An observational study was carried out to determine the indices in serum biochemical and enzyme parameters that would be possible to predict the early diagnosis of TRP in cows. Serum glucose, protein, fibrinogen, bilirubin, BHB, Ca, IP, Mg, ALT, ALP and AST were investigated in 19 cows suffered from traumatic reticulopericarditis and the results were compared with 10 healthy cows in Urmia, Iran. The mean values for glucose, Ca, Mg, IP and ALT in TRP cows were lower than healthy cows (P< 0.01). The minimum value was observed for IP. The mean values in protein (Ptn), fibrinogen, bilirubin, BHB, ALP and AST were higher than healthy cows (P< 0.01). The maximum values were found in fibrinogen, bilirubin and AST, respectively. The correlations among parameters under study revealed that glucose, electrolytes and AST, respectively, showed the greatest relationships among themselves and others. The regression results showed equations among glucose, Mg, AST (R²=0.47, SE=12.1) and Ca, IP, Mg, (R²=0.89, SE=0.35). Thus, it is concluded that the serum glucose and Ca concentrations could be useful indices in diagnosis of TRP in cow.

Keywords: TRP, cow, radiography, serum biochemical and enzyme parameters.