Summary

The kidney is a common target for toxic antibiotics, due to its capacity to extract and concentrate toxic substances, and to its large blood flow share (about 20% of cardiac output)**.**

Several drugs can cause acute ARF including antibiotics, contrast media, antiviral agents, non-steroidal anti-inflammatory agents and anticancer agents.

Drug-induced kidney disease occurs primarily in patients with underlying risk factors. A number of factors enhance the vulnerability of the kidney to the nephrotoxic effects of drugs and toxins.

One, two or all three of the factor categories can act to promote various forms of renal injury. The main risk factors affect in DIN are genetic/hereditary susceptibility, occupational, environmental exposure, gender, race, nutrition, socio-economic status and age.

GIN occurs by a number of therapeutic agents have long been associated with the development of iatrogenic renal failure. in a study on 249 consecutive patients receiving aminoglycoside, reported that a significant deterioration in renal function, was detected in 31 of the 249 patients (12.4%).

The Strategies to prevent aminoglycoside-induced nephrotoxicity: select least nephrotoxic aminoglycoside, correct hypokalemia and hypomagnesaemia, avoid use if possible in high-risk patients, adjust dose for renal function, limit duration of therapy to 7-10 days, avoid concomitant

nephrotoxic medications, pharmacokinetically monitor drug levels and use once-daily aminoglycoside regimen.

CIN has gained increased attention in the clinical setting, particularly during cardiac intervention and also in many radiological procedure in which iodinated contrast media are used. There is good clinical evidence from well-controlled randomized studies that CIN is a common cause of acute renal dysfunction.

The Strategies to prevent CIN:

- Identification of patients at risk.
- Consideration of alternative imaging procedures without radiocontrast.
  Risk benefit assessment.
- Avoid nephrotoxic drugs as NSAIDs, ACEI or metfomin.
- Moitor creatinine for 5 days.
- The use of low- or nonionic agents rather than high-osmolar contrast material.
- The use of the smallest doses required.
- Dose adjustment to renal function.
- Oral N-AC 600-1200 mg twice daily two doses.
- Intravenous hydration with saline 1-2ml/kg/6-12hours before the use of CM.
- Vasodilators as: adenosine receptor antagonists, dopamine, ANP, endothelin receptor antagonists, calcium-channel blockers or Prostaglandins