Foot-and-mouth disease, FMD or hoof-and-mouth disease (Aphtae epizooticae) is a highly contagious and sometimes fatal viral disease of cloven-hoofed animals, including domestic animals such as, cattle, sheep, goats, water buffalo, and pigs, as well as antelope, bison and other wild bovids. The disease is characterized by high fever; blisters in the mouth that leads to excessive secretion of stringy or foamy saliva and to drooling; and blisters on the feet that may rupture and cause LAMENESS. Adult animals may suffer weight loss from which they do not recover for several months as well as swelling in the testicles of mature males, and in cows, milk production can decline significantly. Though most animals eventually recover from FMD, the disease can lead to myocarditis (inflammation of the heart muscle) and death, especially in newborn animals. The aim of this study was to determine the effect of FMD on acute phase proteins in naturally affected cattle. In this study 20 adult (10 healthy and 10 FMD affected cattle) around Shiraz suburbs (Fars province, Iran) were randomly selected and blood samples were taken within 2 to 3 days of the disease. Serum was separated and stored at -20° c until analyzed for acute phase proteins (haptoglobin, serum amyloid A, fibrinogen, and ceruloplasmin). Results showed no significant differences in serum fibrinogen and haptoglobin between healthy and FMD affected cattle (P>0.05). Significant differences in serum ceruloplasmin and SAA between healthy and FMD affected groups were observed (P< 0.05). FMD affected cattle showed a significant decrease in ceruloplasmin level (P< 0.05). In addition a significant increase in SAA level was seen in FMD affected groups (P< 0.05). It was concluded that in naturally occurring FMD, a significant decrease in ceruloplasmin and a significant increase in SAA are prominent features in acute phase protein changes.

Keywords: FMD, Cattle, acute phase proteins