

# Trauma Notes

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*"Bringing together those involved in the care of the injured patient to promote the highest standard of patient care, education, organization, and research in the field of injury"*

## Ketamine in Multi-Trauma



Multi-trauma patients, including those patients intubated, often have problematic pain control, by which I mean it is often inadequate and difficult to maintain.

Furthermore, even patients that report pain relief seem to be at risk for the same secondary consequences of acute pain such as various chronic pain syndromes.

A newer option is the use of sub-dissociative doses of intravenous or subcutaneous **Ketamine**. By giving 0.2 - 0.4 mg/kg IV bolus

over 10 minutes, followed by an infusion of 0.2mg/kg/hour, the patient's need for Morphine analgesia can be dramatically decreased.

In addition, the patients treated with this regimen are discharged from ICU almost 24 hours sooner and can be extubated significantly earlier. The long-term sequelae of acute pain emergencies also seem to be ameliorated. Because the dose is not dissociative, the patients will not struggle with re-emergence.<sup>1, 2, 3</sup>

*Article by Dr. Patrick Rowe*

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## The FAST Controversy

Recently some surgeons have questioned the value of Focal Abdominal Sonograms in Trauma (FAST). The argument is whether it provides valuable information or just delays treatment.

**FAST is fast:** requiring less than one minute! It is portable, non invasive, and repeatable. It is limited in scope and will only detect the presence or absence of fluid (200-600ml). Serial exams increase the sensitivity as does positioning the patient in trendelenburg. It rarely defines the nature of solid organ injury. It does not image bowel, diaphragm or retroperitoneal injuries.

Diagnostic Peritoneal Lavage (DPL) is invasive, takes 40 minutes for definitive results, and detects very small quantities of blood (20mls) which may not be significant. It has a small risk of injury (1 - 2%).

Both are useful in unstable patients and may obviate the need for CT in a small number of trauma patients (3%) who need immediate laparotomy. It is hazardous to take unstable patients to the CT suite.

Patients with **penetrating abdominal trauma** who are unstable could proceed directly to the OR regardless of FAST findings.



Fluid Surrounding Spleen

Unstable patients with **blunt abdominal trauma** may not require a laparotomy. Negative FAST exams in this setting can be troublesome. Some surgeons suggest they should be supplemented with a *diagnostic peritoneal aspirate* which looks for frank blood.

The real value of ultrasound in trauma may be extensions to the traditional FAST exam. It is ideal for detecting pericardial fluid and tamponade, pneumothorax, and hemothorax. It is invaluable for central line and general intravenous access. It can also aid in the diagnosis of shock and assess the adequacy of fluid resuscitation.

My money is still on the use of ultrasound in trauma!!!

*Article by Dr. John Ryan*

## THE STATS: UHNBC Trauma Facts

Trauma is the leading cause of death in Canada among those younger than age 45. Research indicates that the vast majority of injuries are both predictable and preventable (more than 90%). We know:

**WHEN** they strike; our peak trauma months at UHNBC are August, September and October. Our peak days are on the weekends between the hours of 1800 and 0600.

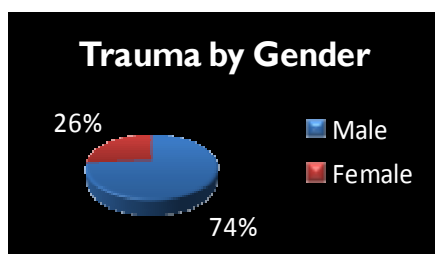
**WHAT** conditions under which they occur; motor vehicle crashes, violence, falls, and recreational activities are some of the leading mechanisms of injury.

