NEUTROPENIC SEPSIS

Consider if recent chemotherapy or extensive radiotherapy with either curative or palliative intent in **ANY** patient who appears to be deteriorating - especially if relatively unexpected.
Most likely between 7-10 days after treatment but neutropenic sepsis needs to be suspected in any patients who have had treatment in the last 6 weeks.
SEE LOCAL ACUTE ONCOLOGY GUIDANCE

Early signs
Flu like symptoms
Temperature of 38°C
Rigors

Late signs
Anxiety, confusion
Hypotension
Tachycardia

Remember both NSAIDs and PARACETAMOL affect temperature so may mask condition / sepsis

DO NOT DELAY
If suspected, ADMIT to HOSPITAL URGENTLY for IV fluids and IV antibiotics

EPILEPTIC SEIZURES

ACUTE SEIZURES

- May settle spontaneously
- Ensure airway secure and administer oxygen if available
- If seizure does not stop within 5 minutes give either
  - ◊ Subcutaneous, intranasal, buccal or intramuscular midazolam 5 mg to 10 mg **OR**
  - ◊ Diazepam 10 mg-20 mg rectally

Once settled consider ongoing seizure management with relevant specialists. Other anticonvulsants are available; please seek specialist advice,

IF SEIZURES CONTINUE despite above measures after 10—20 minutes - repeat measures above.

- Decide if transfer to hospital for emergency management is needed or if care will continue in the current care setting
- For acute management— a secure airway should be established, oxygen should be administered, cardiorespiratory function should be assessed and intravenous access should be established.
- If patient has required two or more doses of a benzodiazepine, consider continuous subcutaneous infusion with starting dose of 10-30 mg midazolam over 24 hours. Seek specialist advice if considering other anticonvulsants, if there are ongoing seizures or patient has eGFR <30.

HYPERCALCAEMIA

- Hypercalcaemia is common in cancer of breast, myeloma, lung, head and neck, kidney, thyroid and cervix.
- Primary hyperparathyroidism should be considered as a possible cause (6% of cancer patients)

Presentation:

- Symptoms of hypercalcaemia include: fatigue, weakness, constipation, nausea, vomiting, polyuria, polydipsia, cardiac arrhythmias, delirium, drowsiness and coma.
- Corrected serum calcium >2.7mmol/L (some variation between laboratories)

ASSESSMENT:
Clinical assessment of the patient is crucial in determining whether treatment of hypercalcaemia is appropriate, as it generally requires IV fluids and admission to an institution.

Generally a decision to treat should be motivated by the patient`s symptomatology rather than absolute calcium level. The most important goal of treatment is to improve clinical symptoms.
Hypercalcaemia may be a poor prognostic sign in cancers such as lung and cervix.
Onset of symptoms raising clinical suspicion should be investigated. Bloods should be checked for urea and electrolytes (U&Es), estimated glomerular filtration rate (eGFR), liver function tests (LFT's) and calcium.

TREATMENT:
May require in-patient unit care in hospital or hospice.
(Refer to local guidelines around bisphosphonate dosing)
The patient should be rehydrated with 1-3 litres of parenteral 0.9% sodium chloride before the administration of bisphosphonates. The volume and rate of fluid replacement should be adjusted in each patient according to their age, the severity of hypercalcaemia, the degree of dehydration and the ability of the cardiovascular system to tolerate rehydration.

- The treatment of choice after rehydration is intravenous bisphosphonate—pamidronate, zoledronic acid or ibandronate depending on local formulary choices.
- Corrected calcium levels should be rechecked at 5-7 days after the bisphosphonate infusion. Checking calcium levels prior to this is not appropriate, as the bisphosphonate will not have achieved it's maximal effect.
- Consider Advance Care Plan about how and where to manage further episodes in the future.

