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CASE REPORT

Suspected Postpartum Haemolytic-Uraemic Syndrome in A Cow

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Summary

A 6-year-old Holstein cow suffering from epistaxis, ecchymoses on the sclera, purulent vaginal discharge and pale mucous membranes one month after parturition was referred for examination. Clinical, hemathologic and biochemical findings, including anaemia, haemolysis, thrombocytopenia, azotaemia and tendency to bleed led us to suspect the case of being haemolytic-uraemic syndrome. The treatment was initiated immediately and the animal completely recovered in a week but scleral echimose diseppeared after one month.

Keywords: *Hemolytic-uremic syndrome, Cattle*

Bir İnekte Postpartum Hemolitik-Üremik Sendrom Şüphesi

Özet

Doğumdan 1 ay sonra başlayan, epistaksis, siklerada ekimoz, purulent vaginal akıntı ve mukozalarda solgunluk şikayetleri olan, 6 yaşında Holstein bir inek muayeneye getirildi. Klinik, hematolojik ve biyokimyasal bulgular olarak; anemi, hemoliz, trombositopeni, azotemi ve kanama eğiliminin olması nedeniyle olguda hemolitik-üremik sendromdan şüphelenildi. Tedaviye hemen başlandı ve hasta bir haftada tamamen iyleşti. Fakat skleral ekimoz bir ayda düzeldi.

Anahtar sözcükler: *Hemolitik-üremik sendrom, Sığır*

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INTRODUCTION

Hemolytic uraemic syndrome (HUS) is an acute illness characterized by clinical triad of acute renal insufficiency, microangiopathic hemolytic anemia and thrombocytopenia without any apparent cause [1-4]. HUS in cattle had been diagnosed based on the clinicopathologic findings [5] and a report of 6 calves with suspected HUS [6].

This communication aims to report HUS, a rarely determined disease of cattle, presumptively diagnosed based on clinical, hematological and biochemical findings.

CASE REPORT

A 6-year-old Holstein cow was referred to the Large Animal Clinic of the Faculty of Veterinary Medicine, University of Ankara, for evaluation of anorexia, weakness, purulent vaginal discharge, decrease in milk production and epistaxis one month after parturition.

At the time of admission, the cow's rectal temperature was 39.5ºC, pulse rate was 96/min, and respiratory rate was 30/min. Epistaxis, pale mucous membranes, ecchymoses on the sclera *(Fig 1)* and purulent vaginal discharge were evident. Rumen contractions were weak and infrequent. Feces were reddish brown in colour. Rectal palpation revealed subinvolution of uterus.

Hemathologic and biochemical findings at admission, included anemia (RBC 3.6x10^{6}µL, Hb 7 g/dl, PCV 20%), leucocytosis (WBC 19.3x10^{3}µL) and thrombocytopenia (50 x10^{3}µL), azotemia (creatinine 4.4 mg/dl, BUN 88 mg/dl), hypocalcemia (6 mg/dl), and increased GGT (64 U/L), CPK (644 U/L), LDH (3645U/L), ALT (230 U/L) and total bilirubin (1.2 mg/dl). The other biochemical values were 75 U/L for AST, 98 mg/dl for glucose, 6.7 mg/dl for total protein, 0.5 mg/dl for direct bilirubin, 139 mmol/L for Na, 94 mmol/L for Cl and 2.6 mmol/L for K. Urine analysis revealed proteinuria, low density (1008), abundant leucocyte and renal epithelial cells.

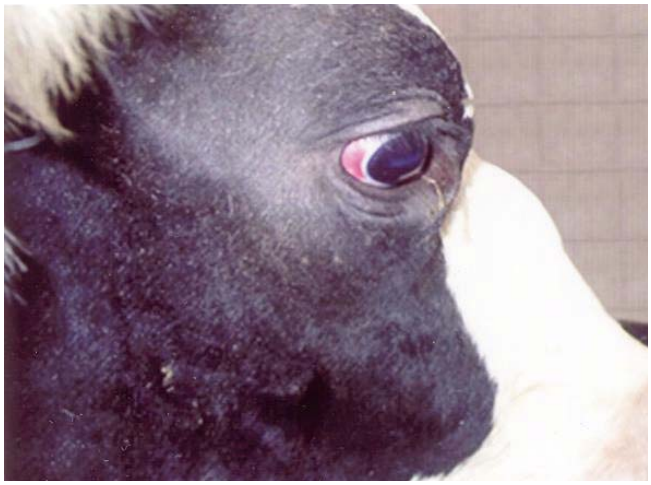

Fig 1: Ecchymoses on the sclera
Şekil 1: Sklerada ekimoz

Based on the clinical and laboratory findings, at admission including anemia, thrombocytopenia and marked azotemia. The case was suspected as HUS.

The cow was treated with Calcium glyconate (25%, 250 ml, IV), NaCl (0.9%, 2 L, IV), and Dextrose (10%, 1 L, IV). Furthermore, penicillin and streptomycin combination and vitamin K, and vitamin B complexes were given. Cow completely healed in a week after treatment. However, scleral echimose disappeared one month after the treatment.

DISCUSSION

In our case, purulent vaginal discharge and subinvolution of the uterus one month after parturition indicated uterine infection resulting in hemolysis and azotemia. Our findings regarding hemolytic uremic- syndrome are in agreement with Robby et al.[5] and Valli and McSherry [6]. This syndrome may develop endothelial injury due to causative agent like viral and bacterial infection, autoimmune disease and antiphospholipid antibody disease, intake of certain medicines (e.g., anti cancer drugs) and pregnancy as well as idiopathic causes [7,8].

Although the primarily affected internal organs in hemolytic-uremic syndrome cases are the kidneys, other internal organs may also be affected [5]. The association of increase in liver enzymes and in CPK and LDH with increase of serum urea and creatinin values reveals liver failure and myocarditis, respectively [5]. According to the laboratory results kidney, liver and myocardium were the possible affected organs in our case.

Although the pathogenesis of hemolytic uremic- syndrome is not clearly understood, disseminated intravascular coagulation is thought to play a primary role in hemolytic uremic-syndrome. In this case, azotemia, abundant leucocytes and protein in urine revealed that the primarily affected internal organs would be the kidneys, and the occurring case following parturation, anemia, thrombocytopenia and the tendency to bleed led to the conclusion of the case being suspected hemolytic uremic-syndrome.

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