Palliative Care

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Definitions

WHO* defined palliative care as:

an approach that improves **the quality of life** of patients (adults and children) and their families facing the problems associated with life-threatening illness, through the prevention and relief of suffering by means of early identification and correct assessment and treatment of pain and other problems, physical, psychosocial, and spiritual

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Spiritual Care
Cultural Care
Circle of palliative care
Emotional Care
Physical Care
Social Care

WHO definition of palliative care for children:

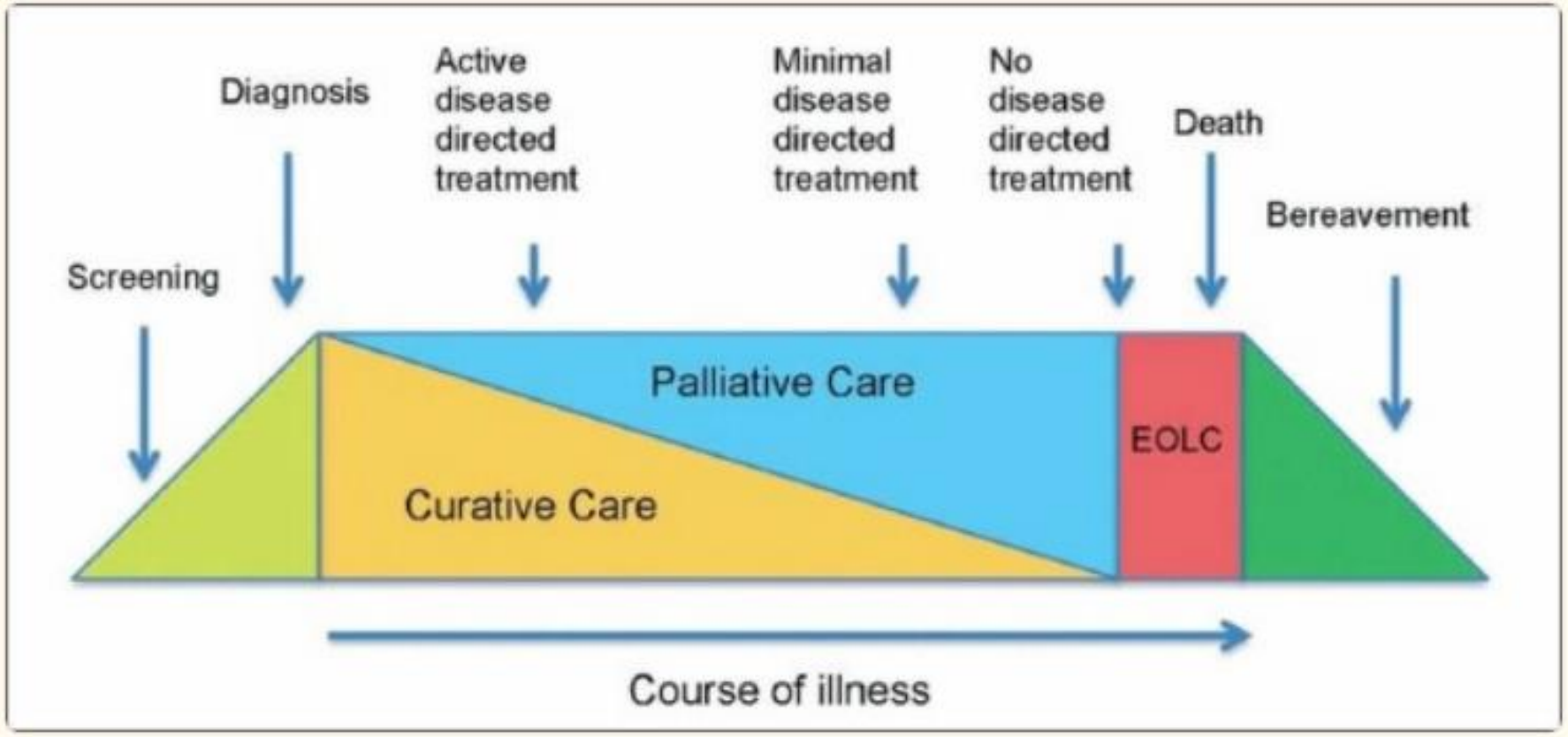
Palliative care for children is the active total care of the child's body, mind and spirit, and also involves giving support to the family.

