

Mycotic Ulcer Treatment Trial I (MUTT I) - 2013



Objective

To compare topical natamycin vs voriconazole for the treatment of filamentous fungal keratitis.

Methods

Design: Double-blind RCT

Sample Size: 323 adults

Treatment Groups:

- Voriconazole (1%): 161
- Natamycin (5%): 162

Outcome Measures:

- Best spectacle-corrected visual acuity (BSCVA)
- Corneal perforation, therapeutic penetrating keratoplasty

Results

- Point 1:** Patients treated with natamycin had significantly better visual acuity measurements at 3-months than patients treated with voriconazole
- At 3 months, the mean BSCVA for patients randomized to receive natamycin was 1.4 lines better than those randomized to receive voriconazole ($P=0.02$), without adjusting for TPK.
 - After adjusting for patients undergoing transplantation (TPK), the mean BSCVA for patients randomized to natamycin was 1.8 lines better than those randomized to receive voriconazole ($P=0.008$).

- Point 2:** Patients treated with natamycin were less likely to have corneal perforation or require therapeutic penetrating keratoplasty than patients treated with voriconazole.
- Patients with ulcers randomized to receive natamycin treatment were less likely to undergo perforation or transplantation (OR: 0.06, 95% CI, 0.01 to 0.28) ($P<0.01$), than those randomized to receive voriconazole.
 - In cases with *Fusarium* fungal infections, the odds ratio for perforation was 0.06 (95% CI, 0.01, 0.28), ($P<0.001$).

TLDR: Natamycin treatment was associated with significantly better clinical and microbiological outcomes than voriconazole for filamentous fungal keratitis.