SUPERIOR VENA CAVAL OBSTRUCTION (SVCO)

- Compression / invasion or thrombosis of SVC due to tumour or nodal mass within mediastinum, preventing venous drainage from head, arms and upper trunk
- Commonest causes (95%) – lung cancer, non-Hodgkin's lymphoma
- Usually onset over weeks or months, but occasionally occurs rapidly over days

SYMPTOMS/SIGNS:

- Swelling of face, neck, arms
- Headache
- Dizziness/ Visual disturbance
- CNS depression
- Seizures
- Dyspnoea
- Dilated veins – neck, trunk, arms
- Hoarse voice
- Stridor
- Cyanosis

MANAGEMENT:
Administer dexamethasone 16 mg orally or parenterally in one or two divided doses - IMMEDIATELY URGENTLY (ideally the same day) discuss with Oncologist about future management

METASTATIC SPINAL CORD COMPRESSION

- Affects 5-10% of patients with cancer
- Most common in prostate, lung, breast cancer and myeloma
- Catastrophic event – aim is to prevent establishment of permanent loss of function
- Symptoms may be vague, there should be a high index of suspicion if a patient goes “off their legs”, becomes unsteady, struggles to get out of a chair or climb stairs.
- Patients with cancer and neurological signs or symptoms of spinal cord compression should be treated as an **oncological emergency**

FOLLOW LOCAL ONCOLOGY GUIDANCE

SYMPTOMS– particularly new or changing:

Back/Spinal Pain:

- may radiate in a radicular, ‘band-like’ pattern
- progressive / unremitting
- may be worse on coughing or straining
- may be nocturnal, pain preventing sleep
- may not be present

Nerve root pain in limbs

Weakness of limbs (out of proportion to general condition of patient)

Difficulty walking

Sensory changes – tingling, numbness, “my legs don’t be-long to me”

Difficulty passing urine – usually a late presentation

Constipation or faecal incontinence

SIGNS: Do not wait for signs. Act on the symptoms

Localised spinal tenderness

Weakness of limbs

Reflexes: Absent / increased. Extensor plantars.

Altered sensation - look for a sensory level

Distended bladder

SAME DAY- MEDICAL ASSESSMENT

Full history and neurological examination,.

Assess fitness to treat

SAME DAY –CONTACT :-

METASTATIC SPINAL CORD COORDINATOR at Oncology centre to discuss case

(for Lancashire and South Cumbria 01772 71656 Or Bleep 2664)

IF SUSPECTED:

- Give dexamethasone 16 mg BY MOUTH or convert to SC
- Prescribe medication for gastric protection
- Give adequate analgesia (opioid if necessary) to enable transfer for admission / investigation
- Nurse flat if pain / symptoms suggest spinal instability
- Request urgent admission and MRI scan

Contact local Specialist Palliative Care Team if advice on symptom management required

POST DIAGNOSIS

May have radiotherapy or spinal surgery to stabilise spine and relieve pressure on spinal cord

Aim to maintain function and continence as much as possible

Involve physiotherapy and occupational therapy as soon as possible

Titrate steroids down to the lowest dose over 2—4 weeks dependent on patient’s symptoms and condition

In many cases developing metastatic spinal cord compression is a poor prognostic sign

MAJOR HAEMORRHAGE

CLINICAL PRESENTATION:

- Cardiovascular compromise – hypotension, tachycardia (>100bpm = significant recent bleed)
- Identifiable bleeding source – haematemesis, haemoptysis, PV or PR bleeding, haematuria, melena
- Erosion of an artery by a malignant ulcer or superficial/fungating tumour

- Bleeding of all types occurs in 14% of patients with advanced disease - seek Specialist advice if time and clinical situation permit
- Haemorrhage causes death in approximately 6% patients
- Catastrophic external haemorrhage less common than internal bleeding. Consider gauze soaked adrenaline (1in1000) or tranex-amic acid for superficial bleeding (apply with pressure 10mins)
- It may be a terminal event in both advanced cancer and non-malignant disease.

MANAGEMENT:

A member of staff must remain with the patient to provide support at all times

- Plan ahead where possible, record and share information with key organisations via EPaCCS
- If there are warning signs or high anticipated risk of bleeding have a proposed management plan ideally discussed with patient and/or family and staff
- Record management plan in case notes and communicate this to all team members
- Provide dark coloured towel to disguise blood loss.
- Anticipatory prescribing of Midazolam 10 mg IM, SC, buccal or sublingual.
- The subcutaneous route may be less affective in catastrophic bleeds due to peripheral shut down with unpredictable absorption of the medication

CATASTROPHIC BLEED:

- **Ensure patient is not left alone**
- Keep patient warm
- Use anxiolytic or analgesics as needed if the patient is distressed
- Support the family and those in attendance
- Debrief for staff after the event

FURTHER CARE: It may be necessary to commence and continue an infusion of anxiolytic (midazolam) and/or analgesic e.g. morphine or oxycodone) in the last hours of life.

If bleeding temporarily stops further management will depend on overall clinical status and discussion with patient and family in relation to further acute interventions.