EARLY MANAGEMENT OF SEVERE TRAUMA

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From a pre-hospital perspective I am going to focus on three specific issues –

Transporting the Patient Directly to the Definitive Hospital

There is good data to support improved outcomes when patients are transported direct to the hospital of definitive care, even when this involves bypassing another hospital which is closer.

This requires a "systems approach" to trauma care, but sadly such a system is not in place throughout all of New Zealand. It is hoped that the New Zealand Major Trauma Network which is currently in the planning phase may help solve this issue for New Zealand.

Tourniquets

Tourniquets have a chequered history, having cycled through the fashions of medicine for decades. In 2009 St John introduced tourniquets for controlling life threatening bleeding from limbs that could not be adequately controlled by conventional methods. They are clearly saving lives and clearly have a role.

Rapid Sequence Intubation by Paramedics

Patients with traumatic brain injury (TBI) with an altered level of consciousness are rarely unconscious enough to be intubated without the aid of drugs. A number of ambulance services (including St John) have introduced rapid sequence intubation (RSI) into paramedic hands to help overcome this problem.

However, RSI by paramedics has been controversial. In particular, data from one large case control study showed worse outcomes in the patients with TBI who were intubated by paramedics using RSI. More recently a randomised trial of RSI vs standard airway care for patients with TBI has been published. It showed improved long term neurological outcomes in the group randomised to RSI.

The controversy is not yet over, but we believe RSI by paramedics has a role provided that –

- The paramedics are carefully selected and highly trained *and*
- Waveform capnography is compulsory *and*
- The paramedics receive adequate ongoing supervision *and*
- The paramedics have adequate ongoing exposure