COMPLEMENTARY THERAPIES

- massage therapy may help move fluids around (use caution on thin, fragile or leaking skin)

FEVER

***Fever* =** increased body temperature greater than 37.5°C (99.5°F) oral or groin, 38.0°C (100.5 °F) rectal or 37.0°C (98.5 °F) axilla. May result from bacteria and their endotoxins, viruses, yeasts, antigen-antibody reactions, drugs, tumour products or other exogenous pyrogens affecting the thermoregulatory control centres in the hypothalamus.

PRESENTATIONS

May include:

- asthenia
- dehydration
- light-headedness, dizziness
- chills, rigors
- delirium
- sweating, night sweats

CAUSES

Many different causes (refer to Fever and/or night sweats, *Module 1*).

APPROACHES AND INTERVENTIONS

Examination, investigation and treatment of underlying causes should be appropriate to the presentation, stage and context of the person and illness.

- maintain hydration (see Dehydration)
- manage sweating (see Skin Care)
- manage confusion (see Delirium)
- if delirium present, consider reducing opioid dosage

APPROACHES	INTERVENTIONS
reduce body temperature	• acetaminophen or ASA 325–650 mg po, pr q6-8h prn • NSAID's may be used with caution, especially with neoplastic fever, i.e. ibuprofen 200–400 mg po q4h prn
reduce skin temperature	• remove excessive bed coverings and/or clothing • avoid plastic bed coverings • cool room and move air over the person (open windows, fan) • bathe skin (cool water, ice water, or alcohol in extremes)

COMPLEMENTARY THERAPIES

- homeopathy: belladonna 6 ch qid ac + hs, increase to 30 ch bid, if needed

NEUROLOGICAL PROBLEMS

NEUROPATHIC PAIN

PRESENTATIONS

- see Symptom Management, Pain Characteristics

CAUSES

One of the most common causes of pain in advanced HIV/AIDS.

Infectious:

- direct involvement of the nerve with HIV or CMV
- post herpetic neuralgia

Other:

- certain chemotherapeutic agents
- superimposed medical or metabolic processes, including alcoholism

Malignant:
- Kaposi's sarcoma
- lymphoma
- squamous cell carcinoma

APPROACHES AND INTERVENTIONS

Examination, investigation and treatment of underlying causes should be appropriate to the presentation, stage and context of the person and illness.

- educate about the difference between pain on movement and pain at rest
- if contact with skin produces increased pain, look to methods for minimizing such contact, i.e. positioning, bed cradles to keep bedding off legs/feet

PROBLEMS	INTERVENTIONS
pain due to nerve damage, infiltration	• provide stepwise analgesia (see Pain) • tricyclic anti-depressants (TCA's), i.e. amitriptylline, desipramine, imipramine may be effective and enhance the effect of opioids: – start with 10-25 mg at bedtime for 3-5 days – if no adverse effects, increase in 10-25 mg increments every 3-5 days up to 75-150 mg/24 hours – maximal response may take 2-4 weeks • local anaesthetics, membrane stabilizing antiarrhythmics (do not combine with TCA's) – mexiletine: • start with 100 mg q8h, increase 100 mg q8h every 3 or more days as needed – flecainide: • start with 50 mg po q12h, increase 50 mg q12h every 4 or more days as needed • capsaicin 0.025-0.075% cream, apply to affected areas tid-qid
pain due to nerve compression, irritation	• provide stepwise analgesia (see Pain) – carbamazepine: • start with 100-200 mg po q12h, increase to 100-400 mg po tid-qid, monitor therapeutic plasma levels – valproic acid: • start with 125 mg po q8h, increase to 250-1,000 mg po q8h as needed – phenytoin • start with 100 mg po q8h, monitor therapeutic plasma levels to modify dose as needed – clonazepam: • start with 0.5 mg po q12h, increase to 0.5-3.0 mg po q8h as needed

COMPLEMENTARY THERAPIES

- acupuncture
- chiropractic: lumbar manipulation
- homeopathy: hypericum 6 ch qid + hs, increase to 12 ch tid ac, then 30 ch bid if effectiveness diminshes
- massage therapy
- TENS may provide additional relief, however it is unpredictable
- therapeutic touch

SEIZURES, MYOCLONIC JERKS

***Myoclonic jerks* =** random shock-like contractions or twitches of a portion of a muscle, an entire muscle or a group of muscles in one or more parts of the body

PRESENTATIONS

May include:

- focal motor seizures
- grand mal seizures
- myoclonic jerks

CAUSES

Infectious:
- encephalitis (all causes)
- meningitis (all causes)
- toxoplasmosis

Malignant:
- lymphoma, cerebral

Other:
- medication excess or withdrawal:
  - neuroleptics
  - benzodiazepines
  - opioids
- medication side-effects:
  - foscarnet
- metabolic:
  - hypoglycemia
  - hypoxia
  - Na, K, Ca, Mg imbalance
  - uremia
- substance use

APPROACHES AND INTERVENTIONS

Examination, investigation and treatment of underlying causes should be appropriate to the presentation, stage and context of the person and illness.

