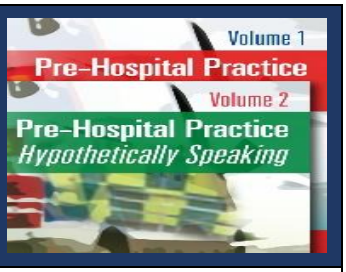
Trauma – head injury
Paramedic case studies #9

Jeff Kenneally www.prehemt.com



Past history

You are attending a 74 year old lady with significant past history including hypertension, ischemic heart disease and gout. She has had multiple episodes of dizziness and has had a few falls due to her increasing unsteadiness.

Today

She has had a fall at home this evening immediately after getting out of bed. She was unable to get up afterward. Her daughter heard the bang as she hit her head on a bedside table and is the one who called the ambulance.

On examination

CNS GCS=13 eyes open (4) confused verbal (4) and localising to pain L=R (5)
CVS pale cool dry P=60 BP=180/90
Resp 16min no dyspnoea evident, on ausc chest clear L=R.
ECG sinus rhythm
Pulse oximetry 94%
BSL 7.6mmol/L (don't reveal this unless the student asks for reading)
Body temperature 36°C (don't reveal this unless the student asks for reading)
2° survey Laceration and bruising over right eye. Small scalp lac now stopped bleeding. No visible chest or abdominal injury. Deformed and swollen right wrist. No other apparent limb abnormality

Working assessment

Traumatic blunt head injury, altered conscious

Management

Discuss need to examine for physical injuries as well as for medical illness. Pt may have had a fall or may have had a medical problem leading to collapse e.g. syncope
Need also to consider problems that may have been caused after fall including hypothermia or pressure sores
Need to consider change in consciousness and establish clear baseline for patient's normal
Need to consider that the patient is an unreliable historian now so presumption for illness must be considered e.g. spinal injury
Need to consider that the patient is likely to deteriorate – discuss haemorrhagic causes
What position to place patient? – depends on conscious state, not necessarily lateral
Airway – what options if needed. Discuss lateral position, OPA difficulties and NPA benefits if needed. What deterioration might be needed to prompt interventions
Oxygen – is it needed? Perhaps not if minor but yes if it is major. What is major? Decrease in GCS. Consider other important factors. Short versus long witnessed LOC time. More than 5 minutes is long. Major structural injury to the head. Vomiting more than once. How important is confusion or repetitive conversation? Often common
Seizures – how to deal with them if they occur? normal seizure management
Body temperature – hypothermia can occur if lying immobile. How is this managed? Passive warming and avoiding further heat loss

Blood sugar level – manage hypoglycaemia. This may be cause. Hyperglycaemia? Consider dehydration
Manage injuries – dress scalp laceration. Splint wrist injury
Analgesia – is it needed? what unwanted problems can be caused?
Scene time – how urgent is the problem? What destination hospital?

Patient deteriorates
CNS conscious state decreases to nil eye opening (1) grimace incomprehensible verbal response to pain (2) and abnormal extension to pain (2) GCS=5
CVS P=50 BP=190/100
Resps 30min but irregular alternating between fast and very slow
Patient vomits once more

Next management
Airway – what now? NPA? Consider ICP assistance for drug facilitated intubation
Discuss why conscious state might be deteriorating – ongoing haemorrhage
Discuss changes in vital signs – classic pattern of change in rising intracranial bleeding
Perfusion – discuss need to maintain cerebral perfusion pressure. Avoid hypotension with IV fluid therapy if needed. Hypertension can be problematic but best not to manipulate. Care is required to avoid causing large blood pressure drops such as caused by anticonvulsants and opioids
Is this more urgent and has the destination changed?

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