

Symptom Management

GENERAL PROBLEMS

ANOREXIA/CACHEXIA, ASTHENIA

Anorexia = lack or loss of appetite

Asthenia = lack or loss of strength and energy, including fatigue, lassitude, generalized weakness

Cachexia (wasting) = a state of malnutrition characterized by a significant loss of body weight, adipose tissue and muscle mass

Generalized weakness = the anticipatory subjective sensation of difficulty initiating activity

PRESENTATIONS

May include:

- anorexia
- cachexia, particularly of fat and muscles
- fatigue, lethargy
- nausea (chronic)
- peripheral edema (associated with hypoalbuminemia)
- asthenia
- muscle pain, spasm, weakness
- drowsiness
- pallor
- areas of skin erythema or breakdown

CAUSES

Infectious:

- HIV wasting syndrome
- opportunistic infections (all causes)

Malignant:

- Kaposi's sarcoma
- lymphoma
- squamous cell carcinoma

Other:

- anemia
- economic or social debilitation making self care difficult
- malabsorption including lactose intolerance
- medication side effects (including chemotherapy)
- psychological
- reduced dietary intake

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 medications where possible
- space out activities over time
- practice energy conservation (occupational therapy)
- encourage active and passive exercises (physiotherapy)
- if bed-dependent, turn q2h
- provide support for loss of body image, self esteem (see *Activities of Daily Living*)

| PROBLEMS | INTERVENTIONS |
|--|---|
| altered taste | <ul style="list-style-type: none"> • choose foods that address preference for salt or sweet • may wish to increase seasoning, marinate foods • drink more fluids |
| anemia | <ul style="list-style-type: none"> • transfuse to correct anemia, if symptomatic, particularly if hemoglobin <75. May improve exertional fatigue for mobile individuals. Transfuse HIV + individuals with CMV negative blood |
| anorexia | <p>To stimulate appetite:</p> <ul style="list-style-type: none"> • try small quantities of alcohol before meals (not in children) • megestrol acetate 40 mg od-160 mg tid (doses up to 800 mg/24 hrs may be useful, particularly in early HIV/AIDS. May be very expensive. • steroids: (in decreasing order of choice) <ul style="list-style-type: none"> – prednisone 10-40 mg po od or dexamethasone 1-4 mg po od-q6h – nandrolone 25-50 mg im q1wk – nandrolone decanoate 50-100 mg im q3-4wks – depo-testosterone 200-400 mg im q3-4wks • consider homeopathy: alfalfa tincture 8-10 drops in 70 mls water ac tid |
| autonomic dysfunction, postural hypotension | <ul style="list-style-type: none"> • ensure adequate hydration • mobilize slowly • fludrocortisone 100 µg po od-bid • steroids as above |
| difficulty taking and/or keeping oral fluids and foods¹⁵ | <ul style="list-style-type: none"> • may be due to dysphagia, odynophagia, nausea/vomiting/retching, reflux, regurgitation, head/neck pain and/or problems • to improve esophageal peristalsis and gastro-esophageal sphincter tone: <ul style="list-style-type: none"> – metoclopramide 5-10 mg po, im, iv tid-qid, 1/2 hr ac + hs, or – domperidone 5-20 mg po, tid-qid, 1/2 hr ac + hs, or – cisapride 5-10 mg po tid-qid, 1/4 hr ac + hs or 20 mg po bid • consider naso-gastric, gastric or jejunal tube feeding, especially if dysphagia is reversible • total parenteral nutrition may improve nutrition and serum albumin in early illness and selected cases (not useful in end-stage HIV/AIDS) - see Dehydration |
| reduced nutritional intake or increased metabolic need (i.e. tumour)¹⁶ | <ul style="list-style-type: none"> • assess dietary needs and preferences, nutrition consult may be helpful • choose high caloric and/or high protein fluids and foods • vitamin supplementation • commercial caloric and/or protein supplements (can be diluted with water or ice chips, especially if difficult to swallow or producing diarrhea) • pay attention to food presentation and feeding: <ul style="list-style-type: none"> – prepare small frequent meals – choose food of a consistency which is palatable, easy to chew and swallow |

