and safe sex. Also avoid using needles for illegal drugs and tattoos.
* See a healthcare provider whenever you think you have an infection like strep throat.