- reduce potential for harm to the person:
  - maintain the airway
  - position on side to minimize the risk of aspiration
  - provide oxygen if available
  - protect from physical injury (but not necessarily restrain)
  - reduce external stimuli
- rehydrate, especially if myoclonic jerks are secondary to opioid build-up (see Dehydration)
- reduce or discontinue all medications that are producing CNS excitation or lowering the seizure threshold

PROBLEMS	INTERVENTIONS
seizures	• to control acute seizures – diazepam 10 mg iv, pr q5–10 min prn – lorazepam 3-4 mg iv, sc q 5–10 min prn – midazolam 1-5 mg iv, im, sc q1h prn – phenobarbital 60–120 mg iv, im, pr q10–20 min prn
seizure prophylaxis	• use phenytoin, carbamazepine or other anti-epileptic medications in loading and maintenance doses appropriate for the person (require therapeutic blood level monitoring) (see *Medication Table, Appendix B*) • if there is hypoalbuminemia, phenytoin doses may need to be reduced

LAST HOURS	INTERVENTIONS
seizures	• as swallowing deteriorates, oral medications for seizure prophylaxis may become more difficult, or impossible, to administer • lorazepam placed against the buccal mucosa with a few drops of water will provide ongoing prophylaxis, (midazolam sc could also be used) • phenytoin (standard doses of parenteral solution) may also be administered pr • phenobarbital 60-120 mg iv, im, pr q10-20 min prn

VISUAL LOSS

PRESENTATIONS

May present as loss of central or peripheral vision (dark shadows encroaching from the edges) or blurring of vision.

CAUSES

Infectious:
- CMV retinitis
- herpes simplex or zoster
- PML
- pneumocystis
- toxoplasmosis

Other:
- dehydration
- ischemia
- hemorrhage
- vestibular problems

Malignant:
- lymphoma, cerebral

APPROACHES AND INTERVENTIONS

Examination, investigation and treatment of underlying causes should be appropriate to the presentation, stage and context of the person and illness.

Examination and investigation must be undertaken quickly. Many conditions may lead to permanent blindness, and require an urgent ophthalmologic consultation, particularly as the associated lesions are often difficult for the untrained examiner to see:

- to prevent blindness, continue therapy (particularly for CMV retinitis) until irreversible loss of consciousness has occurred, i.e. ganciclovir, foscarnet (refer to *Module 1*)
- provide early intervention by Canadian National Institute for the Blind (CNIB) or similar agency to help allay fears, and familiarize person with orientation, mobility and rehabilitation teaching possibilities
- provide counselling and psycho-social support as this is a devastating condition
- provide a familiar environment, remove hazards, i.e. floormats and obstacles
- provide assistive devices, i.e. “talking” clocks, special watches with time one can touch

HEARING LOSS

Tinnitus = a noise in the ears including ringing, buzzing, roaring, clicking

PRESENTATIONS

May present with a hearing deficit, loud speech, difficulty understanding conversations, tinnitus

CAUSES

Infectious:
- encephalitis
- oral candida
- otitis externa and media
- PML
- sinusitis

Malignant:
- Kaposi's sarcoma, external ear

Other:
- chemotherapeutic agents, i.e. vincristine
- eustachian tube dysfunction
- coincidental
- external ear blockage i.e. wax

APPROACHES AND INTERVENTIONS

Examination, investigation and treatment of underlying causes should be appropriate to the presentation, stage and context of the person and illness.

- consider anti-histamines or decongestants, if appropriate
- provide hearing aids
- utilize sign language as appropriate (interpreter)

LOSS OF MOTOR/SENSORY FUNCTION

PRESENTATIONS

May include:
- altered reflexes
- areas of muscle weakness, loss of muscle function/wasting
- areas of sensory abnormality or loss

CAUSES

Infectious:
- CMV myelopathy
- encephalitis (all causes)
- HIV encephalopathy or myelopathy
- meningitis
- toxoplasmosis
- PML

Malignant:
- Kaposi's sarcoma (peripheral effects)
- lymphoma (central or peripheral effects)

Other:
- medications:
  - AZT, ddI, ddC
  - chemotherapy
- diabetes
- alcohol

APPROACHES AND INTERVENTIONS

Examination, investigation and treatment of underlying causes should be appropriate to the presentation, stage and context of the person and illness.

- consider physical aids to enhance activities of daily living (see *Activities of Daily Living*)
- consider active and passive exercise
- maintain good skin care (see Skin care/problems)