**Methylprednisolone (MP) in Acute Spinal Cord Injury (ASCI) – National Spinal Injuries Centre Stoke Mandeville (NSIC) Position Statement.**

**Position summary**

The NSIC does not recommend the use of MP following ASCI, believing that the current evidence points to the potentially adverse effects for the patient outweighing the potentially beneficial ones. Informed consent should always be obtained prior to administration, as MP is unlicensed for use in ASCI and has potential serious unwanted effects.

**Historical Background and Evidence Base for the current NSIC Position**

Experimental evidence from animal studies pointed to the beneficial effect of steroids for spinal cord neurological outcome following ASCI, especially when administered in pharmacological doses.

These animal based findings were evaluated in humans through the prospective, multi-centre, double-blind, placebo-controlled National Acute Spinal Cord Injury Studies (NASCIS). In these studies, trained clinicians neurologically assessed the patients on arrival in the emergency room and at specified intervals thereafter (1-5).

Whilst the methodology of the NASCIS investigations is of the highest order, and the Gold Standard of how such ASCI studies should be conducted, the interpretation of the results has been vigorously debated from the outset.

The NASCIS authors concluded that their findings demonstrated that MP administered within 8 hours of ASCI had a beneficial effect on spinal cord neurological outcome. This opinion has been re-iterated by highly respected reviewers including the Cochrane review from Oxford (6) and the NHS Centre for Reviews and Dissemination based in the University of York (7). Others, using the same data, have disagreed, concluding that the results demonstrate no beneficial outcome (8,9).

The initial view of most SCI specialists was that the administration of MP was mandatory following ASCI, unless specifically contraindicated. This view has been gradually replaced in many instances by either scepticism or outright opposition to the use of MP in SCI. National groups have formally expressed the view in published documents that MP in SCI is not a Standard of Care (10,11).

Some physicians continue to report the beneficial effects of MP (12), but the evidence base of such reports is in general uncontrolled and of low scientific value. More important than the lack of firm evidence for the benefit of MP has been the emergence of positive evidence for its harmful effects. The early anecdotal evidence of idiosyncratic life-threatening abdominal, septic, cardiovascular and respiratory complications has been supplemented by firmer published evidence, such as the development of acute myopathy in some patients who receive MP following ASCI (13).

The NSIC has carefully considered the available evidence. Using the primary principle of “do no harm”, it has concluded that, in the present state of knowledge, MP should not be given in ASCI. The NSIC remains open to new evidence, which may demonstrate that MP has value either in particular subsets of ASCI or in combination with other therapeutic interventions.

The NSIC believes that a body of reasonable medical opinion will support either giving or not giving MP following ASCI. Informed consent should always be obtained, bearing in mind
first that the drug is unlicensed for use in ASCI, second that there are potential serious adverse consequences and third that the benefits are at best uncertain.

References


7. NHS Centre for Reviews and Dissemination, University of York, York, YO10 5DD, Centre for Health Economics, University of York, York, YO10 5DD


11. [www.bascis.pwp.blueyonder.co.uk/philosophy.htm](http://www.bascis.pwp.blueyonder.co.uk/philosophy.htm) - British Association of Spinal Cord Injury Specialists
