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Title of Thesis : *Clinico- biochemical and therapeutic studies on induced Ageratum toxicosis in bovine*”

Abstract

Studies were conducted on six month old male cow calves to understand the clinico-biochemical and pathological alterations and also therapeutic efficacy of certain combinations of drugs against induced ageratum toxicosis. Toxicosis was successfully induced by feeding a single dose of green, freshly cut *Ageratum houstonianum* plant at the rate of 50 g/kg body weight. The symptoms of reduced feed and water intake, dullness and loose mucoid blood tinged faeces were observed as early as 12 h, followed by anorexia, general depression, constipation and atony of gastro-intestinal tract by 24 h. Between 48 h and 72 h, copious eye discharge, mucoid blood tinged black pelleted faeces, weakness, tucked up abdomen and grunting was seen. The animals became icteric and dehydrated with incoordinated gait and sternal recumbency between 72-96 h of feeding of Ageratum plant.

Haematology revealed significant reduction in haemoglobin, total erythrocyte count, mean corpuscular haemoglobin and mean corpuscular haemoglobin concentration with increase in haematocrit percentage. Leucocytosis with neutrophilia was observed along with lymphopenia. There was a significant increase in plasma aspartate aminotransferase, total bilirubin, blood urea nitrogen with a decrease in total plasma proteins by 96 h post Ageratum feeding.
Histopathology revealed massive congestion and haemorrhages in liver with degenerated nuclear elements in mid zonal areas. Spleen revealed marked depletion of lymphoid cells from white pulp. Intestines showed marked congestion and haemorrhages with hyperplasia of intestinal glands. Degenerative changes were also seen in kidneys.

Therapeutic studies indicated that the treatment with 5% dextrose saline, liver extracts, together with haematinics and judged by increased survival rates and also improvement in the clinical signs, biochemical profiles and histopathology of different organs.