Arguments against WHO definition*

- Is it exclusively for people with a **“life-threatening illness**?” Or is it for any patient or family facing the types of **problems** “associated with life-threatening illness?” Many people who do not have clearly a life-threatening illness have problems like pain, dyspnoea, anxiety, depression, impoverishment, or spiritual crisis that are “associated with life-threatening illness.
- A palliative care more responsive to the full variety of peoples’ suffering, and thus more people-centred, could be defined as follows: *Palliative care is the prevention and relief of suffering of adult and paediatric patients – whether physical, psychological, social, or spiritual – and of the psychological, social, and spiritual suffering of family members.*

Diseases requiring palliative care

Adults(15 years and above)	Children(under age 15)
➢ Alzheimer's and other dementias, ➢ cancer, ➢ cardiovascular diseases (excluding sudden deaths), ➢ cirrhosis of the liver, ➢ chronic obstructive pulmonary diseases, ➢ diabetes, ➢HIV/AIDS, ➢ kidney failure, ➢multiple sclerosis, ➢ Parkinson's disease, ➢ rheumatoid arthritis, ➢ drug-resistant tuberculosis	➢cancer, ➢ cardiovascular diseases, ➢ cirrhosis of the liver, ➢ congenital anomalies (excluding heart abnormalities), ➢ blood and immune disorders, ➢ HIV/AIDS ➢ kidney diseases, ➢ meningitis, ➢ neurological disorders ➢ neonatal conditions


Diagnosis
Active disease directed treatment
Minimal disease directed treatment
No disease directed treatment
Death
Bereavement
Screening
Palliative Care
EOLC
Curative Care
Course of illness

Integration of Palliative Care Into Standard Oncology Care

American society of clinical oncology(ASCO) recommended that:

Inpatients and outpatients with advanced cancer should receive dedicated palliative care services, early in the disease course, concurrent with active treatment. Referral of patients to interdisciplinary palliative care teams is optimal, and services may complement existing programs. Providers may refer family and friend caregivers of patients with early or advanced cancer to palliative care services

Definition of Hospice:

Hospice care is end-of-life care (prediction of life expectancy <6 months) provided by health professionals and volunteers. They give medical, psychological and spiritual support

What is the difference between palliative care and hospice?

- Palliative care is offered at all stages of the disease process (early & late)

- Hospice care is a form of palliative care that is given when therapies are no longer controlling the disease; it focuses on caring, not curing. Its candidates should have a prediction of life expectancy <6 months. A patient should have a **Karnofsky Performance Scale(**KPS) < 70 % or PPS **Palliative Performance Scale (PPS)**of ≤ 70 % to be considered for hospice.

Karnofsky Performance Scale

General category	%	Specific criteria
Able to carry on normal activity	100	Normal general status—no complaint—no evidence of disease
No specific are needed	90	Able to carry on normal activity—minor sign of symptoms of disease
	80	Normal activity with effort, some signs of symptoms of disease
Unable to work	70	Able to care for self, unable to carry on normal activity or do work
Able to live at home and care for most personal needs	60	Requires occasional assistance from others, frequent medical care
Various amount of assistance needed	50	Requires considerable assistance from others, frequent medical care
Unable to care for self	40	Disabled, requires special care and assistance
Requires institutional or hospital care or equivalent	30	Severely disables, hospitalization indicated, death not imminent
Disease may be rapidly progressing	20	Very sick, hospitalization necessary, active supportive treatment necessary
Terminal states	10	Moribund
	0	Dead

Palliative Performance Scale (PPS)

