tested with long-acting prescription antimalarials, lumefantrine and piperaquine.

Methods & Materials: LC-ESI-MS/MS methods were validated for simultaneous bioanalysis of lumefantrine and 99-411 and of piperaquine and 99-411 combinations. The interaction studies were performed in rats using these validated methods.

Results: The total systemic exposure of 99-411 increased when administered with either lumefantrine or piperaquine. However, co-administration of 99-411 significantly decreased the systemic exposure of piperaquine by half-fold while it had no effect on the kinetics of lumefantrine. 99-411, thus, seemed to be a good alternative to artesinin derivatives for combination treatment with lumefantrine. To explore the reasons for increased plasma levels of 99-411, an in situ permeability study was performed by co-perfusing lumefantrine and 99-411. In presence of lumefantrine, the absorption of 99-411 was significantly increased by 1.37 times than when given alone.

Conclusion: Short-acting CDRI candidate antimalarial trioxane derivative, 99-411, was found to be pharmacokinetically compatible with long-acting prescription antimalarials, lumefantrine.

Distribution of emm types of beta hemolytic streptococci associated with necrotizing fasciitis: Clinical profile and outcome

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Background: Necrotizing fasciitis (NF) is a rapidly progressive, potentially life threatening infection with a median mortality rate of 32% which may reach 100% without prompt treatment. Based on etiology necrotizing fascitis is classified into, type I (polymicrobial infections), type II (monomicrobial infections, classically caused by Streptococcus pyogenes), and type III (Clostridial infections). The present study was undertaken to find the prevalence and emm types of beta hemolytic streptococci (BHS) causing necrotizing fasciitis and to investigate the clinical characteristics and outcomes associated with it.

Methods & Materials: All BHS isolated from necrotizing fascitis cases over a period of two years (1st October 2013 to 30th September 2015) in the Department of Microbiology, JIPMER were included in the study. These isolates were further characterized by bacitracin sensitivity, PYR test, Lancefield antigen detection and spy1258 PCR. PCR amplification and sequencing of emm genes and assignment of emm types was performed as described by the Center for Disease Control and Prevention, Atlanta.

Results: Out of a total of 651 cases of NF, 23(3.5%) were associated with BHS. Eighty-three (34.7%) were monomicrobial, and 15(65.2%) were polymicrobial. Among BHS isolates 19 were group A streptococci (GAS), 2 were group B streptococci (GBS), and 19 were polymicrobial. In monomicrobial NF, the major pathogen was GAS. Among BHS isolates 19 were group A streptococci (GAS), 2 each belonged to group F and group C and 1 was group G. All the 19 M typed isolates (GAS-17, GCS-2, GGS-1) belonged to different emm types (emm8, emm113, emm193, emm63, emm86, emm80, emm74, emm15, emm82,1, emm113, emm110, emm209, StC28k, StC1741, StG11).

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