| | |
|----------------------|--|
| | <ul style="list-style-type: none"> – use appropriate feeding technique, i.e. feed on the same level, let the person take the food, do not rush – provide appropriate environment, socialization to stimulate eating, accompany the person while eating |
| malabsorption | <ul style="list-style-type: none"> • maintain lactose free diet or use lactase enzyme tablets • elemental enteral feeding supplements (isotonic, 30% fat, medium chain triglycerides) |

COMPLEMENTARY THERAPIES

- acupuncture may boost energy
- aromatherapy:
 - for energy, mixtures of bath oils can be made by aromatherapist
- Swedish massage
- therapeutic touch
- traditional Chinese medicine

ARTHRALGIA, MYALGIA

Arthralgia = pain in joint(s)

Myalgia = pain in muscle(s)

PRESENTATIONS

May be a constant achiness in one or more joints or muscles. May get worse with activity.

CAUSES

ARTHRALGIA

Infectious:

- infective arthropathies

Other:

- joint stiffness from lack of movement
- other arthropathies:
 - osteoarthritis
 - psoriatic arthritis
 - rheumatoid arthritis

MYALGIA

Infectious:

- HIV myositis
- drug induced
 - AZT
 - cotrimoxazole

Other:

- denervation:
 - muscle spasm
- flexion contractures
- medication side-effects
- night-time leg cramps
- non-specific manifestation of a systemic viral infection

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 the risk of joint stiffness, muscle spasm, contraction flexures, and position fatigue, by keeping joints and muscles warm and moving, through intermittent active or passive exercise

| PROBLEMS | INTERVENTIONS |
|--|--|
| pain, joint stiffness | <ul style="list-style-type: none"> NSAID's may reduce pain, joint stiffness due to inflammation <ul style="list-style-type: none"> - see Pain - stepwise analgesia chiropractic for musculoskeletal pain homeopathy: <ul style="list-style-type: none"> - for aching muscles, arnica cream topically - for stiff joints, Rhus toxicodendron 30 ch bid qam and qhs |
| bleeding in hemophilia^{12, 13} | <ul style="list-style-type: none"> where there is an increase in, or a new site of pain, bleeding must be considered to manage pain due to bleeding into joints or muscles: <ul style="list-style-type: none"> - manage associated bleeding (see Bleeding - hemophilia) - ice may be used to relieve the initial pain and reduce swelling - provide stepwise analgesia (see Pain) do not use ASA as this binds irreversibly with platelets NSAID's may be needed, however, they should be used with caution as they interfere with platelet function (reversibly) and are potentially dangerous in hemophilia where parenteral medications are required, use only the iv or sc routes of administration. Do not give im injections as they may induce bleeding |
| muscle spasm | <ul style="list-style-type: none"> for neurologically related spasm: <ul style="list-style-type: none"> - diazepam 5–10 mg po q6–8h prn - dantrolene (Dantrium®), start with 25 mg po od, increase by 25 mg per day up to 25–50 mg po bid-qid - baclofen, start with 5 mg po tid, increase q3 days up to 20 mg po tid if required for musculo-skeletal related spasm: <ul style="list-style-type: none"> - diazepam 5-10 mg po q6–8h prn - cyclobenzaprine (Flexeril®) 10 mg po bid-qid - orphenadrine (Norflex®) 100 mg po bid or 60 mg im, iv bid (for acute skeletal muscle spasm) - methocarbamol (Robaxin®) 6–8 g po od for 2–3 days, then reduce to 500-1000 mg po tid-qid aromatherapy: for muscle tension, rosemary and lavender used in massage |
| night-time leg cramps | <ul style="list-style-type: none"> quinine sulphate 200–300 mg po qhs prn |

