The present investigation was undertaken to carry out clinico-biochemical and therapeutic studies on haemoglobinuria in clinical cases. These cases were investigated on the basis of clinical symptoms, Giemsa stained blood smear examination, haemato-biochemical and mineral profile estimations. A total of 44 cases of haemoglobinuria were studied. On the basis of clinical signs, blood smear examination, biochemical and mineral analysis, 88.63% cases were of blood protista infection either as single infection (Babesia bigemina) or mixed infection (Babesia with Anaplasma or Theileria) and 11.37% cases were of nutritional haemoglobinuria. The major clinical symptoms recorded were passing of coffee coloured urine, high rise of temperature, anorexia, rumen stasis, tachycardia, polypnoea, jugular pulsation, pale and icteric conjunctival mucous membranes, presence of tick infestation, dehydration and lymph nodes enlargement in blood protista infection. In nutritional haemoglobinuria, signs were similar to blood protista infection except those of high rise of temperature, presence of ticks and lymph node enlargement. Haematological examination revealed marked decrease in haemoglobin, haematocrit and erythrocyte count indicating severe anaemia in blood protista infected cattle and nutritional haemoglobinuric animals. The erythrocytes of Babesia bigemina infected cattle were more fragile than control group. Biochemicaly, significant increase in glucose, AST, ALT, AP total bilirubin, BUN and creatinine were observed in both in blood protista infected cattle and nutritional haemoglobinuric animals indicating hepatic and renal impairment. In
nutritional haemoglobinuria, marked decrease in phosphorus concentration was observed. Combined treatment comprising Berenil and Oxytetracycline LA with supportive therapy of vitamin B-complex with liver extract, iron dextran, haematinic mixture and fluid therapy gave encouraging results in blood protista infection. In nutritional haemoglobinuria, combined treatment comprising inj. Sodium acid phosphate (20%) @ 20 gm/100kg wt., inj.Tonophosphan, oral sodium acid phosphate with supportive therapy, 80 % cases were treated successfully.