

Single dose intravenous ceftriaxone therapy in acute mastitis without and with adjunct therapy of a single oral dose of a polyherbal drug

Tapas Kumar Sar

West Bengal University of Animal & Fishery Sciences, India

Mastitis is an inflammatory condition of the mammary gland which is almost always linked with bacterial infection. Mastitis was induced in lactating goats by intracisternal inoculation of 35,000 c.f.u. of coagulase positive *staphylococci* isolated from mastitis milk. Confirmation of induced mastitis was done by determining milk enzyme activity with BTB paper test and clinical symptoms. A single dose of ceftriaxone was administered at 50 mg/kg without and with 1 hr pre single dose oral administration of 1.9 gm Fibrosin® (a polyherbal drug helps in cleansing of udder tissue) in healthy and mastitic goats. The kinetics of ceftriaxone was best fitted to 'two compartment open model' in fibrosin treated healthy goats, and 'one compartment of open model' in healthy and mastitic goats without fibrosin. Ceftizoxime, an active metabolite of ceftriaxone was identified by HPLC with higher concentration for a longer period in milk. Combined therapy of ceftriaxone and Fibrosin® in mastitic goats resulted in normal milk enzyme activity from significantly increased activity in mastitis. Lactoperoxidase activity was increased manifold compared to reduced activity in mastitis. Three cows suffering from acute mastitis in field were given a single intravenous dose of 3 gm ceftriaxone. Ceftizoxime was also analysed in milk of mastitic cows upto 72 hr. All the mastitic goats and cows were cured within 4 days of treatment.

Biography

Tapas Kumar Sar completed his Ph.D. in 2004 from Department of Veterinary Pharmacology and Toxicology, West Bengal University of Animal & Fishery Sciences, Kolkata, India. At present he is working as Head of the Department. He has published 26 (18 International; 8 National) research papers in reputed International and National Journals. He has presented his research findings in different international (BABE-2013, China, IPSCON-2009 etc.), national conferences and received Young Scientist Award in national conference of Indian Society of Veterinary Pharmacology & Toxicology in 2001. He has contributed some chapters in Veterinary Pharmacology book and written popular articles in different technical bulletins and magazines.

tapas.sar@rediffmail.com