
An office-based evaluation of various itraconazole brands



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THERAPEUTIC CHALLENGE

The number of itraconazole (ITR) brands in the market has increased. Although many brands offer optimal quality and results, a number of suboptimal brands have sprung up. It has become challenging for dermatologists to choose and differentiate suboptimal from optimal ITR brands.

SOLUTION

ITR is a highly hydrophobic triazole antifungal drug.¹ It is weakly basic (pKa [acid dissociation constant] 3.7) and has a characteristic pH-dependent solubility, having a higher solubility at acidic pHs than basic pHs.² Because of these physical and chemical properties, solubility of various ITR pellets



Fig 1. Itraconazole pellets placed in 10 mL of distilled water (pH 7.0).

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should be minimal in purified distilled water at pH 7. We opened up the ITR capsules of various brands and placed ITR pellets in 10 mL of distil water (pH 7) at room temperature (24°C) and waited 30 minutes (Fig 1). Solubility of pellets in this solution indicates a suboptimally prepared ITR (Fig 2). This simple and easy-to-perform method can be used by dermatologists (in the clinic setting itself) to avoid prescribing spurious ITR brands.

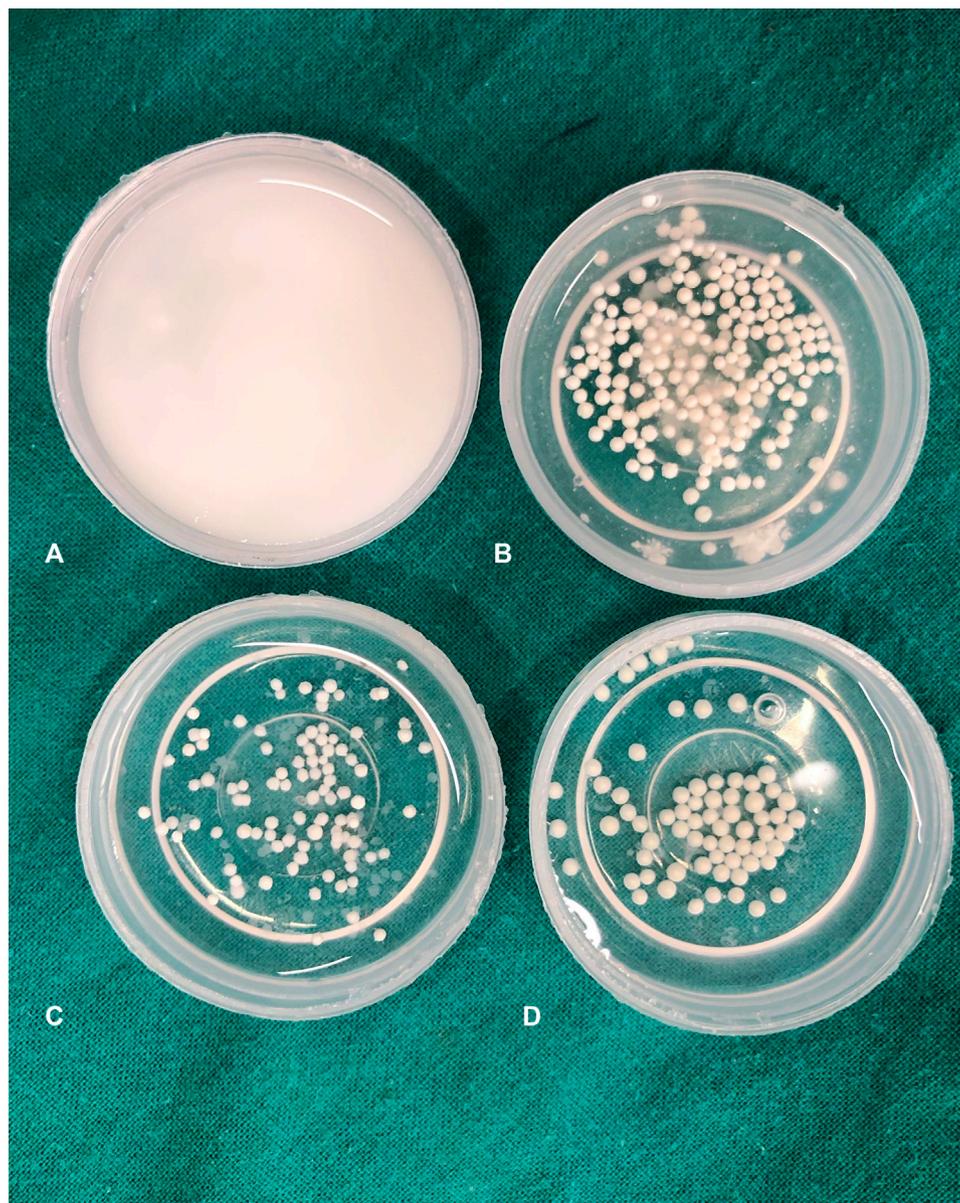


Fig 2. Comparison of solubility of various itraconazole brands **A-D**. Note the complete solubility of brand A, indicating its suboptimal preparation.

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