%	Ambulation	Activity level evidence of disease	Self care	Intake	Level of consciousness	Estimated median survival (days) a	b	c
100	Full	Normal *No disease*	Full	Normal	Full	NA	NA	108
90	Full	Normal *Some disease*	Full	Normal	Full			
80	Full	Normal with effort *Some disease*	Full	Normal or reduced	Full			
70	Reduced	Can't do normal job or work *Some disease*	Full	As above	Full	45		
60	Reduced	Can't do hobbies or housework *Significant disease*	Occasional assistance needed	As above	Full or confusion	29	4	
50	Mainly sit/lie	Can't do any work *Extensive disease*	Considerable assistance needed	As above	Full or confusion	30	11	41
40	Mainly in bed	As above	Mainly assistance	As above	Full or drowsy or confusion	18	8	
30	Bed bound	As above	Total care	Reduced	As above	8	5	
20	Bed bound	As above	As above	Minimal	As above	4	2	6
10	Bed bound	As above	As above	Mouth care only	Drowsy or coma	1	1	
0	Death	As above						

Traditional medicine	Palliative Medicine
curative	symptomatic
distress reduction and improvement in quality of life are secondary issues	primary
Mono-or multi- or interdisciplinary	Multi- or interdisciplinary

Multidisciplinary team MDT	Interdisciplinary team IDT
There is a leader of the team that consult different specialties (who work in relative isolation) and he/she takes the final decision.	The team is sharing and integrating work from the beginning, and leadership is task dependent rather than hierarchy dependent.

Benefits of IDT

- ✓ increased patient satisfaction
- ✓ enhanced quality of life
- ✓ increased accuracy of care
- ✓ decreased time to treatment
- ✓ decreased variability of care

Categories of Palliative Care Provision

Hospice and palliative care inpatient units: where patients are admitted either for rehabilitation following treatment, for control of symptoms, or during the very final stages of their illness

Community palliative care: Where teams offer care for patients at their homes; such care includes advice on pain and symptom control, hands-on nursing, practical advice, and emotional support

Hospital palliative care teams: these teams work alongside surgeons, physicians, nurses, and other health- and social care professionals. Their role is to support the hospital staff by providing education, training, and specialist advice on pain and symptom control

Day centers: where they offer care for patients without being inpatient

Hospice at home: where hospice care is offered to patients in their homes by specialized teams. Some teams can offer 24-h nursing care

Barriers and Challenges for palliative care team

- Lack of political will and administrative support, institutional back-up
- Lack of Inadequate and non-sustainable funding,
- Difficult identifying specific team members
- logistic issues such as:
  - the format, location, frequency, duration, and order of prioritization of the IDT meetings
  - professionals from different disciplines(neurosurgeon, radiation oncologist, nursing staff, psychologist, social worker, counselor, chaplain) speak different languages


Palliative Care:
symptom management of a chronic or life-limiting illness
Hospice Care:
comfort care at the end of life

GIT symptoms control

Anorexia or Anorexia/cachexia syndrome (ACS)

Definition :a complex metabolic process characterized by a loss of appetite, weight loss, and tissue wasting.

Causes:

1 . Many end-stage illnesses

2 . In cancer, pathophysiology of anorexia is shown in next table

3 .In cancer, ACS is due to:

a. Hypermetabolic state due to cancer (1ry ACS) &/or
b. ↓ food intake due to causes as nausea/vomiting, oral mucositis, …etc (2ry ACS)

Diagnosis :

- exclusion of reversible causes (e.g., pain, depression)
- check for oral problems (e.g., xerostomia, ill-fitting dentures, ulcers, candidiasis)

Pathophysiology of anorexia*

Peripheral *Tumour-producing*	• **Substances that alter food intake, e.g., increased lactate, tryptophan, or parathormone-related peptide** • **Alterations in nutrients resulting in anorexia, e.g., low zinc levels result in hypogeusia** • **Decreased ghrelin**
Peripheral *Chemotherapy-producing*	• Altered taste perception and causing nausea, vomiting, mucositis, abdominal cramping, bleeding, and ileus • Dysgeusia
Cytokine release	Increased: IL-1, IL-6, TNFα
Central	• Depression • Pain • Alterations in central neurotransmitters (e.g., 5HT & CRF)

Treatment:

