MD2 Medicine Clinical Reasoning Scenario

Hand out templates
Get them to organise order
Time out after each chart
Pin charts on whiteboard at end to summarise

Altered Mental State

Learning objectives:
By the end of the session, students will have had an opportunity to:
Practice using a Clinical Reasoning Template (mini whiteboards)
Practised managing and treating a patient with an Altered Conscious State

Overview
Freda Allan is a 74 yo female who was admitted with palpitations and tachycardia yet to be thoroughly investigated, whose mental state has deteriorated. You have been called by the nurse as she is confused and has been vomiting. Her daughter stated that she had "been shaking all over" (? Rigor, ? seizure)yesterday prior to hospital admission
HR 110, BP 110/70, RR20, Sat 90%, T 38.3
(Requires oxygen to get sat to 96% / requires fluid to get BP up after 500mls)
Normally: HR 80-90, BP 140/80/ RR 12/ afebrile
Freda is a frail 74 yo with severe osteoporosis who lives in a nursing home. She is usually mentally alert and orientated but she struggles with ADLs and needs help with showering, sitting out of bed etc. She has had several fractures including both NoFs over the past 5 years. She has had an IDC for the past 4 months as she has found it increasingly difficult to be adequately toileted.
What are your initial thoughts on this: CNS or other?
CNS (infection/Stroke/Trauma/seizures)
Drugs (alcohol/narcotics/sedatives/ antidepressants)
Organ failure
Metabolic (glucose, sodium, calcium)
Endocrine
Environmental
Elderly (pain/cold/UTI)
Other
Threats to life:
Hypoxia, hypoglycaemia, hypotension, intracranial mass or bleed, seizures, risk of physical injury

Initial mgt:
DRABCDEFG
She looks pale, feverish and dishevelled .

This project was possible due to funding made available by Health Workforce Australia

Environmental Scan reveals IDC with a moderate amount of cloudy urine in her catheter bag. She does not have a cannula in.
Patient: Freda is semi recumbent in the bed and her glasses have fallen on to her chest. She is rambling, disorientated, chatty. She is a poor historian so nurse/ daughter with scarf on needs to provide history.
HoPC – nursing staff at nursing home concerned re tachycardia, vomiting and fever and general unwellness. She came to the ED early this morning and was unhappy about leaving the nursing home.
Allergies: nil
Meds: Metformin, Nexium, Caltrate, Vit D, cranberry juice
PH: Diabetes, Osteoporosis / reflux/ AF / UTIs X 3 in past 2 years
Lifestyle: Nursing home / widowed
Event: Unwell FI

Physical exam :
Looks dry – JVP/mucous membranes/ history of vomiting/hypotensive, tissue turgor
Neuro – pupils = + reacting. Neuro exam "normal" as far as they can tell. Not post-ictal. No evidence of stroke, TIA or bleed
Chest – few crackles at both bases otherwise normal
Heart – in AF otherwise normal
GIT – Lower (suprapubic) abdo tenderness
Urogen – bilateral loin pain. IDC in situ

<u>What are the DDX?</u>
UTI - Bacterial toxins cross blood-brain barrier
Hyponatraemia -Low sodium causing brain cells to swell with water
Hypoglycaemia -
Investigations:
Blood glucose: 3.0
Urinalysis: nitrites (these are converted from dietary metabolites by urinary bacteria)
MSU (after R/O catheter and before Abs. If catheter is required MSU should be taken after replacement to avoid culturing bacteria remaining from the biofilm of the previous catheter. 2nd choice is needleless port, 3rd option is separating bag from IDC
FBE: white cells (leukocytes)
U and Es: sodium and calcium
Other routine bloods
Cultures
Risks: female, elderly, IDC, diabetic, nursing home

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Teaching points:

10% of IDCs get infected
10% of those have symptoms
10% mortality
May be extraluminal (most common as bacteria enters bladder along biofilm forming around the catheter) or intraluminal (stasis or poor bag changing technique)
Treatment:
Remove and replace catheter – is intermittent an option?
Fluids
Antibiotics: 1 dose ceftriaxate IV until cultures back
Treat for 10-14 days.

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