Alcohol and head injury in small rural hospitals

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"Your patient from the pub wants to leave..."

"Your patient from the pub wants to leave..."

And he said you can #@$% off!

Learning objectives

- When do intoxicated patients need imaging?
- When is a patient competent to decide?
- How do we keep a patient against his or her will?

The case

- 35 year old man drinking at a rugby club evening, then at a BBQ the next day

- Several "bumps"
  - tripped on patio
  - from bar stool
  - during playfight

"Crackers"

- Lying on floor "grinning"
- Pulled to feet and sat on chair
- Blood from left ear
- Taken to hospital by ambulance

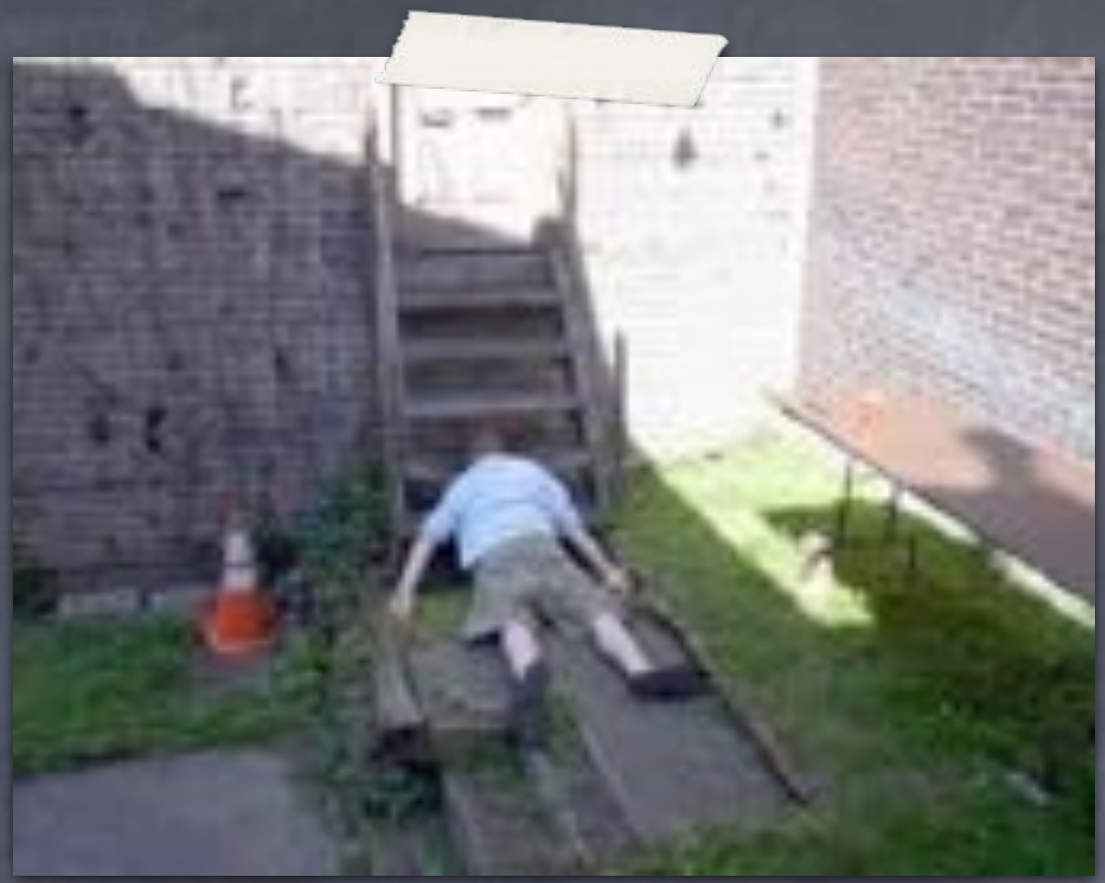
"Chookie"

- 7:30 PM "very busy"
- 20 bed hospital
- GP anaesthetist
- Tachycardic, orientated, no blood in ear (wax)
- Intoxicated and "aggro"

Does he need imaging?

Intoxication and brain injury go together

- About a third to a half of all seriously head injured patients are intoxicated
- It is definitely possible to be **both** intoxicated **and** have a serious head injury



It is definitely possible to be both intoxicated and have a serious head injury

Intoxication is the main reason serious brain injury is missed

- Before CT, 1 in 5 brain injured patients died without a diagnosis made.
- Intoxication was the main cause of missed or delayed diagnosis
- Even now there are lots of coroner's reports

Who needs a CT - rules

Table 1. Findings used by 7 clinical decision rules for CT scanning in mild traumatic brain injury.

