Rotation in Palliative Care
Trainee Knowledge Test

A 45-year-old man with lung cancer and bone metastases has nausea and increasingly severe pain over the left hip. The pain began 6 – 8 weeks ago and was initially controlled with acetaminophen 325 mg/oxycodone 5 mg (Percocet), using 4 – 6 tablets/day. Over the past two weeks the pain has worsened; he now takes 12 tablets per day with only partial pain relief. The pain is constant, aching and well localized; there is no referred pain. (Questions 1 – 7)

1. Increasing pain in this patient most likely represents:

1) new onset depression.
2) opioid addiction.
3) opioid intolerance.
4) worsening metastatic disease.

2. This man's pain is best described as:

1) neuropathic pain.
2) somatic pain.
3) vascular pain.
4) visceral pain.

3. When would you expect a patient to report the maximal analgesic effect after taking a dose of acetaminophen/oxycodone?

1) 30 – 45 minutes
2) 60 – 90 minutes
3) 120 – 150 minutes
4) 180 – 210 minutes

4. The most appropriate next step in drug therapy for this patient would be to discontinue Percocet, and start:

1) oral codeine.
2) oral hydromorphone.
3) oral morphine.
4) oral meperidine.

5. The most appropriate adjuvant analgesic for this patient is:

1) amitriptyline (Elavil).
2) neurontin (Gabapentin).
3) ibuprofen (Motrin).
4) lorazepam (Ativan).

6. The most appropriate first drug to prevent opioid induced constipation is:

1) docusate (Colace).
2) psyllium (Metamucil).
3) lactulose (Chronulac).
4) senna concentrate (Senokot).

7. If hypercalcemia was found to be the main cause of the patient’s nausea, which of the following medications would be the **LEAST** useful in its management?

1) haloperidol (Haldol)
2) metoclopramide (Maxeran)
3) dimenhydrinate (Gravol)
4) prochloperazine (Stemetil)

A 32-year-old man with AIDS notes burning pain along the bottom of both feet. The pain has been present for 4 months and is getting worse. There is often a numbing sensation; the pain limits his ability to walk. He recently began taking acetaminophen 325mg with codeine 30 mg (Tylenol #3) 2 tablets every 4 hours. He says the medication provides only minimal relief. (Questions 8 - 10)

8. This man’s pain is best described as:

1) neuropathic pain.
2) somatic pain.
3) vascular pain.
4) visceral pain.

9. The equivalent dose of an oral short acting morphine preparation is:

1) 30 mg q4h.
2) 12 mg q4h.
3) 6 mg q4h.
4) 20 mg q4h.

10. The most appropriate adjuvant analgesic for this patient would be:

1) dexamethasone (Decadron).
2) amitriptyline (Elavil).
3) ibuprofen (Motrin).
4) lorazepam (Ativan).

A 54-year-old woman is hospitalized for an exacerbation of rheumatoid arthritis. She has chronic mid and low back pain from corticosteroid-induced compression fractures of the spine. You prescribe a long-acting morphine preparation (e.g. MS Contin) as her regular analgesic and short acting oral morphine (e.g. Statex) for breakthrough pain.
(Questions 11 – 13)

11. The patient asks you how often she can take the short-acting oral morphine for pain. Your best response would be to say, "As often as:

1) every 2 hours."
2) every 4 hours."
3) every 6 hours."
4) every 8 hours."

12. Following the first dose of morphine the patient develops nausea. Which of the following statements concerning nausea while taking opioids is **TRUE**?

1) Nausea to opioids is due to bowel distention and stimulation of the vagus nerve.
2) Nausea to opioids is usually accompanied with itching.
3) Nausea to opioids represents a drug allergy.
4) Nausea to opioids resolves in most patients within 7 days.

13. The first night after this patient starts morphine, the nurse calls you to report that her respiratory rate has dropped to 8 breaths/min. Your advice is to:

1) administer naloxone (Narcan).
2) hold further doses of morphine.
3) assess level of consciousness.
4) assess pupillary responses.

