INTRODUCTION

*Sporothrix schenckii* is a dimorphic fungus. It exists worldwide in nature, growing as a mould in association with dead or senescent plant material. When cells of the mould gain entry to susceptible host, they transform into budding yeast cells and persist as such within the infected tissue.\textsuperscript{125} It is responsible for a disease called sporotrichosis. Sporotrichosis usually characterizes as a chronic ulcerative infection of cutaneous and subcutaneous tissue, and tends to spread along channels of the lymphatic system. These infections are initiated by trauma or minor abrasion from plant material harbouring cells of fungus. Lesions normally develop within 3-12 weeks following inoculation. Sometimes the fungus can spread from lesions in subcutaneous tissue to nearby joints, or more rarely to other organs.\textsuperscript{125}

Various clinical manifestations of sporotrichosis are recognized viz. lymphocutaneous, localized cutaneous, disseminated, mucosal, skeletal and visceral. Lymphocutaneous type is the most common form of sporotrichosis.\textsuperscript{186} Dissemination to osteoarticular structures and viscera is uncommon and appears to occur more often among patients who have a history of alcohol abuse or immunosuppression, especially patients with AIDS.\textsuperscript{165}

For the laboratory diagnosis of sporotrichosis in clinical material is cultured at two different temperatures.\textsuperscript{101} It grows in the mycelia form on Saboraud dextrose agar (SDA) at room temperature. White, glabrous colonies are seen within 3-5 days, after which the colonies become moist and wrinkled. As the fungus grows the colour becomes grey, dark brown, or black. On brain-heart infusion blood agar at 37°C, white or slightly yellowish creamy colonies are formed within 3-5 days.\textsuperscript{101} The value
of histopathological examination in diagnosis of sporotrichosis is limited. The sporotrichin skin test is useful for epidemiological study of sporotrichosis.\[10]\]

Treatment options for sporotrichosis include hyperthermia, oral administration of saturated solution of potassium iodide (SSKI), ketoconazole, itraconazole, fluconazole, terbinafine and the two newer triazoles, posaconazole and voriconazole.\[63,86]\]

Potassium iodide (KI) has been used for the treatment of sporotrichosis since the documentation of the disease and to date remains the drug of choice in fixed and lymphocutaneous sporotrichosis. The drug is given as saturated solution starting with 5 drops and gradually increasing to 40 drops three times a day or the maximally tolerated dose for 3 to 6 months.\[63,86]\]

The mode of action of KI in curing the sporotrichosis as eluded the workers so far. There have been a couple of conjectures on this aspect of in-vivo effect of KI but none has been confirmed so far.

As far as in-vitro effect of KI on the growth of S. schenckii is concerned there is a paucity of studies in this aspect. Keeping this in mind, it was decided to study the in-vitro effect of KI on the growth of S. schenckii. For the study it was planned to estimate the optical density, wet weight of the growth, the level of various enzymes, and lipids by incorporating KI in graded concentration into a stable medium. The minimum inhibitory concentration (MIC) of KI was also determined.