Clinical Finding	Canadian	NCWFNS	New Orleans	NEXUS-II	NICE	Scandinavian
GCS score	<15 At 2 h	<15	<15	Abnormal alertness, behavior	<15 At 2 h	<15
Amnesia	Retrograde >30 min*	Any	Antegrade	—	Retrograde >30 min	Any
Suspected fracture	Open, depressed, basal	Any	Any injury above clavicles	Any	Open, depressed, basal	Basal, depressed, confirmed
Vomiting	Recurrent	Any	Any	Recurrent	Recurrent	—
Age, y	≥65	—	>60	≥65	≥65†	—
Coagulopathy	—	Any	—	Any	Any†	Any
Focal deficit	—	Any	—	Any	Any	Any
Seizure	—	History	Any	—	Any	Any
LOC	If GCS=14	Any	—	—	—	Any
Visible trauma	—	—	Above clavicles	Scalp hematoma	—	Multiple injuries
Headache	—	Any	Severe	—	—	—
Injury mechanism	Dangerous*†	—	—	—	Dangerous†‡	—
Intoxication	—	Abuse history	Drug, alcohol	—	—	—
Previous neurosurgery	—	Yes	—	—	—	Shunt

Who needs a CT?

- **B**leeding problem
- **E**mesis persistent/forceful
- **A**ge ≥ 65y
- **N**eurological deficit
  - **B**ehaviour abnormal
  - **A**ltered level of consciousness
  - **S**kull fracture signs
  - **H**aematoma of scalp

NEXUS II

Observation in intoxication?

- NEXUS II found that intoxicated patients without abnormal behaviour or conscious state were not at increased risk of injury
- This is only one study - not widely accepted
- GCS will improve quicker if intoxicated only
- Requires excellent observation and

Advice for this case

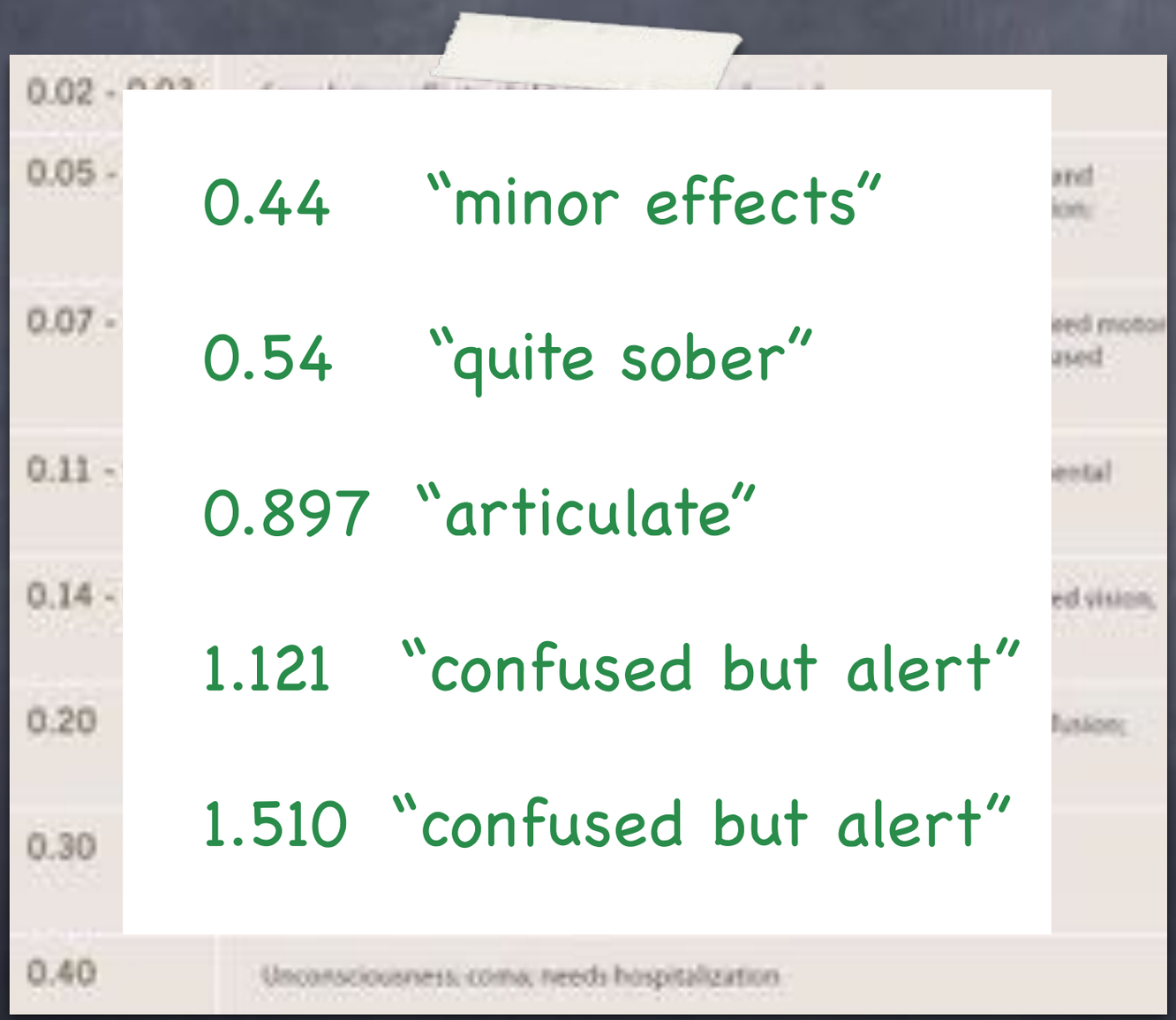
- If there is blood in the ear or abnormal behaviour, then transfer for CT
- If blood from ear is excluded, and behaviour is considered near normal, then observe closely until behaviour returns to normal