A 63-year-old woman is hospitalized with advanced peripheral vascular disease and gangrene of several toes. She has had chronic pain in her feet, managed adequately with long-acting morphine 150 mg q12h and rare use of oral short-acting morphine for breakthrough. The patient needs to be NPO for a surgical procedure.
(Questions 14-17)

14. Based on her present oral regimen, the most appropriate regular IV dose of morphine would be:

1) morphine 50 mg IV q4h.
2) morphine 50 mg IV q6h.
3) morphine 25 mg IV q4h.
4) morphine 25 mg IV q6h.

15. After surgery, a decision is made to discontinue the morphine and begin a fentanyl (Duragesic) patch. How long after first application of a fentanyl patch would you expect serum fentanyl levels to reach the therapeutic range?

1) 2-6 hours
2) 8-18 hours
3) 25-36 hours
4) 48-72 hours

16. Based on her prior dose of long acting morphine, the most appropriate strength of patch to start is:

1) 25 mcg.
2) 37.5 mcg
3) 50 mcg.
4) 75 mcg.

17. The most appropriate order for breakthrough pain is:

1) oral morphine 5 mg q2h prn.
2) oral morphine 20 mg q2h prn.
3) oral hydromorphone 2 mg q2h prn.
4) oral fentanyl 25 mcg q2h prn.

A 85-year-old man is transferred to your inpatient ward from a nursing home because of cough, fever and headache. Chest x-ray shows a large pulmonary infiltrate and moderate sized pleural effusion. Your initial management plan includes starting IV antibiotics, performing a lumbar puncture and a thoracentesis.
(Questions 18 – 25)

18. Which of the planned interventions should be discussed with the patient prior to initiation of therapy to ensure patient consent?

1) None, consent is implied when patients are transferred from a nursing home.
2) Only the lumbar puncture.
3) Only the lumbar puncture and thoracentesis.
4) Thoracentesis, lumbar puncture and IV antibiotics.

19. Which of the following statements is **TRUE** regarding medical decision-making capacity?

1) For patients from nursing homes, decision-making capacity must be confirmed with their Power of Attorney for Personal Care.
2) A major psychiatric diagnosis does not necessarily prevent one from having the capacity to make medical decisions.
3) Scoring over 25/30 on a Folstein mini-mental status exam indicates that a patient has decision-making capacity.
4) Refusing a recommended medial treatment indicates that the patient does not have decision-making capacity.

20. The nurse calls you to the telephone to speak to someone regarding this patient. When discussing bad news on the telephone, the first thing you should do is:

1) ask the person to describe their understanding of the medical issues.
2) give a fair “warning shot” that you have bad news.
3) ask the person to come to the hospital.
4) clarify who it is you are talking to and their relationship to the patient.

21. Dyspnea remains a significant symptom despite IV antibiotics and thoracentesis. The most appropriate next step in drug therapy would be to start:

1) a short acting opioid (e.g. morphine).
2) an anti-cholinergic/antimuscarinic (e.g. hyoscine).
3) a benzodiazepine (e.g. lorazepam).
4) a local airway anesthetic (e.g. inhaled lidocaine).

22. When assessing the patient on Day 3 of the admission, he says "Let's just get this over with - put me to sleep and let me die." The best response to this is to:

1) reassure him that many patients feel this way.
2) tell his family how upset he is.
3) tell him that euthanasia is illegal.
4) ask him to tell you more about how he feels.

23. His daughter approaches you in the hall requesting medication because she feels her father must be depressed. Which of the following statements about depression at end-of-life is **TRUE**?

1) Clinical depression is a normal stage of the dying process.
2) Depression associated with cancer is more difficult to treat.
3) Feelings of hopelessness/worthlessness are indicators of a clinical depression.
4) The degree of appetite and sleep disturbance is predictive of response to antidepressant medication.

