Gout

- Inflammatory arthritis due to deposition of Monosodium urate monohydrate crystals due to ↑ Uric acid.

Causes:

1) Increased Intake:
   - Red meat, Anchovy, Organ Meat, Shellfish.
2) Increased Production.
   - Psoriasis, Glycogen storage disease, High fructose intake.
3) Decreased clearance:
   - Renal failure, Alcohol, lactic acidosis, lead toxicity.

Risk Factors & Epidemiology

- Obesity, Diabetes, Chemotherapy and radiotherapy. Metabolic syndrome.
- Men : Female = 5 : 1

Pathophysiology

Purines (In DNA & RNA)
↓ Break down
Uric acid
↓
Urate ions
↓ Binds to Na^+
Monosodium Urate Crystals.

- When ↑↑↑ Purine & Uric acid → Crystal formation

Clinical features

- Usually First MTP of Big Toe. (Podagra) other area like ankle, knee, small joints of hand, wrist.
- Rapid onset, reaching peak in few hours.
- "Worst pain ever".
- Extreme tenderness, cannot bear sock or bed.
- Red, shiny skin.
- Self limiting within 5-14 days.
- Tophi bodies
- Crystals may be deposited on the joints and soft tissues and produce irregular firm nodules called Tophi.
- Usually in extensor surface of fingers, hands. Forearm, Achilles Tendons.
- White in colour differentiating it from the Tophi & Rheumatoid Nodules.
- Tophi may ulcerate, discharging white gritty material which might get infected. with erythema and pus.
- It may also occur without any preceeding acute attacks.
- It may also Form Renal stones a complication

Investigations:

- Aspiration from the Joint or Tophi:
  - ↳ Acute → ↑ Neutrophils
    Chronic → White, due to urate crystals.
- ↑ Uric acid levels, > 7.0 mg/dL.
- ↑ ESR & CRP.
- X ray → Tophi Bodies.

Complications:

Chronic Gout → Arthritis, Tissue Destruction,
- Kidney stones, Urate Nephropathy.

Management:

- Avoid meat and other purine rich diet