minimise synechia formation and corticosteroids or non-steroidal anti-inflammatory drugs to decrease intraocular inflammation (Walton et al., 2002). Rendle and Hughes (2013) treated a case of hyphaema in stock horse by using intracameral injection of tenecteplase. In present case of hyphaema (uncotted blood) the left eye of horse, got resorbed within 5 days.

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**Management of Renal Form of Equine Leptospirosis – A Case Report**


Department of Clinics, Madras Veterinary College, TANUVAS, Tamil Nadu, India.

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**Abstract**

A 10 year old thorough bred male horse was presented with a history of variable appetite and polyuria with dark yellow coloured urine. Clinical examination revealed dull and depressed mentation, few petechiation and icteric mucous membrane and increased heart rate. Hematological values revealed decreased platelet count and serum biochemistry showed an increase in serum creatinine, SAP, AST, total bilirubin and direct bilirubin values. Urinalysis revealed proteinuria and bilirubinuria. Confirmative diagnosis for leptospirosis was made with MAT which revealed *L. canicola* 1:400 and *L. pyogenes* 1:800. The case was treated with injection Streptomycin and penicillin, fluid therapy and supportive therapy for 6 days. After 14 days paired serum sample showed no significant levels of MAT titres.

**Key words:** Equine leptospirosis - renal - treatment

*Leptospira. The infectious agent is capable of infecting man and animals. Horses have rarely been reported as being important for the transmission of this agent to other animals and humans (Desvars et al., 2011). In horses, it is known to cause a variety of clinical manifestations: acute febrile illness, lethargy, anorexia, renal failure, abortion and (equine recurrent) uveitis (Pearce et al., 2007). There is less known about leptospirosis in horses than any common domestic animal except the cat. The present paper reports management of equine leptospirosis.*

**Case History and Observations**

A 10 year old thorough bred male horse was brought to Madras Veterinary College Teaching Hospital with a history of variable appetite and polyuria with dark yellow coloured urine since one week. Clinical examination revealed dull and depressed mentation, few petechiation and icteric cmm, heart rate 48/1 mt and temperature 39.2°C. Blood sample was collected from jugular vein for hematology and serum biochemistry. Hematological values were within the normal
range except decreased platelet count (1,20,000 lakhs / cmm). Serum biochemistry showed an increase in creatinine (2.45 mg/ dl), SAP (548 IU/dl), AST (279 IU/dl), total bilirubin (2.70 mg/ dl) and direct bilirubin (0.66 mg / dl) values. Urinalysis revealed specific gravity of 1.017, proteinuria and bilirubinuria. Confirmative diagnosis was made for leptospirosis with Microscopic Agglutination Test (MAT) which revealed *L. canicola* 1:400 and *L. pyrogenes* 1:800.

Treatment was initiated with injection Streptomycin @ 10 mg / kg penicillin @ 10,000 IU/kg b.wt, IM bid for 6 days along with normal saline @ 10 ml/kg b.wt IV for 6 days and oral bolus Liv 52 @ 2 bolus/ day for 6 days. After 14 days paired serum sample sent for MAT and no significant levels of MAT titres were detected.

**Treatment and Discussion**

The standard reference method for serologic diagnosis of leptospirosis is the microscopic agglutination test (MAT), in which sera react with live antigen suspensions of various *Leptospira* serovars (Anonymous, 2004).

Most researchers found that positive leptospirosis cases were with titers between 100 and 200 and this agrees with the titers found in our study. In serological tests for leptospirosis such as MAT, the results often indicate infection with more than one serovar (Piligrim and Threifall, 1999). This may be the result of mixed serovar infection but the existence of cross reactivity in the MAT between the serovars is well known and can be excluded from this interpretation.

A slight increase in WBC count due to neutrophilia suggests the presence of a bacterial infectious disease, whereas the mild increases in creatinine, ALP, ALT and bilirubin may suggest some renal and hepatic damage. These findings strongly contrasted to the severe alterations reported in many species, including horses, due to incidental serovars, particularly Icterohaemorrhagiae (Faine *et al.*, 2000).

Pinna *et al.*, (2010) reported that creatinine level increased from 0.67 mg/dl to 1.1 mg/dl, AST level increased from 303 U/l to 336 U/l and ALP level increased from 245 U/l to 321 U/l in horses with leptospirosis. In the present study serum AST, ALP levels in horses with leptospirosis were lower than those reported by Pinna *et al.*, *(loc.cit).* Serum creatinine level was increased to 2.4 mg / dl in contrast to 1.2 mg/ dl reported by Pinna *et al.*, *(loc.cit).* Renal dysfunction due to leptospirosis has been reported infrequently in the horse (Frellstedt and Slovis, 2009). This might be due to acute renal failure following leptospirosis infection (Divers *et al.*, 2008).

Liver function tests (LFT) showed a slight elevation in aminotransferases, bilirubin, and alkaline phosphatase levels in leptospirosis. Urinalysis shows proteinuria, pyuria, and often microscopic hematuria (Ahmad *et al.*, 2005). Verma *et al.*, (2013) stated that Streptomycin (10 mg/kg) and/or penicillin (10,000-15,000 IU/kg) is the drug of choice for equine leptospirosis. Treatment for acute renal failure was commenced with i.v. administration of physiological saline solution (6 ml/kg bwt/h for 6 days (Frellstedt and Slovis, *loc.cit.*).

**References**