COMPLEMENTARY THERAPIES

- acupuncture
- Swedish Massage

BLEEDING

Hematuria = blood in the urine

Petechia = small, round, non-raised purplish red spots caused by intradermal or submucosal hemorrhages

Ecchymosis = extravasation of blood under the skin

Hemoptysis = coughing up blood or blood stained sputum

Purpura = area(s) of confluent petechiae or ecchymosis

PRESENTATIONS

May include:

- bleeding problems specific to hemophilia
- bruising
- hematuria
- petechia
- upper and lower GI bleeds, including oral cavity
- bleeding tumour(s)
- ecchymosis
- hemoptysis
- purpura

Bleeding problems specific to persons with hemophilia:^{12, 13}

Minor Bleeding Episodes

- early bleeding into joints or muscles
- prolonged nose bleeds or severe gum bleeding
- urinary bleeding lasting more than several days (check with the attending physician first)

Major Bleeding Episodes

- advanced joint or muscle bleeding
- neck, tongue or throat hematoma
- following head injury, with or without symptoms
- following severe physical trauma
- severe abdominal pain
- gastrointestinal bleeding (vomiting blood, bleeding through rectum, or black, tarry stools)
- any bleeding that suggests nerve entrapment
- psoas muscle bleed

CAUSES

Infectious:

- pneumonia
- TB
- UTI
- sepsis

Malignant:

- Kaposi's sarcoma
- squamous cell carcinoma
- lymphoma

Other:

- hemophilia
- hepatic dysfunction (all causes)
- thrombocytopenia
 - HIV related ITP
 - ITP
 - other
- trauma

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 misoprostol prophylaxis 100–200 µg po q12h–q6h in persons who will use NSAID's, steroids and have a history of bleeding, gastritis or severe anorexia/cachexia
- use standard principles for the management of bleeding:
 - maintain good hydration
 - transfuse to maintain appropriate hemoglobin, hematocrit, coagulation, platelet count. Use CMV negative blood/plasma in those who are HIV +
 - consider vitamin K₁ injections 10 mg iv or fresh frozen plasma

| PROBLEMS | INTERVENTIONS |
|---|---|
| hematuria, urinary tract infection (UTI) | <ul style="list-style-type: none"> • maintain good urinary output • minimize local trauma, i.e. catheter • irrigate bladder to remove clots |
| thrombocytopenia | <ul style="list-style-type: none"> • AZT (refer to <i>Module 1</i>) • prednisone 40-60 mg po od for 1-2 weeks then taper to maintenance dose • transfuse platelets only if required (rare) • consider splenectomy, as a last resort if it will enhance symptom control and the prognosis warrants it |
| medication related bleeding | <ul style="list-style-type: none"> • discontinue responsible medication(s) • if NSAID related <ul style="list-style-type: none"> – initiate misoprostol 200µg po q6h – consider covering gastric ulcers with sucralfate 1 gm po q6h 1 hr ac+hs • if associated gastritis, consider antacids (see Odynophagia-hyperacidity) • if duodenal bleeding, consider H₂ receptor inhibitors <ul style="list-style-type: none"> – Ranitidine® 150 mg po bid or 50 mg iv tid – Omeprazole® 20-40 mg po od |
| skin and tumour bleeding | <ul style="list-style-type: none"> • manage small bleeding sites with silver nitrate sticks • more extensive bleeding may require the application of: <ul style="list-style-type: none"> – topical thrombin 1,000–5,000 units sprayed on bleeding site (Thrombostat®) – Kaltostat™ dressing – epinephrine 1:1000 dabbed or sprayed on bleeding site – absorbent pressure dressings • if risk of large bleeds, warn family and caregivers of potential risks and develop a clear management plan which may include: <ul style="list-style-type: none"> – removal of family from the room – use of red or coloured towels • provide adequate analgesia, sedation |
| problems specific to hemophilia ^{12, 13} | <ul style="list-style-type: none"> • take special precautions to minimize the risk of falling, especially in those who are weak and fatigued • where there is an increase in, or a new site of pain, bleeding must be considered • to manage bleeding: <ul style="list-style-type: none"> – ensure that a supply of the appropriate factor is kept in your local blood bank and the person's home (obtainable from the local Red Cross) – when bleeding occurs, infuse the clotting factor over 5 minutes through a 22 gauge medicut or 25 gauge butterfly needle, then flush the line with 25 mls of N/S and discontinue the iv access. As each unit of Factor VIII / kg body weight increases the factor concentration by 2%, and each unit of Factor IX / kg body weight increases the factor concentration by 1%: (see next page) |