1. **Treatment of the cause if present.**
2. **The patient should be encouraged to take soft, easy-to-swallow foods, nutritious drinks, or snacks. Avoid liquid intake with food to prevent early satiety. Nutrition consultation.**
3. **Pharmacological Management**
   a. **Corticosteroids: (**Inhibition of synthesis and/or release of proinflammatory cytokines such as TNF and IL-1) ↑ appetite, caloric intake, energy/wellbeing, and functional status **but only for short term (4 wk)**. Dose : start by oral dexamethasone 4 mg or prednisolone 30 mg daily & then ↓ to lowest dose. Proton pump inhibitor must be given
   b. **Progesterons** : (Action on cytokines, and inhibiting TNF) ↑ appetite & body weight in cancer. Have a slow onset (few weeks) but with prolonged effect. Dose: **Megestrol acetate**: (**Megace ®)** starting dose 160 mg orally daily for 1 month, ↑ up to 800 mg. Side effects: nausea, fluid retention, increased risk of thromboembolism.peripheral edema, hypertension, hyperglycemia, breakthrough uterine bleeding, and suppression of the hypothalamic–pituitary–adrenal axis.
   c. **Dronabinol** : (Annabolic) 2.5 mg PO twice daily (max: 20 mg/day)
   - **d. Mirtazapine** : (Blockage of postsynaptic 5-$HT1_b$ and 5-HT_2 receptors with appetite stimulation; blocks 5-HT_3 receptor (anti-nausea) 15–30 mg PO at bedtime, onset 1–2 weeks (also beneficial for depression, nausea, and insomnia)
   e. **Prokinetics** in cases of early satiety, delayed gastric emptying, gastroparesis, or nausea. **Metoclopramide** 10 mg **or domperidone** 10–20 mg (fewer long-term side effects) tds 1/2 h before meals
   f. **Cannabis/cannabinoids** stimulates appetite via its action on the cannabinoid Type I receptors (CB1) in the hypothalamus

Dry Mouth = Xerostomia

Definition	subjective sensation of dryness of the mouth.
Causes	1. Diseases or conditions involving salivary glands or their nerve supply e.g. cancer, surgery, radiotherapy 2. Dehydration 3. ↓ oral intake 4. Anxiety or depression 5. Drugs e.g. hyoscine (Buscopan®), amitriptyline (Tryptozol®)
Symptoms & Signs	chronic dry mouth may lead to recurrent oral infections including candida, painful excoriation and ulceration.

Treatment	• Treatment of the cause (consult the dentist)
	• Pharmacological treatment
	  ○ Saliva stimulants : Pilocarpine tablets 5 mg (tds) with or immediately after meals
	  ○ Artificial saliva and oral lubricants (e.g. biotene)
	  ○ correct dehydration
	• Non-pharmacological
	  ○ sucking ice cubes
	  ○ sugar-free chewing gum, mints, malic acid (saliva stimulants)

Stomatitis .

Definition	diffuse inflammatory, erosive, and ulcerative condition affecting the mucous membranes of the mouth. **WHO grades of stomatitis:** **0** No symptoms **I** Painful ulcers, erythema, or mild soreness **II** Painful ulcers, edema, or ulcers but able to eat **III** Painful ulcers, edema, or ulcers, unable to eat **IV** Requires parenteral or enteral support
Causes	• Trauma • recurrent aphthous ulcers • infection • cancer • nutritional deficiencies. • **chemotherapy or radiotherapy**
Treatment	**Prevention**: • good nutritional intake, • good oral •hygiene practices, and early detection of any oral lesions •recombinant human keratinocyte growth factor-1 (Palifermin) for high-dose chemotherapy and total body irradiation **Treatment of the cause** **Pharmacological treatment** • Topical Analgesics: Benzydamine (tantum verde) oral rinse, Choline salicylate dental gel, Flurbiprofen lozenges, Topical local anesthetics (Bbc spray & citrulin mw & dentocaine oral gel & lignoral spray), Topical opioids e.g. Morphine sulfate solutions •Systemic analgesics: opioids & nonopioids

