Methyl Prednisolone in Spinal Cord Injury : Is the Sheen Fading?

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Spinal cord injuries are catastrophic events. The health care systems are strained by the challenges posed by the management of spinal cord injury victims [1,2]. In our country, spinal cord injury victims still succumb to sepsis from lung, urinary tract infection and bed sore infections.

The role of methyl prednisolone in spinal cord injury was evaluated in a series by National Acute Spinal Cord Injury Study (NASCIS) in North America. These studies evaluated the neurological benefits, if any, of methyl prednisolone administration [3]. A limited, but definite neurological benefit was demonstrated in patients with methyl prednisolone administered within eight hours of injury. Today the majority of neurosurgeons administer methyl prednisolone to spinal cord injury victims as recommended in the NASCIS II protocol [4]. The use of methyl prednisolone is associated with immune suppression, which results in flaring up of chest or urinary tract infections. The skin would become more liable to disruption and pressure sore formation; diabetic states would flare up while gastrointestinal hemorrhages and osteopenia would be an additional risk.

The validity of the NASCIS trial has been questioned [5]. The Canadian Association of Emergency Physicians no longer recommends methyl prednisolone as the standard of care [6]. The American College of Surgeons has modified their advanced life support guidelines [7] to state that methyl prednisolone is 'a' recommended treatment rather than 'the' recommended option.

Where does this leave us? There is probably no role for methyl prednisolone in open spinal cord injuries or in cauda equina lesions. In closed spinal cord injuries in the Indian scenario, methyl prednisolone should be administered to young (<50 years) individuals with cervical spinal cord injuries who have no additional risk factors (associated chest injuries, diabetic state or peptic ulcer) [8]. In dorsal spine injuries, the risk benefit

evaluation becomes more unfavourable. In older individuals and those with above mentioned co-morbidities, methyl prednisolone is more likely to cause harm than good and could be withheld. In conclusion, the primary aim in these cases is to optimise the clinical condition, decompress spinal cord and stabilize the spine early. The benefits of early decompression of the cord are well established [9]. Newer treatment options including stem cells cultured along oligodendrocyte lineages are providing hope [10]. The sheen of methyl prednisolone as a panacea seems to be fading.

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