EFFECT OF KETOCONAZOLE — POTASSIUM IODIDE COMBINATION ON CONIDIOBOLUS CORONATUS INFECTION

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A rare case of subcutaneous Conidiobolus coronatus infection of the nose of 1 year duration is being reported. Following treatment failure using oral Potassium iodide only, the patient responded to Ketoconazole and Pot. iodide combination with remarkable fastness.

Coronatus, being a pathogenic fungus under the class Zygomycetes and order Entomophthorales, is also called Entomophthoromycosis. It usually involves the nose, paranasal air sinuses and upper lip. Subcutaneous Zygomycosis by Entomophthoraceae was first reported by Joe et al (1956) in Indonesia. Since then the literature contains reports from Africa, Asia and America. Until 1977 a total of over 150 cases only were recorded in the world literature (Towsersey et al, 1988).

Case Report

In March 1988, a 21 year old male Muslim from the village Chinapukur, Thana Bhangur, District – 24 Parganas (South) was admitted in Medical College Hospital with complaint of a firm, non-tender, well demarcated swelling of the external nose and its adjoining sides (Fig. 1) for 1 year duration. The overlying skin was erythematous at places. Initially there was excessive itching of the nose, later on it produced bilateral nasal obstruction and mucoid discharge.

His past, personal and family history were insignificant. Clinical examinations revealed generalised oedema of nasal mucosa in both anterior and posterior rhinoscopy with total obstruction of nasal airways.

Routine examination revealed normal ear, throat, hypopharynx and larynx. Few small non-tender lymph nodes were palpable in the posterior cervical chain in both sides.

Laboratory data (routine haemogram, blood sugar, VDRL, urine analysis) were all within normal range.

X-ray of paranasal air sinuses showed only soft tissue swelling without any sinus or bone involvement. A biopsy from the nasal mucosa was taken and submitted for histological and mycological examination.

Microscopic examination of histological section stained with Haematoxylin-Eosin revealed collagenization, fibroblastic proliferation and an inflammatory reaction with lymphocytes, histiocytes, plasma cells, eosinophils and giant cells. Few thin hyphae were also seen with branching and sub-branching processes. Small amount of the tissue were also planted on Sabourand dextrose agar media and incubated at 25°C which showed evidence of fungi within 48 hours. After 5 days, a cream coloured waxy colony covered the surface of the media. Microscopically, numerous sporangiola produced at the apex of short erect sporangiophores were seen. Sporangiola had prominent papillae and some of them produced...
secondary spores (Fig. 2). These characteristics led us to identify the lesion as C. Coronatus. Restrepo et al (1967) recommended Amphotericine – B in patients who did not respond to Pot. iodide therapy. However, there are many cases proven to be resistant to all these drugs.

Chauvin et al (1982) had success using Ketoconazole orally to treat this disease. For this reason and failure of treatment after oral Pot. iodide therapy in the case under report, we tried Ketoconazole in addition as a new combination and achieved a quick result within 4 weeks without relapse at the time of reporting. Isolation and identification of the causative agent is fundamental for the diagnosis of mycosis. The isolated fungus can also be submitted to culture and sensitivity to antifungal drugs, to have quick cure and definitive therapy.

Ketoconazole is an antifungal imidazole. Ketoconazole was first approved by the Food and Drug Administration in 1981 for the treatment of coccidiodomycosis, chromoblastomycosis, histoplasmosis, South American blastomycosis and candidiasis.

Toxicity from Ketoconazole (Willard D. Steck, 1989) is generally mild when doses are kept below 400 mg per day. Higher doses have been observed to produce mainly endocrine or gastro-intestinal symptoms and temporary suppression of adreno-cortico-steroid production leading to gynecostasia, decreased libido and impotence in men and menstrual irregularities. Liver damage (Laurance and Bennett, 1987) may range from transient elevation of hepatic transaminase and alkaline phosphatase to severe functional derangement and death.

However, this possibility has been observed by others to be extremely rare if the signs of hepatic toxicity are watched for and if the drug is discontinued when they are detected. (Willard D. S 1989)

**References**