Nausea and Vomiting

Definition	• Nausea is an unpleasant sensation experienced in the back of the throat and the epigastrium that may or may not culminate in vomiting. • Vomiting is the forceful expulsion of the contents of the stomach through the oral or nasal cavity. • Retching is the unsuccessful attempt to vomit
Common Causes	• ↑ intracranial tension • GIT mechanical obstruction • Drugs: opioids & chemotherapy • Vestibular disease • Others e.g. uremia & hypercalcemia
Treatment	**Treatment of the cause** **Pharmacological treatment** • Prophylactic e.g. use of antiemetics when starting opioids or chemotherapy • Antiemetics include: ○ Antidopaminergics: Domperidone 10–20 tds; Metoclopramide 10–20 tds/; Haloperidol 1.5–3 od/bd ○ Anticholinergics: Hyoscine (scopolamine) butylbromide20 qds ○ Anti-5HT3 granisetron 1–2 mg or ondansetron 8 mg bd/tds orally or parentrally ○ Anti H_1 &Anticholinergics: Cyclizine 50mg (Emetrex amp. Or tab.) q4h–q6h ○ Steroids dexamethasone 8–16 mg daily.

Constipation

Definition	passage of small hard feces more infrequent and difficult than normal pre-illness pattern
Common causes	1. Poor nutrition, ↓ fluid intake, low fiber diet 2. GIT diseases e.g. diverticulitis, anal fissure 3. Cancer: abdominal & pelvic 4. Neurological: spinal cord compression 5. Metabolic : hypercalcemia 6. Drugs: **opioids**
Symptoms	1. bowel habit: pervious & current frequency, consistency of stool and Use of laxatives 2. Symptoms for specific causes
Signs	Examination must include abdominal, rectal & neurological exam.
Treatment	**1. Treatment of the cause** **2. Pharmacological treatment:** **a. First-line treatment with oral laxative**: **See next table** **b. Second-line treatment**: i. Rectal suppository and enema ii. use of a peripherally-specific opioid antagonist, eg, methylnaltrexone, if patient taking an opioid **3. Non-pharmacological treatment** a. good oral fluid intake b. high- fiber diet

Laxative class*	Mode of action	Expected time to effect	Adverse effects	Evidence for use in palliative care
Osmotic: sugar laxatives such as lactulose	pass unchanged into the colon. In the colon, the sugar is broken down into fatty acids and lactic acid which in turn changes the intraluminal pH and increases intraluminal pressures. These changes increase peristalsis and promote water retention in the lumen	1–2 days	Bloating, abdominal pain, cramping, electrolyte disturbances	Moderate when co-prescribed with senna
Stimulant such as senna and bisacodyl	induce propagated colonic activity leading to increased colon transit times. Bisacodyl may also be given as a suppository with the main action being in the rectum	8–12 h	Watery diarrhea, cramping abdominal pain, nausea, dehydration, and electrolyte disorders	Moderate
Polyethylene glycols	possesses a water binding capacity. The orally administered fluids soften the stools in the large bowel without causing an influx of fluid into the bowel lumen	1–3 days	Abdominal pain, bloating, nausea	Poor but in routine use
Softeners e.g. emollients and lubricants	Emollients include docusate and lubricants include mineral agents. The aim of these agents is to make the actual passage of the stool easier	They do not induce laxation but cause softening in 2–3 days	Fecal soiling	Low but in routine use
Prokinetics: prucalopride	selective 5-HT4 agonist	Hours	Headache, nausea, abdominal pain, diarrhea	Low

Neuro-psychiatric Comorbidities

Neuro-psychiatric Comorbidities

Neurological and neurosurgical diseases have been found to be the second most common conditions in patients seen by a palliative care inpatient consultation service*

Neuro-psychiatric Comorbidities

In hospice patients, for example, roughly 50% will experience symptoms of depression, approximately 70% will experience clinically significant anxiety, and nearly all patients will experience delirium as death nears*

Neuro-psychiatric Comorbidities

- Anxiety
- Delirium
- Depression
- Myoclonus

Anxiety

Anxiety occurs in more than 70% of medically ill patients, especially those approaching the end of their lives.

Most of these patients have worries, fears, and apprehensions that result in symptoms of anxiety but do not rise to the level of an anxiety disorder.

Anxiety Management

- **Psychiatrist** helps the team when to intervene, and what therapies to use.
- **Nonpharmacological interventions** are typically the first line of therapy in patients with advanced life-threatening illnesses. Supportive and (or) group psychotherapy, Dignity Therapy, and alternative medical approaches, such as progressive muscle relaxation, massage therapy, guided imagery, hypnosis, meditation, or aromatherapy
- If **psychopharmacology** is needed, a psychiatrist can suggest and monitor the effect of medications not typically used for anxiety, such as beta-blockers, mood stabilizers, and trazodone.
- ***In general, benzodiazepines should not be used as first-line agents and only play a very limited role for anxiety management in this patient population***.

