



GRISEOFULVIN

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Griseofulvin is an antifungal antibiotic used in the treatment of several fungal dermatologic infections. It is produced by a specific species fungus called penicillium. The drug was first isolated in 1939 and initially was used as a treatment for ringworm in cattle. It was officially approved by the FDA in 1959. It is marketed in several oral formulations including microsize and ultramicrosize. Griseofulvin is metabolized in the liver and excreted in the feces, urine and perspiration.

Mechanism: In addition to its direct vasodilatory effect, griseofulvin has a fungistatic effect by its ability to disrupt the mitotic spindle structure of the fungal cell which arrests metaphase in cell division. It deposits in the skin, hair, nails, fat and skeletal muscles. Griseofulvin is deposited in keratin precursor cells which make a negative environment for the fungal infection allowing it to be effective for superficial dermatophyte infections.

Uses: With its unique mechanisms of action, griseofulvin has established good coverage against various strains of epidermophyton, microsporum and trichophyton. Because of its mechanism of action, it is useful in the following **fungal dermatologic diseases:**

- Tinea barbae
- Tinea pedis
- Tinea corporis
- Tinea capitis
- Tinea cruris
- Tinea unguium

Side Effects: Griseofulvin is contraindicated in patients who have hypersensitivity to carbapenem, penicillin and cephalosporin. It is also contraindicated in patients with porphyria and hepatocellular failure. Since griseofulvin undergoes hepatic metabolism, the drug should be used cautiously in patients with hepatic impairment. The most common adverse reactions are rash and **urticaria**. Other adverse reactions include headache, dizziness, fatigue, insomnia, photosensitivity, nausea, vomiting, confusion, leukopenia, proteinuria, oral candidiasis, nephrosis, gastrointestinal bleeding and diarrhea. Other rare side effects that have been reported include drug induced lupus-like syndrome, paresthesias and menstrual irregularities. Stevens-Johnson syndrome and **toxic epidermal necrolysis** have also been reported. Patients with lupus-like diseases should avoid the drug because there are reports that it can exacerbate lupus. Additionally, because of its hepatic metabolism, griseofulvin should be avoided if taking warfarin due to decreasing its anticoagulant effect. Griseofulvin can also decrease the efficacy of oral contraceptives and has been reported to affect cyclosporine levels. Hematopoietic, liver and renal function should be carefully monitored while administering this drug. Treatment with griseofulvin during pregnancy is contraindicated and should be avoided in lactation as there is no literature available for assessing its safety.

This information has been provided to you compliments of the American Osteopathic College of Dermatology and your physician.

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