24. Despite aggressive management, the patient remains severely dyspneic and anxious. At his request and following discussion with his family and the rest of the care team, a decision is made to sedate him. All of the following medications are appropriate for this purpose **EXCEPT**:

1) methotrimeprazine (Nozinan).
2) morphine (Statex).
3) lorazepam (Ativan).
4) midazolam (Versed).

25. Palliative sedation in a dying patient with uncontrollable dyspnea is an example of:

1) assisted suicide.
2) failure of medical management.
3) acceptable practice.
4) euthanasia.

A 67-year-old woman with pancreatic cancer metastatic to liver is seen in the emergency department at the request of her family doctor. She is experiencing anorexia and generalized fatigue, and spends most of her day in bed or lying on the couch. You speak with her oncologist and he indicates that there is no role for further chemotherapy. (Questions 26 – 31)

26. What is her Palliative Performance Scale (PPS) level?

1) 60%
2) 40%
3) 50%
4) 30%

27. Outside the examination room the patient's husband stops you and says, "If you have more bad news, please do not tell my wife – she will fall to pieces." How should you manage the husband's request to limit "bad news"?

1) Ask the husband if family/friends/clergy might be better at transmitting bad news.
2) Ask the husband if he understands the principle of "patient autonomy".
3) Ask the husband to define the type of information he feels you can present.
4) Ask the husband to tell you more about his concerns.

28. The single best predictive factor in determining prognosis in patients with metastatic cancer is:

1) functional ability.
2) number of metastatic lesions.
3) serum albumin.
4) severity of pain.

29. The patient asks you, "How much time do you think I have?" After further discussion with the patient and her husband, you confirm that they want to talk about prognosis. The best approach is to tell them:

1) "On average patients with your condition live for about 6 – 9 months."
2) "Only God can determine how long someone has to live."
3) "I believe your time is short, probably several weeks to a few months."
4) "I really can't tell how much time you have."

30. The patient asks you, "Is there anything I can take to improve my appetite?" Which of the following drugs has been shown to improve appetite in patients with advanced cancer?

1) conjugated estrogen (Premarin)
2) haloperidol (Haldol)
3) lorazepam (Ativan)
4) megesterol acetate (Megace)

31. Investigations indicate no acute intercurrent illness. Prior to discharging the patient home you would:

1) prescribe an opioid medication in case of pain.
2) make a referral to the Community Care Access Centre (CCAC) for home support.
3) call a palliative care physician to provide care in the community.
4) discuss the option of a feeding tube.

A 74-year-old anuric, end-stage renal failure patient has been receiving hemodialysis three times per week for seven years. She is considering stopping dialysis as it is increasingly a burden due to infections, vascular access problems and fatigue.
(Questions 32 – 36)

32. The patient wants to know how long she would likely survive if she stops dialysis. The best response would be to say:

1) "About 2-3 days."
2) "About 1-2 weeks."
3) "Only God can determine how long someone has to live."
4) "There is no way to tell for sure."

33. Spirituality is best defined as a person's understanding of:

1) their religious traditions and rituals.
2) heaven and hell in the context of imminent death.
3) their relationship between self, others, and the universe.
4) how a higher being values life accomplishments.

34. The patient tells you she would like to be at home when she dies. Her son asks about intravenous fluids – "Will we need intravenous fluids at home?" Which one of the following statements about intravenous (IV) hydration in the last week of life is **TRUE**?

1) Maintaining IV hydration will improve pain control.
2) Maintaining IV hydration will prevent dry mouth.
3) Stopping IV hydration will lead to painful muscle cramps.
4) Stopping IV hydration will lessen dyspnea associated with renal failure.

35. Which is the best opioid to prescribe for her as a PRN for pain?

1) morphine
2) codeine
3) hydromorphone
4) fentanyl

36. The day prior to discharge the nurse calls you and says that the patient was agitated during the night, trying to get out of bed. She is only oriented to person and is experiencing visual hallucinations. She is afebrile and has no focal neurological signs. Which one of the following statements about treating this patient's delirium is **TRUE**?