Delirium

- What is Delirium and its distribution ?
- What are its types?
- What are its causes?
- What are its ttt?

Delerium

Among patients with cancer admitted to a hospital or hospice, 44% may experience delirium; 50% of this delirium may be reversible. As patients approach the end of their lives, more than 80% may experience delirium.

Def	Acute disturbed consciousness and inattention with cognitive impairment
Types	• hypoactive: quiet, withdrawn, and inactive • hyperactive: increased arousal, agitation, or hallucinations • mixed pattern
S & S	• altered conscious state, • impaired thinking (delusions), • impaired judgment, • altered perceptions (hallucinations, illusions), • disorientation (time, person, place), • disordered speech, • disturbed sleep pattern (drowsy by day, insomnia at night) • memory deficits
Common causes	• Cerebral tumor, cerebrovascular disease • Renal or hepatic dysfunction • Electrolyte imbalance • **Uncontrolled pain** • **Urinary retention** • Drugs: **opioids**, steroids, antineoplastics, (e.g., vincristine, vinblastine, asparaginase), anticholinergics • Drug withdrawal; sedatives or antidepressants
Treatment	➢ **Psychiatric consultation** ➢ **Treatment of the cause** ➢ **Pharmacological: 1. Haloperidol** (D2R antagonist) 5 mg/d in divided doses; has extrapyramidal symptoms so it is contraindicated in parkinsonism. **2. Risperidone** (riscure 1,2,4 mg tab) 1-2mg bid; preferred in parkinsonism. **3. Benzodiazepines**: (medizolam or lorazepam) can cause paradoxical worsening of delirium; indicated only in drug withdrawal. ➢ **General measures**: quiet area, & minimize noise

Role of Psychiatrists in treatment of delirium

Psychiatrists can recommend strategies to:

- ensure patient, family, and caregiver safety;
- modify the environment and teach family and staff helpful behaviors;
- recommend appropriate medications, depending on whether the **delirium is reversible** (that is, if reversible, use antipsychotics and avoid benzodiazepines, or **if irreversible terminal delirium**, use benzodiazepines for their sedative, amnestic, muscle relaxant, and antiepileptic properties)
- provide ongoing support to the patient, family, caregivers, and the health care team

Depression

- Prevalence of up to 42% has been reported in patients enrolled in palliative care programs
- Untreated depression can
  - increase the perceived severity of pain and other symptoms;
  - affect physical health and quality of life;
  - impair a patient's capacity to make decisions, interact with caregivers, and (or) attain final goals of life; and
  - significantly increase the probability of morbidity, mortality, and suicide.

Depression

Def	Depression is a mental disorder that presents with depressed mood, loss of interest, feelings of hopelessness, helplessness, worthlessness, or guilt, & disturbed sleep or appetite
Risk factors	• **Terminal diseases** • **Poorly controlled symptoms e.g. pain** • Physical disability • Recent bereavement • Current life stresses • Family history of depression
DD	❑ **Delirium**: disturbed consciousness & incoherent speech ❑ **Dementia**: poor orientation & memory deficits

Treatment	➢ **Treatment of the cause**
	➢ **Psychiatric consultation**
	  ➢ Antidepressants (take weeks to work): TCAs, SSRIs, & SNRIs. Should be withdrawn slowly
	  ➢ Psychological therapy

Myoclonus

Def	intermittent, irregular, involuntary, jerky movement generally involving the limbs.
Causes	• **Neurological:** MS, Alzheimer's disease • **Opioid toxicity** (due to overdose, dehydration or renal dysfunction)
Treatment	➢ **Treatment of Reversible causes** ➢ Decrease opioid dose, treat dehydration & renal dysfunction, opioid rotation ➢ **Pharmacological**: benzodiazepines e.g. clonazepam 0.5-1 mg at night

Palliative Care Emergencies

- **Hemorrhage**
- ***Hypercalcemia***
- ***SCC (spinal cord compression)***
- ***SVCS (superior venacava occlusion)***
- **Convulsions**

