HNE Area Intensive Care

Clinical Guideline

Guideline approved for : JHH ICU only

Protocol for the Use of Steroids in Septic Shock

This protocol applies only to the adult ICU population.

2008 additional recommendations.[2]

- No evidence to support routine short synacthen test as prerquisite for steroids
- Random cortisol may be useful in refactory cases to exclued adrenal failure
- Steroids may have a modest benefit in refactory cases of shock and reduce pressor requirement. Hyperglcaemia should be avoid and diligence is required to look for superinfection
- There is now a question whether steroids have a survival benefit

To be **eligible, patients** must fulfil the criteria:

- Presence of Septic Shock (Proven or suspected infection and systolic arterial pressure below 90mmHg or a mean arterial pressure below 70mmHg for 1 hour despite adequate fluid loading and adequate intravascular volume status OR a need for vasopressors.)

    - AND one other organ failure, OR an Apache II score of at least 25
    - AND Less than 12 hours have passed since these criteria have been met.
    - AND have absolute adrenocoticoid deficiency or inadequate response to a synacthen test - from 2008 synacthen test will not be routinely recommended[2]

Patients with formal indication or contra-indication for steroids would be **ineligible** for the protocol.

Patients with concurrent causes of shock should be examined by the supervising intensivist with regard to their suitability for inclusion in the protocol (eg AMI, PE complicated by sepsis).

Steroid Regime

REF:

1. Effect of Treatmennt with low dosese of Hydrocortisone and Fludrocortisone on Mortality in Patients with Septic shock: D.Annane et al JAMA ,Aug 21,2002,228 862-871
2. Hydrocortisone therapy for patients with septic shock(The CORTICU study) NEJM 2008;358:111-123

Organ Failure Definitions

RENAL: Urine output below 0.5ml/kg/hr for at least 1 hour despite adequate fluid resuscitation.

RESPIRATORY: a PaO_2:FiO_2 ratio of less than 250mmHg or need for mechanical ventilation.

HAEMATOLOGIC: a platelet count of less than 80,000 per cubic millimetre or which has decreased by 50% in the previous three days.

UNEXPLAINED METABOLIC ACIDOSIS: a pH of less than or equal to 7.30 or a base deficit of greater than or equal to 5.0 mmol/L in association with a plasma lactate level of greater than 1.5 times the upper limit of the normal value for the reporting laboratory.

Synthetic ACTH Testing

Blood is collected for baseline cortisol measurements.

250µ g of Synacthen is give intramuscularly (IM) immediately after this.

Further blood samples are taken for cortisol measurements at 30 and 60 minutes following the injection.

The patient is eligible for steroid supplements if the rise in serum cortisol is less than 250µ mol/L.

If the tests are being performed during the night, steroid supplements can be commenced while waiting for the results of the laboratory analysis which will be performed the following morning.

Patients who still require inotropes at 48 hours should be retested and steroids commenced for 5 days if they have an inadequate response to ACTH.

Steroid Supplementation

50mg hydrocortisone q6hr IV

Treatment continued for 7 days then stopped

.Created: 3/2003 by Dr P Harrigan/JH ICU specialists Reviewed: 12/2007 by Dr Harrigan
Guideline to be reviewed before : 12/2009