# Comparative activity of azithromycin and doxycycline against *Brucella* spp. infection in mice

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***SUMMARY.*** The activities of a short therapeutic regimen with azithromycin and the classic treatment doxycycline with streptomycin were compared and evaluated in mice infected with *Brucella melitensis*. In a chronic model, starting therapy 31 days after challenger, azithromycin (10 days, 50 mg/kg/day) significantly reduced the infection (2.9 logs, day 48 post-infection). The effectiveness of doxycycline (21 days, 50 mg/kg/12 hourly) was greater than azithromycin (4.1 logs of reduction, day 48 post-infection) and when doxycycline was administered for a period of 45 days, all the animals were bacteriologically cured from day 78. The combination with streptomycin (14 days, 10 mg"/kg/day) did not improve the effect of any of the regimens. In an acute model infestion, treatments with doxycycline or doxycycline-streptomycin, for a period of 3 days, starting 1 day after lethal challenge, were able to protect all the mice. In contrast, only 50% of the mice treated with azithromycin survived the challenge. In conclusion, althourgh a short oral treatment with azithromycin was able to reduce the infestion significantly, it was not able to cure the animals as effectively as the classic regimen with doxycycline administered for a longer period of time.

# Endotoxin-Induced Intravascular Coagulation in Rabbits: Effect of Tissue Plasminogen Activator vs Urokinase on PAI Generation, Fibrin Deposits and Mortality

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***SUMMARY.*** We have evaluated the effect of plasminogen activators (t-PA and urokinase) on an experimental model of disseminated intravascular coagulation (DIC) in rabbits by injection of 20 μg/kh/h of E. coli lipopolysaccharide during 6 h t-PA (0.2 mg/kg and 0.7 mg/kg), urokinase (3000 U/kg/h) and saline (control) were given simultaneously with endotoxin. Results indicated that urokinase and low dose of t-PA significantly reduced the increase of plasminogen activator inhibitor (PAI) activity observed 2 h after endotoxin ($p < 0.001$). High t-PA dose also diminished the PAI levels at 6 h ($p > 0.0001$). A significant reduction of fibrin deposits in kidneys was observed in both t-PA treated groups as compared with findings in the group of rabbits infused with saline solution ($p < 0.005$), whereas urokinase had no significant effect on the extent of fibrin deposition. Finally, the mortality rate in the control group (70 %) was reduced to 50% in rabbits receiving high doses of t-PA. In conclusion, treatment with t-PA resulted in reduced PAI generation, fibrin deposits and mortality in endotoxin-treated rabbits.