1. for **Hemophilia A** and:

- **minor bleeds**, infuse 15 units of Factor VIII / kg of body weight to increase the factor concentration by 30%
- **major bleeds**, infuse 25 units of Factor VIII / kg of body weight to increase the factor concentration by 50%
- **head injuries**, infuse 50 units of Factor VIII / kg of body weight to increase the factor concentration by 100%

2. for **Hemophilia B** and:

- **minor bleeds**, infuse 20 units of Factor IX / kg of body weight to increase Factor IX concentration by 20%
- **major bleeds**, infuse 40 units of Factor IX / kg of body weight to increase Factor IX concentration by 40%
- **head injuries**, infuse 70 units of Factor IX / kg of body weight to increase Factor IX concentration by 70%

– as Factor VIII has a half-life of 8-12 hrs and Factor IX has a half-life of 12-24 hrs, a second infusion may be necessary within 12-24 hrs if bleeding continues

- to reduce the risk of bleeding, especially where there is a risk of seizures (that could lead to injury), consider infusing the missing factor 2-3 times per week prophylactically
- manage associated pain (see Arthralgia, Myalgia/hemophilia)
- where parenteral medications are required, use only the iv or sc routes of administration. **It is advisable not to give im injections** as they may induce bleeding. Depending on the severity of hemophilia, im injections in severe hemophilia may require Factor VIII/IX before and several days after the injection

DEHYDRATION

Anuria = no urine output

Oliguria = reduced urine output, usually dark in colour

Poor skin turgor = reduced fullness of skin, increased wrinkling, often dry, flaking

Xerostomia = dryness of mouth from lack of normal secretions

PRESENTATIONS

May include, even in the presence of ascites, peripheral or pulmonary edema:

- anuria
- asthenia
- fatigue
- light-headedness, dizziness, orthostatic hypotension
- poor skin turgor
- thirst
- xerostomia

CAUSES

Other:

- reduced fluid intake
- fluid loss due to sweating, fever, diarrhea, nausea and vomiting, etc.
- hypoalbuminemia

APPROACHES AND INTERVENTIONS

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

- always check for postural hypotension
- carefully monitor fluid intake and output
- address issues that are limiting fluid intake or causing excess fluid losses
- reduce elevated body temperature (see Fever)
- **do not overhydrate**, especially in the cachectic person with hypoalbuminemia (monitor skin turgor and minimize ascites, peripheral and pulmonary edema)
- the syndrome of inappropriate anti-diuretic hormone secretion (SIADH) and other electrolyte imbalances may occur in HIV/AIDS

| PROBLEMS | INTERVENTIONS |
|--|--|
| dehydration with normal albumin (normal oncotic pressure) | To rehydrate <ul style="list-style-type: none"> • initially, replace intravascular volume with salt and fluids, then • replace free water and continue to correct electrolyte imbalances • do not over-hydrate |
| dehydration with hypoalbuminemia (reduced oncotic pressure) | To rehydrate <ul style="list-style-type: none"> • initially, carefully replace intravascular volume with salt and fluids. With a lower albumin, you will need less salt and fluid replacement, then • carefully replace free water • do not over-hydrate (watch closely for peripheral and pulmonary edema) • it may not be possible to correct electrolyte imbalances |
| hypoalbuminemia | <ul style="list-style-type: none"> • increase protein intake (if possible) • albumin infusions are not appropriate. The infused albumin is rapidly catabolized and does not correct hypoalbuminemia |

