Cotrimoxazole

Notes Med.com

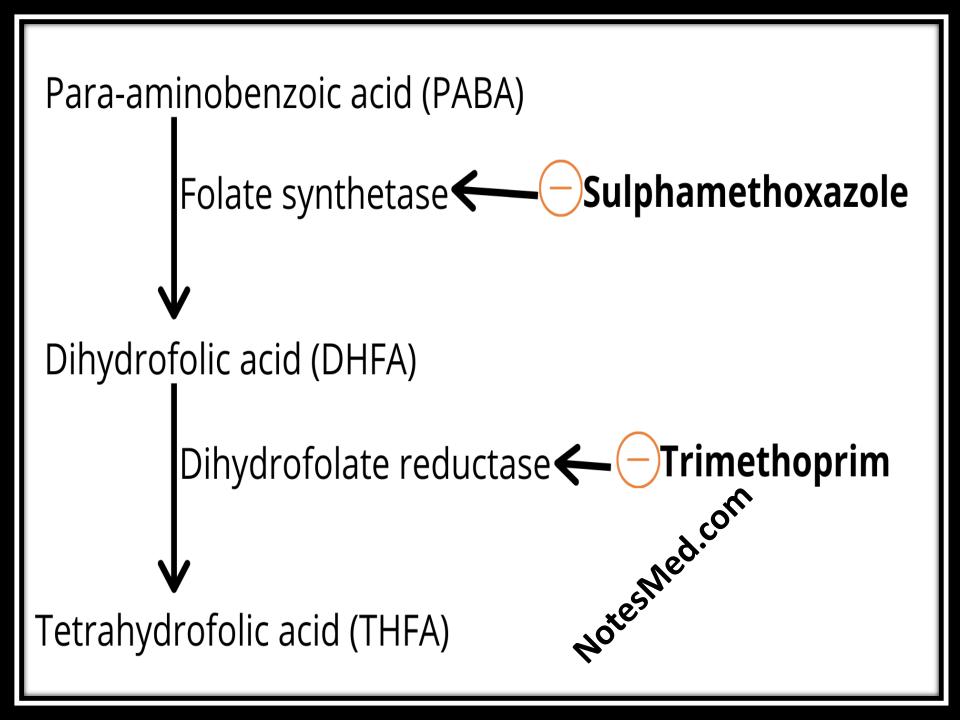
Cotrimoxazole

 WHO approved fixed-dose combination of sulphamethoxazole and trimethoprim in ratio of 5:1.

Notes Med.com

Mechanism of action

- Cotrimoxazole produces sequential blockade.
- Produces supra-additive effect.
- Two drugs interfere with two successive steps in the same metabolic pathway.
- Sulphamethoxazole inhibits folate synthetase.
- Trimethoprim inhibits dihydrofolate reductase enzyme.



Pharmacokinetics

- Similar half life
- Optimum synergistic effect in seen at a concentration ratio of (Sulphamethoxazole to Trimethoprim) 20:1 in blood and tissue.
- Well absorbed after oral administration
- Parental also use
- Widely distributed to the various tissues such as CSF and sputum.
- Metabolized in liver
- Excreted mainly in urine

Advantages of this combination

- Both are bacteriostatic but the combination has cidal effect
- Chances of development of bacterial resistance are also greatly reduced.

Notes Med.com

Adverse effects

- Well tolerated
- Skin rashes
- Gastrointestinal (GI) disturbance
- Exfoliative dermatitis
- Erythema multiforme
- Stevens-Johnson syndrome
- Nausea, vomiting, glossitis and stomatitis.
- Megaloblastic anemia
- Bone marrow supression with leukopaenia, neutropaenia and thrombocytopaenia
- Contraindication in pregnancy

Indications (@SEPTRAN D)

- STD's (Chancroid and LGV)
- Enteritis (E.coli, Shigella)
- Pneumocystis jiroveci infection
- Typhoid fever
- Bacterial Respiratory tract infections
- Acute uncomplicated lower urinary tract infection (UTIs)
- Nocardia
- Bacterial diarrhoeas