

Pathomorphological study of Flunixin meglumine toxicity in broiler chicks

■ K.B. KAPADIYA, R.A. PATEL¹, P.G. PATEL², K.S. PRAJAPATI¹, B.P. JOSHI¹
AND D.J. GHODASARA¹

Members of the Research Forum

Associate Author :

¹Department of Veterinary Pathology, College of Veterinary Science and Animal Husbandry, Anand Agricultural University, ANAND (GUJARAT) INDIA

²Department of Veterinary Pathology, College of Veterinary Science and Animal Husbandry (SDAU), Dantiwada, BANASKANTHA (GUJARAT) INDIA

AUTHOR FOR CORRESPONDENCE :

K.B. KAPADIYA

Department of Veterinary Pathology, College of Veterinary Science and Animal Husbandry, Anand Agricultural University, ANAND (GUJARAT) INDIA
Email: komalKapadiya89@gmail.com

Abstract : The aim of the present study was to evaluate the toxicopathological effects of flunixinmeglumine in broiler chicks. The chicks of group I were kept as control while group II, III and IV were fed with diet containing flunixinmeglumine @ 10 ppm, 25 ppm and 50 ppm, respectively for 21 days. Clinical signs viz., dullness, depression, anorexia, shifting lameness, unthriftiness with ruffled feather, drooping of the wings and lethargy with shrunken eyes were noticed in birds of treatment group III and IV only. Maximum mortality was observed in group IV (48%) followed by group III (20%) and group II (4%). A dose dependent reduction in body weight was observed in all treatment groups. The mean values of kidney: body weight ratio was significantly increased in all treatment groups. The plasma uric acid values were significantly increased in treatment group II whereas highly significantly increased in group III and IV. The plasma creatinine and BUN values were significantly increased in treatment group III, whereas, highly significantly increased in group IV. Grossly, chalkywhiteurate deposits of varying degree on mucosal or serosal surface and parenchyma of visceral organs and joints were observed in chicks that died during experiment from treatment group III and IV. Microscopically, the lesions were characterized by congestion, haemorrhages, degeneration, necrosis and deposition of urate crystals in visceral organs. The overall lesions gave an impression that flunixinmeglumine was nephrotoxic in nature and causes similar toxicity in broiler chicks as diclofenac does in vultures.

Key words : Biochemical, Broiler chicks, Flunixinmeglumine (FM), Kidney, Nephrotoxicity, Urate crystals, Visceral gout

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