HYDRATION TECHNIQUES

Rehydration may be accomplished by several routes of administration:

| ROUTE OF ADMINISTRATION | SALT SOURCES | FLUIDS WITH MINIMAL SALT |
|-------------------------|--|---|
| oral | <ul style="list-style-type: none"> • club soda, soups, "red" vegetable juices, i.e. tomato, V8, commercial salt and fluid replacement solutions (sport and medical) • extra salt on foods • popcorn, potato chips, nuts • do not push salt intake to the point that it is nauseating | <ul style="list-style-type: none"> • soft drinks, juices (other than "red" vegetable juices), water, mineral waters • tea, coffee and alcohol are diuretics |
| intravenous | <ul style="list-style-type: none"> • normal or half-normal saline (N/S) • Ringer's lactate • others | <ul style="list-style-type: none"> • dextrose and water • half-N/S • 1/3 saline, 2/3 dextrose and water • others |

| ROUTE OF ADMINISTRATION | SALT SOURCES | FLUIDS WITH MINIMAL SALT |
|---|--|---|
| <p>subcutaneous (hypodermoclysis)</p> <ul style="list-style-type: none"> – inject 150 units of hyaluronidase at the needle site before starting infusion (optional) – then infuse 1,000–1,500 mls per 24 hours, rate as tolerated | <ul style="list-style-type: none"> • N/S | <ul style="list-style-type: none"> • not used for sc rehydration |
| <p>rectal</p> <ul style="list-style-type: none"> – route of last choice – not indicated with diarrhea, anal or rectal problems – insert small pediatric feeding tube pr – then instill 250 mls q1h up to 500 mls and wait several hours before repeating | <ul style="list-style-type: none"> • warm N/S | <ul style="list-style-type: none"> • not used for rectal rehydration |

| LAST HOURS | INTERVENTION |
|--|---|
| <p>dehydration¹⁷</p> | <ul style="list-style-type: none"> • iv/sc hydration is only useful if condition is reversible and should not be started during the last hours of living unless there is a clear indication for it • isotonic dehydration may be protective as increased ketones may induce some anesthesia • the individual will suffer from dehydration: <ul style="list-style-type: none"> – if free water consumption leads to hyponatremia (may produce nausea) – if mucous membranes dry out and become painful – if feeling thirsty • rehydration may settle terminal delirium if dehydration is a factor • see Dysphagia |
| <p>dry mucous membranes</p> | <p>Eyes</p> <ul style="list-style-type: none"> • keep conjunctiva moist with: <ul style="list-style-type: none"> – artificial tears or N/S 2 drops each eye q1h prn, especially when eye is open, or – ocular lubricant, i.e. Lacri-lube™ • the eye lid may not be able to close properly when the eyeball sinks back into its socket, (as the fat behind the orbit disappears in extreme anorexia/cachexia) <p>Lips and Nares</p> <ul style="list-style-type: none"> • reduce evaporation from exposed mucous membranes by applying a thin layer of petroleum jelly or other moisturizer, i.e. Secaris™ q1h prn (caution: avoid petroleum products with plastic tubing, i.e. nasal prongs) |

dry mucous membranes

Mouth and Teeth

- keep moist and clean using baking soda mouthwash q30-60 min prn (1 tsp baking soda, 1 tsp salt, 1 quart tepid water)
- avoid commercial mouthwashes
- do not insert fingers beyond the teeth (avoid bites)
- apply mouthwash and any medications with sponge swabs
- avoid lemon-glycerine swabs (while these are stimulating in the individual who can produce saliva, the glycerol is desiccating and the lemon irritating in the individual with xerostomia)
- cover oral ulcers with topical anesthetics
- dab candida with mycostatin suspension
- a humidifier may reduce drying (be careful not to increase risk of respiratory infections)

