Emergency - Quality, Education and Safety Teleconference

E-QUEST
For smaller EDs

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Thanks for joining

House rules

Confidentiality

Respect
Agenda

• Case 1
  • ECI clinical context
• Case 2
  • ECI clinical context
• Plans for the future
Case 1

20 yr old Male
Friday 23:30
“Lower abdo pain 3/10 + 1 vomit”
Multiple attendances for abdo pain + N/V
Cannabis use
Case 1 progress

00:30 Seen by CMO

Imp: viral illness + dehydration

Intoxication

Plan: IM: Ketorolac, buscopan,

PO: Paracetamol/codeine, hydrolyte + ondansetron
Case 1 progress

02:30 Ongoing pain. Refusing PO

Reported testicular pain to RN → CMO

Re-reviewed by CMO x2:

- Agitated patient, verbally aggressive.
- No c/o testicular pain
- Epigastric tenderness.

Rx: IV morphine & ondansetron
Case 1 progress

4th review: Asleep
  Clear plan documented
  Discharge if improved
06:00: Woke pain free
  Discharged with GP F/U
Case 1 post D/C

13:20 GP review. Pain free. US testes booked 1/52

Sunday returned
11:00 ATS Cat 3
Distressed, lower abdo & testicular pain
Dysuria
Red swollen scrotum
>12 hours of continuous pain
PMHx

Right orchidectomy as infant
?
Cause “Cancer?”
Actually: Torsion, undescended testis
No contralateral orchidopexy

FHx: Testicular Torsion 2 x
Case 1 return

Imp: Epididymo-orchitis
    Testicular torsion - unsalvagable

Plan: Admission, Surgical review
    Analgesia, ABX, MSU, Bloods, Testicle US

1900: Surgical review
    Agreed with above
Case 1 outcome

US: Torted testis – appears non viable

Friday – Gangrenous (solitary) testicle removed
What contributed?

- **Patient**
  - Multiple previous presentations with benign course
  - Communication difficulties & lack of PMHx
- **Personnel**
  - Poor rapport between staff
- **Practices**
  - 1 CMO for ED & all wards & ICU 00:00-08:00
  - >18 x 12hr shifts / month
Could this happen at your ED?
How might we prevent this occurring?

- **Individual level**
  - Testicular enquiry… & exam
  - Question cognitive biases

- **System level**
  - Rostering practices
  - Inter-disciplinary culture
Acute Scrotum

- Testicular Torsion
- Epididymo-orchitis
- Fournier’s Gangrene
- Further References and Resources
Testicular Torsion

Pediatric testicular torsion epidemiology using a national database: incidence, risk of orchiectomy and possible measures toward improving the quality of care.
Testicular torsion

- Infarction & necrosis
- Infection
- Contralateral atrophy & Infertility
- Cosmetic & psychological injury

Time = Testicle

4-6 hrs  90-100% viable
12  hrs  20-50%
24+ hrs  ~0%
Presentation

Paediatric scrotal pain + nausea / vomiting

PPV >95%

Poorly sensitive - 65%

Suspected torsion ATS 2

Beware

Isolated abdominal pain

Embarrassment

Crying /unsettled infant
Examine... all boys with abdo pain

Loss of cremasteric reflex

Horizontal Lie

High riding
Investigation

→ IN THEATRE

Surgical exploration +/- detorsion
<6hrs

“… a surgical emergency and if suspected, a paediatric or experienced adult surgeon should be consulted immediately. An immediate local procedure may be indicated.”

*Infants and Children: Acute Management of Abdominal Pain NSW Health Policy Directive*
Ultrasound?

For: Confirmation of alternative diagnosis
Low suspicion for torsion
Not for: Confirmation of torsion
Torsion in Summary

Ask
Feel
Explore (in OT)
Case 2

67 yr old male
Thursday 17:00
   Presents with 5 days left scrotal pain & rigors
   ATS Cat 3
PMHx: Type 2 Diabetes
Obs between the flags
   Except T 38.5
Scrotum red & swollen

WCC 17 CRP 374
Case 2 Progress

Imp: Scrotal cellulitis
P/C to Infectious Disease
  Tazocin
P/C to Urology
  Accepted for transfer to referral hospital

Next day 12:13
  Still in primary ED
  Reviewed by ED.SS
  Bedside Ultrasound – gas locules
Case 2 Progress

Transfer expedited
14:30 Arrived in referral hospital
17:00 Seen by Urology team
   ‘Cellulitis’ Change in ABX, ICU rv
19:00 Reviewed by Gen Surg
   ‘Necrosis of scrotum’
22:30 Debridement of gangrenous groin
   ICU post op
   Repeated surgery
What contributed to outcome?

- Under-appreciation of severity?
- Delay to transfer
- Delay to definitive management
Could this happen at your ED?
How might we prevent this occurring?

Individual level
Consider diagnosis of gangrene in immunocompromised patient

System level
Confirm urgency of transfer
Clarity in handover, including **key investigations**
Working practices of receiving hospital
Clinical Tools
Acute Scrotum

Testicular Torsion

Epididymo-orchitis

Fournier’s Gangrene

Further References and Resources
Fournier’s Gangrene

Necrotising fasciitis of the perineum
Older men especially

Rapid severe, polymicrobial infection

Multi-organ failure
Mortality >40%
Fournier’s Gangrene

Severe pain (> signs) initially

Immunosuppression
  Diabetes
  Alcohol
  Chronic liver / renal disease
  Chemotherapy
Examination

Sepsis / septic shock

Tenderness & swelling
Oedema beyond margins
Crepitus
(gas = dirty shadowing on bedside U/S)
Dusky colour → gangrene
Investigations

IN THEATRE

For complications:
VBG – septic shock
UEC – AKI
Coags - DIC
Blood culture

CT – for equivocal cases
Management

Urgent debridement +/- relook

Broad spectrum IV ABX

Meropenem 1 g (child: 25 mg/kg up to 1 g)  8-hourly
Vancomycin load 25mg/kg
Clindamycin 600 mg (child: 15 mg/kg up to 600 mg)  8-hourly

Vasopressors / ICU
E-QuESTs so far

- Atypical Chest Pain - ACS
- Sepsis in the elderly
- Abdominal Pain in the elderly - AAA & Ischaemic gut
Looking to next month…

• Share your cases
• Share your actions

We are all here to learn from each other
Thoughts

What would you like to see / hear about?
Further Info

Clinical Excellence Commission guidelines on M&M
Google “CEC M&M”

ED Quality Framework Death Audit
Google “ECI death”

Look out for our survey
Many thanks

Next E-QUEST
Friday 20th October (TBC)