“Every dogma has its day.”

Anthony Burgess

Dr Matt A Edwards
SpR Emergency Medicine
(EBM Enthusiast)

MYTHS IN MINORS
Outline

- Abscess packing
- Adrenaline in digits
- RICE
- Wound closure
- Anterior shoulder dislocation
Abscesses

- 20yr old fit well pt with large 5x5cm abscess on his upper back
  - I+D alone
  - I+D plus abx
  - I+D plus MRSA coverage
  - Pack it?
  - Drain?
  - Primary closure?
  - Refer to surgeons
Packing

- **Pros**
  - No premature closure
  - No reaccumulation

- **Cons**
  - Painful
  - Cost (time/reattendances)


NNT review conclusion

“These data therefore support the findings of the one trial, suggesting that packing after abscess drainage, a classically recommended practice that was not based on evidence but rather based on theoretical concerns, may lead to increased pain without any corresponding benefit.”
MRSA

- Rates on the increase
- Up to 70% in US
- Loculated abscesses
- Nasty other new bugs
So what should we do

- Good analgesia, ?LA infiltration vs block? sedation?
- Incision (does it need to be large?)
- Break down loculations (esp in MRSA)
- Wash out with saline and pressure
- Consider a loop or wick
- No evidence for antibiotics (in uncomplicated)
  - Resistance / MRSA / recurrance
- Primary closure CAN work well BUT...
Consider this...

- **Paediatrics leading the way!**
  - **minimising pain**
  - **improving cosmesis**


Consider this...

- http://www.youtube.com/watch?v=gw7tA1B9Aos
In 1956, a popular textbook of hand surgery published the ominous warning

“epinephrine should never be injected into the finger because from this gangrene has often resulted.”
Adrenaline kills fingers

“The prohibition against the use epinephrine with local anesthetics for digital blocks or infiltrative anesthesia is an established dogma in dermatologic surgery. Major textbooks reinforce this teaching suggesting that there is substantial risk of digital gangrene caused by local anesthesia containing epinephrine.”
How much evidence kills a myth?


BUT what about the accidental injection?
Epipen in the digit

- **Zero** cases of digital necrosis in lit. from 1900-2005

C. Fitzcharles-Bowe, K Denkler & D.Lalonde, Finger Injection with High-Dose (1:1,000) Epinephrine: Does it Cause Finger Necrosis and Should it be Treated? HAND (2007) 2:5–11
R ankle pain. Inversion injury this am. Ottawa +ve refusing to WB initially. Pain over lateral malleolus. No # on Xray.
Advised RICE, NSAIDS. Advice sheet given

REST
ICE
COMPRESSION
ELEVATION
RICE - REST

- What do we mean by ‘rest’ (immobilisation?)
- Immobilise in POP
  - No clinically significant benefit
  - HARM/RISK – DVT, pain, money + time
- Support – splintage better than POP/bandage
- Crutches - debate
- Early touch weight bearing, ROM and prop exercises
RICE – ICE/cryotherapy

- 90% Drs recommend it (66 papers – mostly poor – even some animal models)
- Animal models - microvascular changes
- 37 pts cold early vs cold late vs hot
- 74 pts cold vs placebo (?) 4x per day 14 days
- 89 pts, intermittent better than constant group
- COST – very little
- HARM - frost nip is very rare
- Cochrane review - Hubbard – 2004
RICE - Compression

- One study in which it looks at it **on its own**
- Group with compression bandage had more pain (95% had more pain) and no functional benefit
- Patients still want tubigrip
  - But it isn’t really compression, its a sock
- Splintage seems to help (aircast / a boot)
RICE - Elevation

- Very little evidence in sprains
- Ortho practice on the wards
- J Ath training, Sang
- 5 minutes it goes back to the same size.
RICE to RISE?

• Rehabilitate
  Touch weight bearing, ROM, proprioception

• Ice
  Intermittent, early, a few days

• Support not compression/POP
  Crutches are good for most

• Education (Elevation won’t harm)
12/04/2011

Dear Consultant in Charge,

I am dismayed by the dangerous practice being perpetrated by members of your staff and I am writing to you to make sure you are aware and it doesn’t happen again.

I believe that one of your new-fangled nurse practitioners treated my son’s arm wound incompetently. I was not there but I was horrified to learn that this girl treated my son’s laceration by washing it under the tap! And then just to ensure it was full of germs, used normal gloves instead of sterile ones! I can only imagine that this girl was very lazy as she closed the wound with staples rather than sutures. My son was rather pleased as he was in and out very quickly but it’s not going to matter one jot seeing as his arm is likely to drop off with gangrene or just scar horrendously.

It was all such a ghastly nightmare I had to take him to see my wonderful GP the next morning and insisted he was referred immediately to plastic surgery and that they initiated him on high dose broad spectrum antibiotics.

