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**DEPT: PHARMACOLOGY**

**MATRIC NO:17/MHS07/015**

**PHA306 ASS**

The drug used in treatment of uti that causes urine color ton turn brown is nitrofurantoin. It is bacteriostatic (slows or prevents growth) at 32ug/ml and bactericidal at 100ug/ml and higher. Its antibacterial activity is higher in acidic urine.it is active against e.coli and enterococci. Most species of proteus and pseudomonas and many species of Enterobacter and klebsiella are resistant.

**Mechanism of action**

Rapidly reduced in bacterial cell by flavoproteins (nitrofuran reductase) to multiple reactive intermediates that attack ribosomal proteins, DNA, respiration, pyruvate metabolism and other macromolecules within the bacterial cell, inhibiting protein synthesis**.**

**pharmacokinetics**

Nitrofurantoin is absorbed rapidly and completely from the GIT tract.

Antibacterial concentrations are not achieved in plasma following ingestion of recommended doses because the drug is rapidly eliminated.

Nitrofurantoin colors the urine brown.

It is not used for pregnant women, individuals with impaired renal function, children younger than one month of age.

It is not recommended for the treatment of pyelonephritis or prostatis.

**Adverse effects**

Gastrointestinal disturbances: these side effects include nausea, vomiting, and diarrhea.

Acute pneumonitis

Neurological problems such as headache, nystagmus, and polyneuropathies with demyelination may occur.

Hemolytic anemia.