**WHY;** in 2009, 49% of these major injuries occurred under the influence of alcohol and/or illegal drugs.

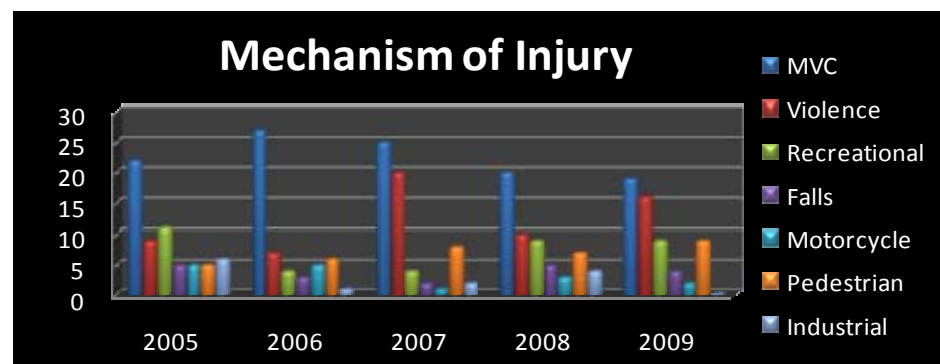
**WHO** is at risk: males between the ages of 25 and 34 experience the highest rate of major trauma, followed by 35 to 44 year olds.

**WHERE** the majority of injuries happen: at home and on our streets and highways!

*Article by Jordan Oliver RN*



Males continue to outnumber females 3:1



Violence & pedestrian crashes have increased over the last several years



## TRAUMA ROUNDS

MULTI-DISCIPLINARY  
TRAUMA ROUNDS  
PRESENTED QUARTERLY AT  
UHNBC

**Videoconference  
Available  
September 2010**

Everyone welcome to attend!

### What would you like to see in Trauma Notes?

Please forward any suggestions or trauma questions to contacts below!



## UPCOMING TRAUMA EDUCATION

**ATLS**  
(ADVANCED TRAUMA LIFE SUPPORT)  
Fall 2010 (Date To Be Announced)

**TNCC**  
(TRAUMA NURSING CORE COURSE)  
November 2010

**ENPC**  
(EMERGENCY NURSING PEDIATRIC  
COURSE)  
Spring 2011 (Date To Be Announced)

**ACLS Recertification**  
(ADVANCED CARDIAC LIFE SUPPORT)  
Fall 2010 (October)

**ACLS Provider**  
(ADVANCED CARDIAC LIFE SUPPORT)  
Fall 2010 (September)

## Injury Prevention: Get A Helmet!

Imagine a world where an injury meant a scrape, bump or bruise. Just a reminder of how 'lucky' you were that something worse didn't happen. Now take a moment to consider that injuries are in-fact not 'accidents', but as many as 90% of injuries happen in similar, predictable patterns and can be prevented.

In BC, **preventable injuries** are among the leading causes of death and hospitalization for all ages, and the numbers are even higher among Northern BC residents.

What's new? **Get A Helmet** Campaign from Safe Kids Canada, encouraging everyone to keep active and stay safe. Since 2000, 17 kids have died from a serious head injury while biking, inline skating or skateboarding. Wearing a helmet reduces the risk of a serious head injury by 85%.

- Get the right helmet for the sport
- Look for the safety sticker, like SCA, CPSC, Snell or ASTM.

- Check the fit: 2 fingers from helmet to eye brow, V-shaped straps around both ears, and just 1 finger fits between strap and chin.

- Replace helmets if they've been in a crash or reach five years old.

Northern Health's Injury Prevention promotes initiatives, programs and community partnerships that focus on building awareness of the burden of injuries in our communities, and supports prevention strategies. Check out what we have to offer on-line at [www.northernhealth.ca](http://www.northernhealth.ca) under Your Health and let us know how we can help your efforts to prevent injuries where you work, live and play.

For more information, contact Northern Health Injury Prevention Coordinators:

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*Article by Denise Foucher RN*

## Resources

- <sup>1</sup> Galinski M, Am J Emerg Med, 01-May-2007; 25(4): 385-90
- <sup>2</sup> Gurnani A, Anaesth Intensive Care, 01-Feb-1996; 24(1): 32-6
- <sup>3</sup> Hedderich R, Crit Care Clin, 01-Jan-1999; 15(1): 167-84



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