Antifungal Drugs

Fungal CM disruption: nysta and ampho-B
Ergosterol synthesis inhibition: Azoles and Allylamines
Glucan synthesis inhibition: Echinocandins
Nucleic Acid synthesis affectation: Flucytosine

Azole

Alyllamine

Polyene antibiotic

Flucytosine

Water soluble pyrimidine related to 5-Fu; narrower spectrum than Ampho-B.

MOA: Get rtansported inside fungal cell by CYTOSINE PERMEASE gets deaminated to 5-FU thus inhibiting DNA and RNA synthesis.

Oral and injection; >60% absorbed from the GIT; ^5-90% of plasma in CSF conc.; Can penetrate aqueous humour; 90% excreted unchanged in urine.

Therapeutically use for:bone marrow depression; rash; nausea,vomiting, diarrhea; severe enterocolitis; cryptococcal meningitis (Always +Ampho-b)

Echinocandins

Caspofungin

MOA: Inhibits synthesis of 1-3 B glucan (glucose polymer) used in maintaning fungal cell walls (like ergo)

Por oral absorption; IV; Get metabolized by hydrolysis and N-acetylation; >95%protein bound; Need a loading dose; half life of 9-11 hours

Can cause: Nausea; Vomiting; Diarrhea

Used for Candidiasis; INVASIVE Aspergillosis refractory to ampho-B

Greseofulvin

Narrow spectrum isolated from Penicillium griseofulvum

MOA: Interferes with mitosis by binding to fungal microtubules

Increase absorption with fatty meals; Oral; Available in micro-sized and ultramicro-sized powders (50% more bioavailability)

Can cvause: Epigastric distress; headache ; Photosensitivity; allergic reaction

LOCAL TREATMENT IS INEFFECTIVE

SKin and hair: 30 days treatment

Nails: 6-9 moths (fingernails); 12 months (toe nails)