

SEPSIS PROTOCOL

SIRS and SEPSIS are leading causes of morbidity and mortality in hospitalised patients. Early detection saves lives

DISEASE STATE AND DEFINITIONS	INDICATE CURRENT STATUS OF THIS HORSE	INTERVENTIONS TO CONSIDER
<p>SEPTIC SHOCK</p> <p>Severe sepsis with:</p> <ul style="list-style-type: none"> • <i>Non responsive hypotension</i> 	6	<p>DOBUTAMINE 1-4ug/kg/min</p> <p>or</p> <p>NORADRENALINE 1-2ug/kg/min</p>
<p>SEVERE SEPSIS</p> <p>SIRS / Sepsis with:</p> <ul style="list-style-type: none"> • <i>Hypotension</i> • <i>Hyperlactaemia (> 2mmol/l)</i> • <i>Abnormal membranes</i> 	5	<p>MONITOR BLOOD PRESSURE (Tail)</p> <p>10litre FLUID BOLUS (20ml/kg)</p>
<p>SIRS 4 CRITERIA MET</p>	4	<p>POLYMXIN B 5000iu/kg q12h x 3 doses (If normal creatinine)</p> <p>HEPARIN 50iu/kg BID SQ</p> <p>PENTOXIFYLLINE 10mg/kg BID PO</p> <p>PLASMA 2 litres</p> <p>DIGITAL CRYOTHERAPY</p>
<p>SIRS 3 CRITERIA MET</p>	3	
<p>SIRS 2 CRITERIA MET</p>	2	<p>CHECK WBC (if not recently done)</p> <p>EMPIRICAL ANTIBIOTICS</p> <p>FLUNIXIN MEGLUMINE 1.1mg/kg</p> <p>BIOSPONGE AND TRANSAUNATE IF COLITIS</p>
<p>NO SIRS NO CRITERIA or ONLY 1 CRITERIA MET</p>	1	<p>CONSIDER DEESCALATION OF ANTIMICROBIALS and ANTI INFLAMMATORIES</p>
<p>Definitions:</p> <p>SIRS: Systemic Inflammatory Response Syndrome</p>	0	<p>SEPSIS: SIRS WITH ACTIVE INFECTION</p>

Total number or criteria that are abnormal to develop SIRS Score

HEART RATE > 52 bpm
RESPIRATORY RATE > 20 per min
RECTAL TEMPERATURE <37 or >38.5°C
TOTAL WHITE CELL COUNT <5 or >12.5x10⁹/l

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THIS PAGE IS FOR INFORMATION AND SHOULD NOT BE PRINTED

Description:

Sepsis is an important cause of hospital acquired complication and can lead to increased mortality and morbidity in your hospitalised patients. Criteria for recognition of SIRS have been described in adult patients by [Roy et al in 2017](#) and predict prognosis and identify those animals most at risk.

The purpose of the protocol is to IDENTIFY those horses most at risk of developing complications arising from SIRS so that early interventions can be initiated. Protocols should be printed and laminated and attached to stable doors of ALL horses presenting with

1. Gastrointestinal disease including colic and diarrhoea
2. Severe respiratory disease (beyond asthma)
3. Horses with severe dental pathology

Everytime a patient is examined, abnormalities should be summed to identify the number of abnormal SIRS criteria based on abnormalities of

1. Heart rate
2. Respiratory rate
3. Rectal temperature
4. Leucocytes

The laminated sheet should be adjusted to identify the animals current risk to ensure that all of the team are made aware of this. It may form a discussion for during case rounds as well.

Where an animal scores 2 abnormal criteria, that has previously been normal, it should undergo a complete white count to further assist in its disease risk stratification.

All animals with abnormal SIRS scores (2 or above) should be handled with additional hygiene precautions especially around catheter care. Gloves / hand sanitiser and more frequent changing of IV lines should also be instituted.

Currently there is no evidence that the interventions listed on the right will help with prognosis and the evidence of benefit of some (eg pentoxifylline are at best speculative).

Disclaimer: These protocols have been designed to improve clinical practice and to assist veterinary practices in the UK meeting their PSS criteria. Please adjust interventions as appropriate to your clinical case profile. Clinical doses indicated are those used by the author, but users are advised to consult their own practice and check all protocols remain relevant. Medicine.vet referrals accepts no responsibility for adverse events arising from the application of all or any of this protocol or the application of any potential interventions. Veterinary surgeons remain responsible for their own clinical decision making. Medicines included in this protocol are not authorised for use in horses in the UK and their use requires application of the prescribing cascade and the responsibilities this brings.

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