Supportive care in hematooncology

Areas of supportive care

1. Prevention and treatment of infections
2. Substitution with blood products
3. Pain management
4. Antiemetic prophylaxis and treatment
5. Nutrition support
6. Palliative care

Basic scenarios of treatment of hematooncological patients

1. Patient treated with curative intent, good performance status, no/minimal comorbidities: prevention and treatment of infections, outpatient treatment

2. Patient treated with curative intent, poor performance status and/or significant comorbidities:

- Inpatient treatment
- Improvement of performance status (pain management, nutrition, rehabilitation)
- Narrow window of opportunity – do not miss it!

3. No curative/life prolonging options, patients in both good and poor performance status: symptomatic therapy, outpatient if possible

ECOG/WHO score

0 Fully active, able to carry on all predisease performance without restriction
1 Restricted in physically strenuous activity, but ambulatory and able to carry out work of a light and sedentary nature (e.g. light house work, office work)

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2 Ambulatory and capable of all self-care but unable to carry out any work activities. Up and about more than 50% of waking hours.
3 Capable of only limited self-care, confined to bed or chair more than 50% of waking hours
4 Completely disabled. Cannot carry on any self-care. Totally confined to bed or chair.
5 Dead

Curative intent is attempt to cure or significant life prolongation (not necessarily succesfull)

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What would first come to your mind if the doctor said: „We wil contact you with the palliative team?

1. So, this is the end…
   0
2. I‘m staying calm and waiting for more information
   0
3. I‘m not interested in palliative care, I want some other curative option
   0
4. Hooray, I can spend more time at home
   0
5. So they will transfer me in the hospice…
   0
6. Hey, what does this mean - palliative care?
   0

What comes to your (= doctor‘s mind) if you hear or read „palliative care?“

1. Improves quality of life
   -
2. Prolongs life
   -
3. It‘s an inpatient hospice care
   -
4. Can be offered together with curative treatment
   -
5. Should also include work with patient‘s family
   -
6. This label carries too many negative connotations, we should rename it
   -

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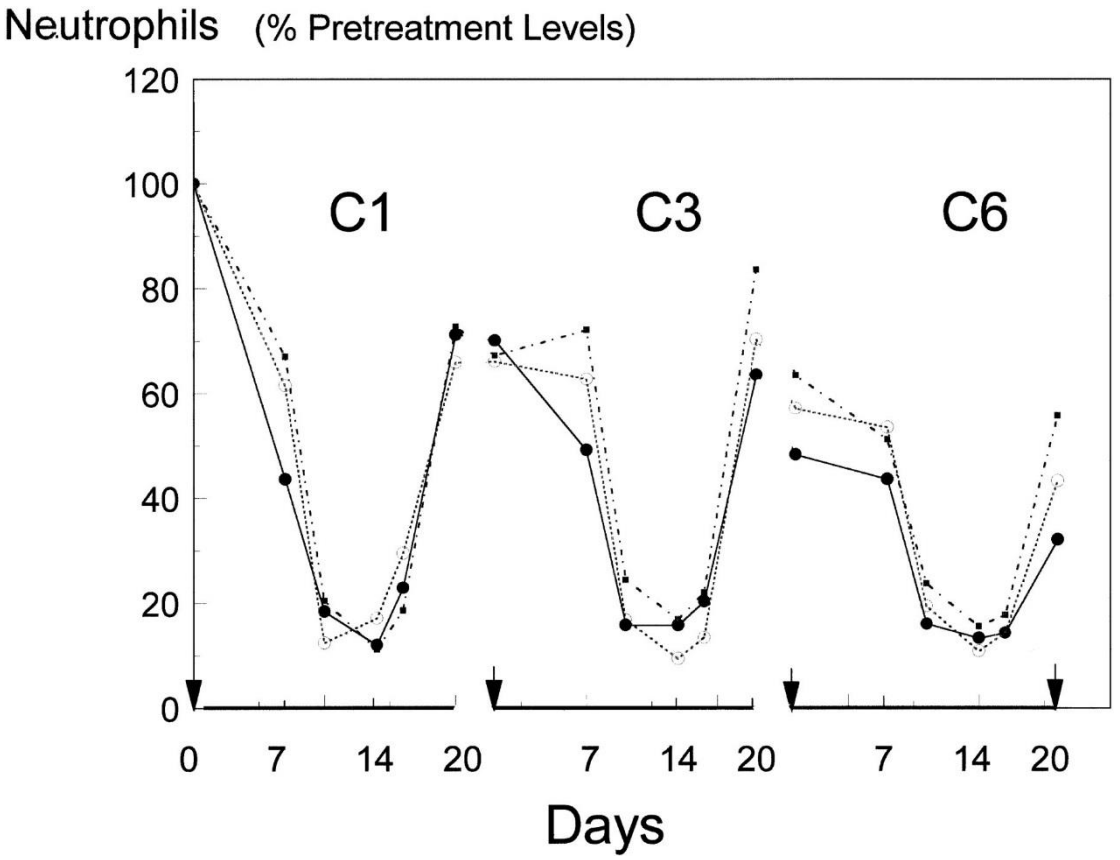
What is most important in infection prevention?

