



Lakeridge
Health

Penetrating Chest and Abdominal Trauma

I've Been Impaled

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Case Reviews

- 12 cases from October 2013 to September 2015
- 1 case Lakeridge Health Bowmanville, 11 cases Lakeridge Health Oshawa, zero cases at Lakeridge Health Port Perry
- 1 deemed homicide
- 11 males, 1 female (1 male and the female had self inflicted wounds)
- Average age 28 years old
- 1 case required transfer to trauma centre
- 2 cases AWOL/AMA
- 2 cases patient had to return within 4-5 hours for recurrent bleeding
- All cases were stabbings



Quick Case Review

26 year old male, stabbed with a box cutter. Left posterior thoracic. Dropped off at triage bleeding profusely

20 y. o. male, stabbed in abdomen and leg. “Innocent bystander” of an altercation

17 y. o. male, stabbed in right arm and axilla. Arm wound more significant.

76 y.o. male, stabbed multiple times in anterior thorax. VSA on EMS scene arrival

17 y. o. male, stabbed to RUQ abdomen by a knife. Injury 2 days old but first access to treatment



18 y. o. male, reported self inflicted stab wounds to abdomen x's 2. 911 activated by patients family

21 y. o. male, single stab wound to left mid posterior thoracic region. Unknown cause

24 y. o. male, multiple stab wounds to left chest and left upper arm. Injuries 2-3 days old at time of presentation

37 y. o. male, single stab wound to LLQ abdomen. ?self inflicted

30 y. o. male, single stab wound to abdomen and lac to head. "Fell on a knife" Head lac apparently from being struck with a mug

41 y. o. female, single deep stab wound to RUQ abdomen. Self inflicted

24 y. o. male, single stab wound to lower abdomen, small bowel protruding.



Selected Case Review

26 year old male presented at 0250 on a Saturday morning

Triage note: “Brought in by EMS. Was leaving bar and there was an altercation going on. He was bystander and got stabbed to abd with unknown object. Wound to LLQ. Sent directly into Trauma. MD in room. VS: T-36.4, HR-102, BP-115/52 No past medical history, NKDA. (actually stabs x’s 2 in left flank).

Trauma BW panel ordered, HGB 141. FAST EDE neg. One L N/S bolus given. Abdo CT with contrast: “The intraabdominal contents appear spared, with no intraperitoneal pathology. A few droplets of air are noted in the abdominal wall compatible with some tracking of air through the abdominal wall.”

Discharged at 0715 with sutures to abdo and leg (left medial thigh), Rx Keflex, BP-121/78, HR-98.

Returned at 1205 with report of blood in stool since discharge. “Reports since sent home this am post abd stabbing. Has had a few syncopal episodes.” BP-102/68, HR-97. HGB: 104. Abdo xray: “Findings highly suspicious for perforation of the colon.” To OR at 1600 for retroperitoneal hematoma and perf of descending colon.



Selected Case Review

76 year old man arriving VSA at 1711 (approx) on a Monday

Triage note: VSA. “Direct to Trauma. PEA/Multiple puncture wounds to chest. CPR in progress.”

Unknown down time. 911 call by suspected perpetrator.

EDE showed no cardiac activity. Pt pronounced at 1713.

Article on Trauma.org website states: “The survival rate (for Traumatic VSA patients) is as close to zero as it can get.”

ATLS supports the same statement for out of hospital unwitnessed traumatic cardiac arrest.



Pre Hospital

- Police involved pre hospital in 10 of the 12 cases
- EMS transported 9 of the 12 cases to hospital
- 6 cases had documented substance use prior to incident



Investigations

What did we do?

- 8 of 12 patients had a Hemoglobin checked
- 9 of 12 patients had CT or Xray done
- 8 of 12 patients had an EDE
- Of the 2 patients that returned with bleeding, one required repeat investigations and the other did not

Of note, the homicide did not warrant any ER diagnostic evaluations and 1 patient left the ER AMA prior to MD assessment



Treatments

How did we help?

- Tetanus status documented on 3 cases
- Antibiotics provided to 5 patients
- IV fluid boluses provided to 4 patients
- Discharge referrals provided for 4 patients



- All but 2 patients had valid OHIP
- No consistencies to past medical history. One patient had previously sustained stab wounds to his back.
- The one patient that required transfer out had an LOS of 58 minutes!
- LOS for the other cases ranged from 1 to 12 hours. The longer LOS were the more injured patients and those referred to CIT.
- Patients seemed to present between 0100-0500 and 1700-2030
- Sunday (aka Saturday night) and Wednesday were the most common days of presentation
- There were a few other cases of penetrating trauma to extremities as well but these cases were not included in this review.



Reflection and Summary

- Tetanus status not well documented
- No one received uncrossed blood
- Trauma panel for blood work well utilized
- Police involvement well documented, and Police not notified by ER staff without patient consent
- One elderly patient (age 76), removing this patient pulls average age down to 22 years old
- Majority of patients were discharged from the ER and did not have a revisit within 7 days

Crime Statistics



Durham Region Police Services Board website indicates general decrease in assault charges for 2014 from 2013

- 9.8% decrease for Durham Region overall
- 6.4% decrease for Central East Durham Region (Oshawa)
- 17.4% decrease for East Durham Region (Bowmanville)
- 10.4% decrease for North Durham Region (Port Perry)

2015 Toronto Police Services data indicates 11% increase in assault charges

There is no legislation for mandatory reporting of stabbings or other assault related injuries outside of Gun shot reporting so provincial comparison data is difficult to obtain.

Statistics Canada website indicates Ontario saw an decrease of 6.61% in violent crimes based on the Crime Severity Index (calculated by using Incident-based Uniform Crime Reporting Survey data).