"Crackers"

- Vital signs returned to normal
- No CT arranged (would need transfer)
- Brain injury thought to be unlikely
- Advised to stay

Is he competent to decide to go home?

Alcohol level is not helpful



Alcohol level is not helpful

- Can have a high blood alcohol and be normal due to practice
- Can have a low blood alcohol and be abnormal due to injury

0.44	"minor effects"
0.54	"quite sober"
0.897	"articulate"
1.121	"Confused but alert"
1.510	"Confused but alert"

Alcohol levels are seldom important for emergency patients

This is the deal...

- We want to help the patient (duty of care)
- The patient wants to be in control of his own body (autonomy)
- Autonomy always overrules duty of care IF the patient is competent

Legally incompetent

- Under 16 years old and at home
- 14 or older and living independently
- Involuntary psychiatric patient
- Guardian or full power of attorney appointed

Assessing competence to refuse medical treatment

Beigler MJA May 2001:174 p522-5

- Based on Re C ruling and Grisso-Applebaum correlates
- Compares ability to understand with actual understanding of the current problem
  - for co-operative patients test actual understanding
  - for impatient patients, consider ability to understand

Three stage rule for co-operative patients

- Comprehension / (understanding)
  - clearly express reasons for choice and can repeat all potential risks (recall / paraphrase)
- Belief / (appreciation)
  - believe medical info or show reason why not
- Weighing / (reasoning)
  - how was decision reached

Give patients a chance to show they understand this situation

For impatient patients

- If a patient refuses to be assessed, are they likely to have the ability to understand if they have
  - normal speech and cognition
  - no significant physiological derangement
  - not unduly under the influence of drugs or alcohol
  - not unduly influenced by pain, emotional shock, fatigue, panic, fear
    (Re MB case - not competent to refuse caesarean as scared of needles)

Advice for this case

- Try to get the patient to repeat dangers of going home, and reasons he wants to leave
- If he won't co-operate, his bizarre behaviour is probably enough to say he is incompetent

"Chookie"