1. To wear a face mask
   - 0
2. No outdoor activities
   - 0
3. Hands washing
   - 0
4. Preventive antibiotics, antimycotics
   - 0
5. To stay in the hospital
   - 0

Infections in hematooncological patients

- ✓ Repeated cycles of chemotherapy are toxic especially to bone marrow and mucosal membranes
- ✓ Treatment with corticoids and monoclonal antibodies is toxic to specific immunity



Prevention of infections

- ✓ Hands washing: hygienic/ desinfecting
- ✓ Face mask/respirator
- ✓ (Dietary counselling)

Isolation/reversion isolation:

- ✓ Single bed room (patients with the same infection can be together)
- ✓ Desinfection + gloves + disposable clothing + face mask + disposable hair cover…
- ✓ For every patient his own: thermometer, blood pressure measuring device, stethoscop

Prevention of infections 2

Growth factors (G-CSF)

- ✓ In regimens, where the risk of febrile neutropenia >20%
- ✓ Mobilisation of peripheral blood stem cells

Prophylactic antibiotics

- ✓ Cotrimoxazol 960 mg trice weekly Pnemocystis jiroveci
- ✓ Quinolones in longer neutropenies – no unequivocally recommended - resistances, Clostridium difficile
- ✓ Antimycotics, prevention of VZV, HBV reactivation

Immunoglobulins: IgG < 5g/l and repeated infections

Basic principles of treatment of infection in oncology patients

- ✓ Risk grouping: Outpatient/inpatient treatment
- ✓ Diagnostic samples (blood cultures, urine... BAL…)
- ✓ After diagnostic samples, start broad spectrum antibiotics immediately (best: combination of ATBs)
- ✓ Adjust antibotics to sensitivity results
- ✓ Consider empiric antimycotics if long febrile neutropenia and/or typical radiological imaging

What is febrile neutropenia?

✓ Fever ≥38.3 C plus neutrophils <0.5x10^9/l plus absence of proven infection (blood + urine cultures, chest X-ray)

✓ Low risk patients: outpatient – peroral ATB therapy

- Amoxycilin/clavulonic acid + fluoroquinolone

✓ High risk patients: inpatient – intravenous ATB therapy – monotherapy or combination:

- Broad spectrum penicillins/cephalosporins + beta-lactamase inhibitors
- Carbapenems
- Aminoglycosides
- Others (vancomycin, antimycotics)

What do you thing about this central venous catheter?

