

Acute phase proteins in cattle: discrimination between acute and chronic inflammation

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Acute phase proteins such as serum amyloid A, haptoglobin, and α_1 -acid glycoprotein have been identified markers of inflammation in cattle because they are produced by the liver in response to pro-inflammatory cytokines. This study was designed to assess whether they could be used to discriminate between acute and chronic inflammation. Their concentrations were measured in serum samples from 81 cattle in which inflammation was classified by thorough clinical examination, supported by postmortem findings, as being acute in severity in 31 and chronic in 50. The classical haematological markers of inflammation were also determined in blood from the animals. Serum amyloid A had a maximum (100 per cent) clinical sensitivity in discriminating between the acute and chronic cases, and haptoglobin had the highest clinical specificity of 76 per cent; counts of neutrophils and band neutrophils had sensitivities of 71 per cent and 42 per cent and specificities of 30 per cent and 72 per cent, respectively. It was concluded that serum amyloid A and haptoglobin may be used to discriminate between acute and chronic inflammatory conditions.

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