Yours sincerely,

Mrs R.C.Cowe
Retired matron
Wound care – sterile technique

- **Irrigation**
  - Irrigant (if you wouldn’t put it your eye...)
    - Betedine / peroxide / Saline / tap water
  - Pressure vs amount
    - 15psi (20ml syringe 19G needle) = 85% of bugs/grit

- **Gloves**
  - 2004 RCT 816 pts (98% 3/12 follow up)

<table>
<thead>
<tr>
<th>Clean non-sterile gloves v sterile gloves for laceration repair*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outcome at mean 23 days</td>
</tr>
<tr>
<td>-------------------------</td>
</tr>
<tr>
<td>Wound infection rate</td>
</tr>
</tbody>
</table>

*Abbreviations defined in glossary; RRR, NNT, and CI calculated from data in article.
Public expectations

“It’s a prescription for one of those new super-antibiotics. You won’t just get better, you’ll get even.”
Wound care - closure

- Think about anatomy / blood supply / tension
- Cosmesis
- Glue – good meta-analysis data (NB tension)
- Staples -
- Sutures – used less and less (Boutros 2000)
- Combo
- Delayed primary
Wound care - infection

- Excluding Risk Factors!
  - MRSA?
- Extremities vs face/scalp
- Blunt vs sharp
- Don’t shave wounds! Not a myth.
- Time of injury
- Antibiotics
  - Hand (2007 review of all data – no sig. Difference)
  - NOT NEVER!
<table>
<thead>
<tr>
<th>Study/Year</th>
<th>Wound Location</th>
<th>Patients</th>
<th>Time Cutoff (In Hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Berk 1988</td>
<td>Mixed</td>
<td>204</td>
<td>&lt; 19 hours for extremities</td>
</tr>
<tr>
<td>Chisholm 1992</td>
<td>Mixed</td>
<td>550</td>
<td>&lt; 10 hours above clavicle</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>&lt; 6 hours below clavicle</td>
</tr>
<tr>
<td>Kanegaye 1997</td>
<td>Scalp</td>
<td>88</td>
<td>&lt; 12</td>
</tr>
<tr>
<td>Barnett 1998</td>
<td>Mixed</td>
<td>163</td>
<td>&lt; 12</td>
</tr>
<tr>
<td>Hollander 1998</td>
<td>Face/Scalp</td>
<td>1923</td>
<td>&lt; 6</td>
</tr>
<tr>
<td>Singer 1998</td>
<td>Mixed</td>
<td>120</td>
<td>&lt; 6</td>
</tr>
<tr>
<td>Beatrix 2002</td>
<td>Extremity</td>
<td>45</td>
<td>&lt; 8</td>
</tr>
<tr>
<td>Lammers 2003</td>
<td>Mixed</td>
<td>1142</td>
<td>&lt; 24, but rate increased at 10</td>
</tr>
<tr>
<td>Valente 2003</td>
<td>70% Face/Scalp</td>
<td>500</td>
<td>&lt; 10</td>
</tr>
</tbody>
</table>
“Don’t forget to take a handful of our complimentary antibiotics on your way out.”
WOUND CARE - what’s important

- Functional and anatomy specific assessment
- Risk factors including time since injury
- Good analgesia/LA
- Clean irrigation with pressure
- Some gloves
- Remove (most) FBs
- BLOOD SUPPLY / TENSION / cosmesis
- Antibiotics in rare situations (Tetanus status)

PATIENT / WOUND / ANATOMY SPECIFIC
Shoulder relocation needs
LOTS OF TRACTION

- Interestingly Kochers method did not mention traction (1870)

“Pressing the arm bent at the elbow towards the body, turning outward until resistance is felt lifting of the outwardly rotated upper arm in the sagittal plane as far as possible and finally slowly turning it inward.”

In reference to the common technique at the time
“...Schinzinger himself admits a certain violence and painfulness of his method”
CHECK THIS OUT!

- http://www.youtube.com/watch?v=jlVjVRXo7gw
Medical ‘wisdom’ the power of dogma

- Pseudo axioms
- Power of anecdote
- EBM vs Daily Mail
- Our practice formed by the scientific method, a pressure to publish or malign influence?
  - TEXT BOOK
  - JOURNAL
  - CONFERENCE
“Don't be trapped by dogma – which is living with the results of other people's thinking. Don't let the noise of others' opinions drown out your own inner voice. And most important, have the courage to follow your heart and intuition.”

Steve Jobs

BUT BEWARE

“The first principle is that you must not fool yourself and you are the easiest person to fool.”

Richard Feynman
1. Make an observation.
2. Form a hypothesis.
3. Perform the experiment.
4. Analyze the data.
5. Report your findings.
6. Invite others to reproduce the results.
“It doesn’t matter how beautiful your theory is, it doesn’t matter how smart you are, if it doesn’t agree with experiment, it’s wrong.”

Richard Feynman
Where do I go?

- www.theNNT.com
- Shoulderdislocation.net
- SmartEM.org
- BestBETS
- Lifeinthefastlane
- EnlightenME
- Empractice.net
- Cochrane database

(is this the end of the text book?)