1. Is OK

2. We need to change the clothing

3. We need to change clothing + apply local desinfection

4. We need to take it out

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Blood products substitution

Packed red cells substitution if:

- ✓ Hb<80g/l
- ✓ Hb<100g/l in patients with undelying heart and/or lung disease or before surgery in general anesthesia

Standard dose is 2 packed red cell units

Thrombocyte substition if:

- ✓ No bleeding and thrombocytes $<10x10^9/l$
- ✓ Minor bleeding, sepsis or small surgery and thrombocytes $<20x10^9/l$
- ✓ Large surgery and thrombocytes $<80\text{-}100x10^9/l$

Blood products substitution 2

Fresh frozen plasma

Bleeding disorder with deficiency of several coagulation proteins:

- ✓ Disseminated intravascular coagulation
- ✓ Liver failure
- ✓ Massive bleeding
- ✓ Acute promyelocytic leukemia
- ✓ Thrombotic thrombocytopenic purpura/HUS

Other derivatives (albumin, coagulation factors concentrates, immunoglobulines) are drugs, not blood products

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What is the greatest problem in pain management with opioids?

1. Suppression of breathing
   - 0
2. Drowsiness, sleepiness, confusion
   - 0
3. Constipation
   - 0
4. Worsening of pain with long-term use
   - 0

Acute and chronic pain

Acute pain

Restlesness - yes

Seeking for relief position - yes

Vegetative symptoms – sweating, tachypnoe, tachycardia - yes

Chronic pain

Restlesness - no

Seeking for relief position - no

Vegetative symptoms – sweating, tachypone, tachykardie - no

Breakthrough pain:
episode of acute pain on top of chronic pain

Basic principles of pain management

1. **By clock, by mouth, by ladder**
2. Patient should use drugs regularly for chronic pain – do not wait for breakthrough pain
3. Convenient route of delivery (peroral, transdermal) – for chronic pain with prolonged effect
4. For breakthrough pain, have fast and short-time acting drugs (intranasal fentanyl)
5. Adjuvant pain management: anxiolytics, haloperidol, antidepressants, myorelaxants, corticoids, radiotherapy

Analgesic ladder

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Nausea and vomiting: what is correct?

1. The most emetogenic drug is cisplatin

0

2. Complete elimination of nausea and vomiting is successfull in only 10% of patients

0

3. Complete elimination of nausea and vomiting is possible only at cost of significant side effects

0

4. Radiotherapy is not emetogenic

0

Nausea and vomiting: what is correct?

Emetogenic chemotherapy:

Cisplatin (>99% vomiting without prophylaxis)

Cyclophosphamide, anthracyclines (30-90%)

Etoposide (10-30%)

Vincristin, Bleomycin (<10%)

Emetogenic radiotherapy:

Total body irradiation

Mantle irradiation

Irradiation of upper abdomen or inverted Y

Antiemetics in prophylaxis and treatment

1. Serotonine antagonists – setrons (granisetron, palinosetron)
2. Inhibitors of neurokinin receptor - aprepitant
3. Metoclopramide (Cerucal – dopamine antagonists)
4. (glucocorticoids - dexametason 8-20 mg)
5. Others - thiethylperazin (Torecan), chlorpromazin (plegomazin), lorazepam

The goal of antiemetic therapy is complete relief from nausea and vomiting

Successful in 80% patients with one day regimens, 50% patients with 4-6 day regimens

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Nutrition

Tumor anorexia - cachexia

- Caused by chronic proinflammatory environment
- Loss of >10% body weight/6 months, hypoalbuminemia, oedema

Improvement of anorexia:

- Corticosteroids (Prednison 3x5mg)
- Megesteron acetate (Megace 400-800 mg)
- Canabis

Nutritional support

- Best enteral, oral or nasojejunal feeding
- Preventive PEG in expected severe mucositis
- TPN is simple, but should be the last solution

Successfull (nutritional) intervention needs time

What will I take home?

1. Supportive care makes difference
2. It is not very different from supportive care in other areas of medicine
3. Palliative care can prolong life and should be started early
4. Two or three of above
5. Something else
6. Nothing

Thank you for your attention