Itraconazole – A Potent Antifungal Drug

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Itraconazole is an orally active triazole antifungal drug which has demonstrated a broad spectrum of activity and a favourable pharmacokinetic profile. It is a potent inhibitor of most human fungal pathogens including Aspergillus species.

In non comparable clinical trials, Itraconazole was shown to be extremely effective in a wide range of superficial and more serious deep fungal infections when administered once or twice daily. Preliminary findings also indicate that itraconazole may hold promise for the prophylaxis of opportunistic fungal infections in patients at risk, i.e. women with recurrent vaginal candidiasis, AIDS patients and patients receiving immunosuppressant drugs.

MECHANISM OF ACTION

The mechanism of action of itraconazole relates to its binding of fungal cytochrome P-450 with resultant inhibition of ergosterol synthesis and perturbation of membrane bound enzyme function and membrane permeability. Itraconazole binds more avidly to fungal cytochrome P-450 than does ketoconazole.

ITRACONAZOLE AND ASPERGILLUS INFECTIONS

Itraconazole has been shown to be highly effective in the treatment of human and experimental invasive aspergillosis. (Graybill 1989). The role of itraconazole as an adjunct to amphoterecin B and 5-fluorocytosine in the treatment of aspergillosis awaits study. In vitro (Kerkering and Espenil Ingroff 1987) and in vivo (Polak, 1987) investigations suggest itraconazole

and 5-fluorocytosine are synergistic against *Aspergillus* species. In mice infected with *A. fumigatus*, the combination of itraconazole and amphoterecin B was generally indifferent. (Polak, 1987).

SIDE EFFECTS

In studies to date, itraconazole has been very well tolerated (Hay, 1987). Most common side effects has been gastro intestinal disturbances. Transient changes in indices of liver function has been seen to have occurred in 1-2% patients. However symptomatic liver dysfunction (as occurs infrequently with ketoconazole) has not been reported.

DOSAGE AND ADMINISTRATION

The recommended dosage for superficial fungal infections is 100 mg once daily at meals for 15 days. The initial dosage in systemic mycosis including paranasal sinus mycosis is 200mg once daily. Treatment length should be individualized by clinical and mycological response. In children, the recommended dose is 3-5 mg/kg/day. Itraconazole is contraindicated in pregnancy.

PHARMACOKINETICS

Itraconazole gets absorbed when taken orally. Food doesn't affect its absorption. Infact, food has a statistically and clinically significant effect of the bioavailability of itraconazole.

CONCLUSIONS

Clinical experience however is relatively limited and further evaluation by controlled trials with

amphoterecin B and ketoconazole would help clarify the ultimate role itraconazole will have in the management of paranasal sinus mycosis.

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TWENTIETH ALL INDIA RHINOPLASTY COURSE

(Under the auspices of All India Rhinology Society)

Twentieth All India Rhinoplasty Course will be held in Anand Hospital, Preet Vihar, Delhi from 9th-11th November, 1997. The course has been designed to impart training in rhinoplastic and septal surgery. The programme consists of cadaveric demonstration, live operative sessions through closed circuit television, video presentation of surgical procedures, Panel discussions and didactic lectures on the "State of art in Rhinoplasty".

The course fee is Rs.1400/- for the members of All India Rhinology Society, Rs.1500/- for the non-members and Rs.750/- for the residents, which includes course materials, lunches, tea and a dinner. The course fee is payable by demand draft in the name of Dr. V. P. Sood. Guest Faculty : Dr. A. Mahadevaiah, Bangalore, Dr. A. R. Bhide, Pune, Dr. Maj. Gen. R. C. Kochhar, Pune.

Enrollment is limited on first come first served basis.

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