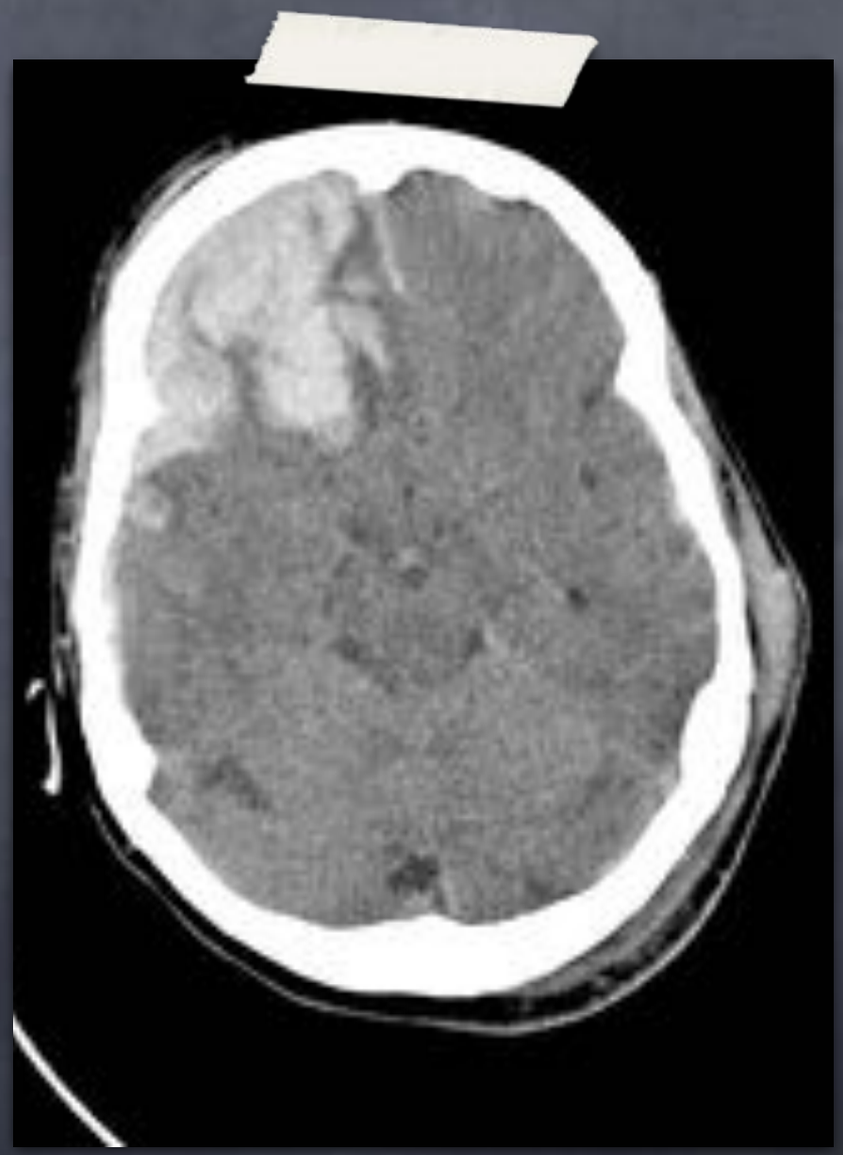
- Thought "not competent to sign" the discharge against medical advice form
- Head injury leaflet given
- Discharged with friend about 7:30

"Chookie"

- Returned to BBQ
- Found behaving bizarrely on neigbour's lawn
- Friends though serious illness had been ruled out
- Dead in garden the next morning

"Chookie"

- Autopsy findings
  - skull fracture
  - multiple brain contusions and lacerations
  - cerebral swelling
  - midline shift
- BAC 0.197% (14 hours after last



How could we keep him against his will?

De-escalation

- Respect the Patient's and Your Personal Space
- Do not be provocative
  - calm demeanor
  - hands visible and not clenched
  - avoid prolonged eye contact
- Establish verbal contact
  - only one person interacts verbally with the patient
  - introduce yourself and provide orientation reassurance

De-escalation

- Be concise, simple, and repetitive
- Listen closely to identify wants and feelings
- Agree or agree to disagree
- Set clear limits and coach the patient how to meet them
- Be optimistic, but realistic

Restraint

- Physical restraint can be used as a bridge to chemical restraint
- KEEP YOURSELF SAFE
- Use police

Intubate if GCS < 10

- Use narcotic to control behaviour (100mcg fentanyl)
- Don't forget c-spine
- Rapid sequence induction

Consider sedation if GCS 10-14

- Midazolam
  - **age > 60 and/or SBP < 100**
    0.05 mg IM/IV (max 5 mg x 4 doses)
    If IM repeat in 10/60
    If IV repeat in 5/60
  - **age < 60 and SBP > 100**
    0.1 mg IM/IV (max 4 doses)
    If IM repeat in 10/60
    If IV repeat in 5/60
- Ask for help
- May need to intubate for transfer anyway

Advice for this case

- If de-escalation fails, consider sedation
- Call police
- Will probably need to intubate

Summary

- It is definitely possible to be both intoxicated and have a serious head injury
- Alcohol levels are seldom important for emergency patients
- Give patients a chance to show they understand this situation
- Intubate if GCS < 10

Questions