1) Family members should leave the room to help decrease agitation.
2) Paradoxical worsening of this condition may occur after administration of a benzodiazepine (e.g. lorazepam).
3) Placing the patient in a dark room will help decrease sensory input and reduce the agitation.
4) Naloxone should be administered due to opioid toxicity.

A 60-year-old woman admitted with an extensive CVA deteriorates and becomes unconscious. In keeping with the patient's wishes, the family decides that no further aggressive care is warranted. They request "comfort measures". (Questions 37 – 41)

37. Comfort measures for this patient could include all the following **EXCEPT**:

1) a phenothiazine (e.g. methotrimeprazine) for agitation.
2) changing body position frequently.
3) rectal acetaminophen for fever.
4) intravenous fluids.

38. The family notices that the patient has very loud, raspy breathing and asks you if there is any treatment. You determine the cause is retained pharyngeal secretions. The best treatment option is:

1) oral/pharyngeal suctioning.
2) anti-cholinergic/antimuscarinic medication (e.g. hyoscine).
3) subcutaneous opioid (e.g. morphine).
4) reassurance of the family.

39. The patient begins to moan with turning and grimaces when touched. The most appropriate analgesic medication is:

1) subcutaneous fentanyl.
2) subcutaneous morphine.
3) subcutaneous oxycodone.
4) rectal acetaminophen.

40. All of the following are signs of approaching death **EXCEPT**:

1) increasing social detachment.
2) mottling of extremities.
3) increasing pain.
4) decreasing urine output.

41. Two days later, the patient dies. You are called to "pronounce the patient". As you enter the room there are four family members standing around the bed, each holding or touching the patient. Which of the following is **NOT** appropriate during this encounter?

1) Ask the family to leave the room while you perform your examination.
2) Offer to remove medical paraphernalia (e.g. oxygen mask).
3) Stand quietly for a moment and offer consolation to the family.
4) Volunteer to contact family members not present.

A 45-year-old man suffers an anoxic brain injury after a sudden unexpected cardiac arrest during cosmetic surgery. Resuscitation efforts succeeded in restoring his heartbeat, and he was placed on a ventilator. On day 5 following the event, he is comatose with no neurological improvement. There is no pupillary response to light and no motor response to pain. The patient has not been on any sedative medications for the past 4 days. (Questions 42 – 44)

42. Which of the following statements is **TRUE** about medical futility?

1) A physician is ethically bound to comply with a patient's or family's wish for treatment, even when the physician believes that the treatment requested by the patient has no likelihood of medical benefit.
2) The concept of futility can be applied only to a specific medical intervention applied to a specific patient at a particular time.
3) Futility refers to any treatment with less than a 5% chance of positive outcome.
4) The term "futility" should be used with patients and family when discussing medical treatment that the physician believes will not help the patient.

43. The family asks you "What is the likelihood the patient will recover?" The best response would be to say:

1) "There is almost no chance of meaningful neurological recovery."
2) "There is a 50/50 chance for neurological improvement."
3) "There is no way to be sure until at least 6 weeks after the event."
4) "Approximately 20% of patients in this situation show improvement."

43. The patient's wife asserts that she clearly knows that her husband would not want to be kept alive by machines when there is no hope he can regain consciousness. She is able to recount his past statements of wanting "the plug to be pulled" if he wasn't going to recover. Which statement best characterizes your obligations as his physician?

1) You should require his wife to get a court order authorizing the removal of the ventilator, in order to prevent a lawsuit.
2) You should continue his ventilator and other treatments because the surgery was elective.
3) You should discontinue his ventilator and other treatments because his wife presents clear and convincing information that he would not want them.
4) You should continue his ventilator and other treatments because he did not put his wishes in writing.