Hypercalcemia

Def	**Corrected Serum Ca more than 2.6 mmol/L** Corrected calcium (mmol/L) = uncorrected level + 0.02 [40 - serum albumin in g/L] .
S & S	• 2.65–3.0 mmol/L (None or mild) : fatigue, anorexia, nausea, constipation, polyuria • 3 -3.5 mmol/L (Moderate) : vomiting, thirst, mild confusion, muscle weakness • 3.5-4 mmol/L (Severe) dehydration, ileus, psychosis • >4.0 mmol/L (Life threatening) bradyarrythmias, heart block, coma, systolic arrest, and death
causes	❑ **Malignancy: bone metastases , MM** ❑ Hyperparathyroidism ❑ RF ❑ Sarcoidosis ❑ Drugs: thiazides, Vit D toxicity
Treatment	➢ **Adequate hydration** ➢ **Loop Diuretics** ➢ **Bisphosphonates**; inhibit bone resorption, possibly by acting on osteoclasts or osteoclast precursors (risk of osteonecrosis of the jaw) e.g. **Zoledronic acid** (Zometa®) 4mg IVI & **Ibandronic acid** (Bondronat®) 2-4 mg IVI or 5o mg/day orally (They should be taken on an empty stomach 1 h before the first food or drink (other than water) of the day & taken while sitting or standing) ➢ **Calcitonin** (Miacalcin® SC (short duration) ➢ **Corticosteroids** for hypercalcemia due to increased Calcitriol production, as seen in some patients with lymphoma ➢ **Denosumab** is the latest treatment option in the management of hypercalcemia of malignancy. It inhibits osteoclast activity resulting in reduced bone resorption. ➢ **Dialysis** is likely to be considered when a patient has renal impairment or cardiac failure and where aggressive fluid hydration may be challenging. ➢ **ttt of the cause**

Spinal Cord Compression

causes	• Traumatic • Malignancy: metastases of vertebrae(thoracic > lumbar > cervical)
S&S	❑ Sensory: paresthesia. Pain , loss ❑ Loss of bladder/bowel sensation ❑ Motor weakness or paralysis ❑ Reflexes: weak or lost
Diagnosis	MRI
Treatment	➢ **Immediate measures** ▪ Urgent surgical decompression (Neurosurgical consultation) or Radiotherapy *((ideally should be commenced within 24 h of radiological diagnosis for best functional outcome))*, The maximal benefits from radiotherapy usually takes 4–6 weeks to occur ▪ Dexamethasone 16 mg/day IV ➢ **Other measures** ▪ Analgesics for pain ▪ Bisphosphonates

Superior vena cava obstruction (SVCO)

Causes	• **70% due lung cancer (esp. Rt side)** • **10 % lymphoma** • **Other causes: other malignancies, sarcoidosis, thrombosis**
Classification	• See Grading Scheme in next table
symptoms	• dyspnea, • facial/upper body and arms swelling and/or skin mottling • headaches
signs	❑ • swelling of the face and neck, and ❑ • prominent blood vessels in the neck, trunk, and arms
Diagnosis	CT chest
Treatment	➢ **Immediate dexamethasone** (16 mg/day) to reduce edema associated with the mediastinal tumor and reduce radiotherapy-induced inflammation ➢ **Vascular stent** ➢ **Chemotherapy and Radiotherapy**

SVCS Grading

Grade	Category	Estimated incidence (%)	Definition
0	Asymptomatic	10	Radiographic superior vena cava obstruction in the absence of symptoms
1	Mild	25	Edema in head or neck (vascular distention), cyanosis, plethora
2	Moderate	50	Edema in head or neck with functional impairment (mild dysphagia, cough, mild or moderate impairment of head, jaw or eyelid movements, visual disturbances caused by ocular edema)
3	Severe	10	Mild or moderate cerebral edema (headache, dizziness) or mild/moderate laryngeal edema or diminished cardiac reserve (syncope after bending)
4	Life-threatening	5	Significant cerebral edema (confusion, obtundation) or significant laryngeal edema (stridor) or significant hemodynamic compromise (syncope without precipitating factors, hypotension, renal insufficiency)

Thank you