



## REGIONAL ANALGESIA ABSEILS INTO THE LIMELIGHT

Two trauma specialists, a top anaesthetist and a duo of mountain rescue experts, are banding together in Cape Town to explore the benefits of regional analgesia for accident victims isolated in remote settings.

They also want to probe the benefits of nerve blocks for peripheral injuries in hospital casualty settings.

Hardly taught in the local medical curriculum and seldom pursued in the field except by a dedicated few doctors, regional analgesia is a fast growing specialty in France, Switzerland and several other European countries.



Dr Elmin Steyn.

One such local doctor is Rik De Decker, a paediatrician attached to UCT's Division of Human Genetics and Red Cross Children's Hospital, and a mountain climber of 20 years' experience.

De Decker recently returned from the French Caribbean Island of Martinique where the renowned (French) National Association of Mountain Rescue Doctors held a 10-day workshop on advanced rescue skills in the island's steep and difficult canyons. Many of the lessons learnt at that workshop are applicable to rescues from the deep mountain kloofs of the Western Cape.

He was deeply impressed by how much easier the mobilisation of peripheral injury victims became in a presentation by world expert, Dr Xavier Ledoux, on regional analgesia in alpine and canyon rescue situations.

'What we tend to do here is give big doses of morphine and stretch the woozy patient off,' De Decker said.

However working just with the damaged limb kept the patient alert and awake, pain free and avoided side-effects, making the rescue 'much easier'.

While conventional anaesthetists may shudder at the idea and the associated risks, a top private practitioner in regional anaesthetics, Dr Luc Evenapoel, is cautiously optimistic.

'The risks are real and serious, but it deserves proper investigation,' says Evenapoel, who has begun an acute pain service and written a book on postoperative pain.

'The benefits if you have someone confident and skilled enough are great — especially for fractures or minor trauma.'

Evenapoel said that while a single plexus block required a high degree of skill, intravenous or intramuscular morphine often rendered a patient almost unconscious before they were out of pain. 'With local pain relief, the person being rescued or being worked on can co-operate. The disadvantage is that pain is also a warning signal and they could move a damaged limb around and injure it further.'

He said high skills levels in nerve block procedures in South Africa were 'virtually non-existent — and that obtaining these would be a pre-requisite. An inadvertent injection into a vessel could be fatal and sepsis risks would need to be minimised.'

De Decker and one of the country's top mountain rescuers, Dion Tromp, said mountain rescues in the Western Cape happened on average once every three weeks.

They had no doubt that regional nerve blocks could be a major boon.

Evenapoel queried whether a mountain rescue physician could accumulate enough experience and

therefore skill, to make the practice safe and effective.

***With local pain relief, the person being rescued or being worked on can co-operate.***

'Doing it once a year or attending a workshop and then letting someone loose is no good — you need to have done it 80 or 90 times,' he cautioned.

He qualified this by saying he had never done mountain rescue, so was looking forward to input from experts in this and the trauma field.

He said the irony was that academic hospitals had the volume of patients but too few specialists, while private hospitals had the reverse.

Tromp, who with De Decker is a member of the newly formed umbrella Wilderness Search and Rescue Group (WSAR), cited several examples of patients being put onto cumbersome stretchers 'purely because of the pain'.

'Sometimes the pain of being lifted vertically is too much — even if they are immobilised. Imagine being able to get them into a harness, immobilising the peripheral injury with strapping and splints and having them assist us with simple tasks,' he said.



*A rescuer abseils to safety with a peripheral injury victim.*



Logistics with stretchers — so essential for spinal and neck injuries — were 'problematic, especially on major rock faces or in confined areas like caves'. Local anaesthetics could cut rescue times by 'half or more', he added.

Dr Elmin Steyn, a trauma surgeon at two big private Cape Town hospitals, commented, 'we're all speculating now, but if it's done successfully elsewhere, great, let's learn from them and do it'. She said she could see many potential applications for going beyond digital blocks, Bier's blocks, intercostal and intrapleural blocks or local infiltration of wounds, all of which were 'very effective'.

She could see major benefits in the actual emergency room where nerve blocks could reduce the need for and minimise the side-effects of opiates such as morphine, especially in women and children.

***Mountain rescues in the Western Cape happened on average once every three weeks.***

'If we had specifically trained doctors in a public trauma unit it would be of great benefit for patients with limb injuries who lie waiting for ages for theatre.'

Patients often were not given a second pain-relieving shot because of the lack of nursing supervision. 'If people know what they're doing, the chances of them getting it right first time are far greater,' she added.

Dr Wayne Smith, deputy director of Metro Rescue in the Western Cape, and chairman of the WSAR advisory board, said heavily sedating a badly trapped person could compromise their airway. 'If we could be a bit more liberal with blocks, we could home in on the area of concern'.

Regional blocks not only simplified rescues but improved the morbidity of

patients (like re-aligning a limb quicker and getting perfusion to the limb).



*A woman mountaineer suitably strapped for a peripheral injury is painlessly hoisted aboard a rescue helicopter after regional analgesia.*

'Sometimes it's a really angulated fracture which would impede blood flow because the person is in such pain — if that same guy is stuck on a ledge and we could get the pain under control, extrication would be greatly simplified.'

Smith however believed that 'we should steer away from the more complicated blocks'.

Asked about the chances of paramedics being trained up, he said this would require the permission of their own professional board. 'They are entitled to administer morphine, midazolam, or diazepam, so this wouldn't be too much of a step up.'

Smith said his bottom line was that 'if it was me in a (trapped) predicament, I would always like to be aware of what's happening to me. I'd like my pain sorted out to the max and would also feel comfortable if the person doing it was very competent — if they weren't I'd probably still take my chances'.

***Regional blocks not only simplified rescues but improved the morbidity of patients.***

He said that to shoot down the regional block initiative before some kind of programme had evolved would

be 'very unfortunate'. 'Many years ago the purists shot down spinal epidurals — it was even debated when I was studying, yet today it's the norm.'

De Decker said a possible solution to the problem of training the current volunteer rescue doctors to perform safe regional anaesthesia in the field would be to recruit sufficient numbers of already trained anaesthetists to assist with WSAR rescues.



*An injured climber gets a regional block.*

In return, the anaesthetists would be trained in the necessary technical rope and other skills to enable them to be effective in mountain rescues.

In addition, the current (professional) METRO doctors (who are also trained for mountain rescue) could undergo thorough training in regional analgesia and apply the technique routinely in their daily work of pre-hospital care in urban trauma victims. Application to mountain rescue would then be a 'natural progression'.

**Chris Bateman**