

Bactericidal Activity Of Moxifloxacin In Patients With Pulmonary Tuberculosis

Abstract:

Patients in Whom Acid-fast Bacilli Smear-positive Pulmonary Tuberculosis Was Newly Diagnosed Were Randomized To Receive 400 Mg Moxifloxacin, 300 Mg Isoniazid, Or 600 Mg Rifampin Daily For 5 Days. Sixteen-hour Overnight Sputa Collections Were Made For The 2 Days Before And For 5 Days Of Monotherapy. Bactericidal Activity Was Estimated By The Time Taken To Kill 50% Of Viable Bacilli (vt50) And The Fall In Sputum Viable Count During The First 2 Days Designated As The Early Bactericidal Activity (eba). The Mean Vt50 Of Moxifloxacin Was 0.88 Days (95% Confidence Interval [ci], 0.43-1.33 Days) And The Mean Eba Was 0.53 (95% Ci 0.28-0.79). For The Isoniazid Group, The Mean Vt50 Was 0.46 Days (95% Ci, 0.31-0.61 Days) And The Mean Eba Was 0.77 (95% Ci, 0.54-1.00). For Rifampin, The Mean Vt50 Was 0.71 Days (95% Ci, 0.48-0.95 Days) And The Mean Eba Was 0.28 (95% Ci, 0.15-0.41). Using The Eba Method, Isoniazid Was Significantly More Active Than Rifampin ($p < 0.01$) But Not Moxifloxacin. Using The Vt50 Method, Isoniazid Was More Active Than Both Rifampin And Moxifloxacin ($p = 0.03$). Moxifloxacin Has An Activity Similar To Rifampin In Human Subjects With Pulmonary Tuberculosis, Suggesting That It Should Undergo Further Assessment As Part Of A Short Course Regimen For The Treatment Of Drug-susceptible Tuberculosis.