**ABSTRACT**

Ketoconazole is an imidazole derivative having half life of 2 h and used for the treatment of local and systemic fungal infections. The oral use of ketoconazole is not much recommended as it has many systemic side effects. Commercially available topical ketoconazole preparations are considered to reside at targeted site for a relatively short period of time. The entrapment of drug in a vesicle has shown improved delivery of drug at the targeted site and has also reduced the dose and thus, has shown better patient compliance. Ethosomes are lipid vesicular carriers containing high concentration of ethanol which provides better penetration of drug into the skin. Ethosomes of ketoconazole were prepared by cold method. The composition includes, phospholipid (1-3%), ethanol (20-40%), propylene glycol (10%), and distilled water up to 100%. Liposomes of ketoconazole were also prepared by film casting method. Selected formulations were subjected to sonication for reducing the vesicle size. FT-IR and DSC study confirmed the purity of drug and revealed no interaction between the drug and excipients. Ethosomes and liposomes were characterized for vesicle shape, vesicle size, entrapment efficiency percentage, in vitro drug diffusion and skin irritation. X-RD of ethosomes reveled amorphous nature of drug. Sonicated ethosomes showed better results than unsonicated ethosomes. %CDR after 12 h for ethosomal, liposomal and marketed formulations was 83.28 ± 1.036%, 66.65 ± 0.8399% and 60.45 ± 0.8654% respectively. Ethosomal formulation (F7) was found stable at 4 ± 2°C and at room temperature during the storage of 2 months. Efficient delivery of drug to deep skin strata from ethosomal drug application found to be highly beneficial in localizing the drug to desired site in the skin and reduced the side effects associated with conventional treatments.

**Keywords:** - Ethosomes; ketoconazole; skin infection.