EDEMA, LYMPHOEDEMA, ASCITES

Edema = accumulation of excessive fluid in extracellular spaces

Lymphoedema = accumulation of excessive lymph fluid in extracellular spaces

Ascites = accumulation of excessive serous fluid in the abdominal cavity

PRESENTATIONS

May appear in:

- | | |
|---------------|------------------|
| • abdomen | • back |
| • conjunctiva | • feet and legs |
| • genitals | • hands and arms |
| • head/neck | • lungs |

Edema of subcutaneous tissues may be **pitting** (due to serous fluid leakage from blood vessels) or **non-pitting** (due to chronic lymphatic fluid leakage from blocked lymphatic drainage channels).

CAUSES

PITTING PERIPHERAL EDEMA

Malignant:

- Kaposi's sarcoma
- lymph node obstruction

Other:

- congestive heart failure (CHF)
- dependent (postural) edema
- hypoalbuminemia
- over-hydration
- thrombosis
- venous insufficiency
- venous obstruction

NON-PITTING PERIPHERAL EDEMA

Malignant:

- Kaposi's sarcoma
- lymphoma

ASCITES

Malignant:

- Kaposi’s sarcoma
- lymphoma

Other:

- CHF
- hypoalbuminemia
- liver congestion
- over-hydration

PULMONARY EDEMA

Other:

- CHF
- over-hydration
- uremia

- manage salt and fluid balance carefully, do not over-hydrate
- elevate and/or carefully support edematous and dependent part(s) of the body to move fluids and reduce risk of skin breakdown (see Skin care/problems)

APPROACHES AND INTERVENTIONS

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

| PROBLEMS | INTERVENTIONS |
|--------------------------|--|
| ascites | <ul style="list-style-type: none"> • diuretics may be helpful if albumin is not too low. Start gently and increase dose as appropriate: <ul style="list-style-type: none"> – spironolactone 50–250 mg po od-bid and/or – furosemide 20–120 mg po od (caution: excessive diuresis may produce postural hypotension, especially in presence of hypoalbuminemia) • consider paracentesis if symptomatic (abdominal discomfort or pain, dyspnea, orthopnea) and appropriate for the stage of the illness |
| non-pitting edema | <ul style="list-style-type: none"> • elevate and support edematous and dependent limbs • protect skin, especially at points of contact (see Skin Care/problems) • manage concurrent pitting edema • steroids may reduce obstruction causing edema: <ul style="list-style-type: none"> – dexamethasone 1–8 mg po, iv, im sc q6h • consider prophylactic measures to reduce risks of deep vein thrombosis and pulmonary embolism, i.e. heparin 5,000 units sc bid-tid |
| pitting edema | <ul style="list-style-type: none"> • elevate and support edematous, dependent limbs • protect skin, especially at points of contact • diuretics may be helpful if albumin is not too low. Start gently and increase dose as appropriate: <ul style="list-style-type: none"> – spironolactone 50–250 mg po od-bid – furosemide 20–40 mg po, iv od • use Tedd™ stockings to compress edematous legs • if there is no skin breakdown consider using a sequential lymphoedema pump, i.e. Lymphopress™ to move fluids • consider prophylactic measures to reduce risks of deep vein thrombosis and pulmonary embolism, i.e. heparin 5,000 units sc bid-tid |
| pulmonary edema | <ul style="list-style-type: none"> • manage cough, shortness of breath (see Cough, Dyspnea) • use appropriate cardiac medications to manage arrhythmias, CHF, ischemia • diuretics: <ul style="list-style-type: none"> – furosemide 20–240 mg po, iv prn, or – ethacrynic acid 50–200 mg po, iv • oral nitrates or nitro paste may enhance peripheral venous dilatation • administer oxygen, as appropriate • avoid over-hydration |

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 | <ul style="list-style-type: none"> • 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 | <ul style="list-style-type: none"> • 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