Case Study 3 – Palliative and End-of-Life Care

Click here to review the draft Palliative and End-of-Life Care – Interactive Case Study. (http://pixelera.com/demoweb/casn/Palliative/story.html)

The following case vignette provides key concepts that could be considered when developing a plan of care for a patient who may require a controlled substance to manage their health concerns. As with any clinical situation, there are many patient variables that must be considered, including comorbid conditions, social determinants of health and their personal choices. You may choose to include different or additional health history and physical examination points, diagnostic tests, differential diagnoses and treatments depending on your patient's context however this case vignette focuses on the aspects relevant to controlled substances.

Characters

Danny Kahan NP-Adult, specialty is palliative care
Joshi Kamakani – 70 year old male with metastatic prostate cancer
June Kamakani – patient's wife
Kelli Kamakani – patient's 40 year old daughter

Scene 1

Danny is reviewing the patient history outside the house or in the car before visiting the patient.

Joshi Kamakani is a 70 year old retired engineer that the Palliative Care home care team and I have been looking after at home for the last two months. Joshi was diagnosed with inoperable prostate cancer three years ago and has been treated with ablative hormone therapy. Six months ago, Joshi started to have pain in his hips. His oncologist ordered a CT scan and found he had metastases in his ribs, pelvis and lumbar spine. Joshi and his wife June had a meeting with the team at the cancer centre and decided not to go ahead with any further cancer treatment. Our team has been involved since.
June called me yesterday and asked me to make a home visit. Joshi has been having more pain this week and has been spending most of his time on the couch. He cannot get around without assistance and is very fatigued.

Joshi's past medical history includes hypertension and reflux. He is taking Predisone 5 mg PO BID, Leuprorelin Depot 22.5mg IM every 3 months, hydrochlorothiazide 25 mg daily and pantoprazole 40 mg daily.

For pain, Joshi takes Morphine slow release 100 mg q12h and has not needed additional medication for breakthrough pain so far.

Scene 2

Takes place in the home. Patient is seen reclining on couch in first floor living room. Wife and daughter present.

Danny rings the doorbell and June lets him in.

> June: Hi Danny. I'm so glad you've come.

Danny takes off his coat and shoes and walks into the living room. Kelli is sitting with her father who is covered up with a blanket on a couch in the main living area – he is awake but obviously drowsy. He smiles at Danny and holds out his hand. Danny shakes it a sits down in a chair opposite.

> June: His pain killers just are not working any more – he's uncomfortable when he is resting and it's worse when he has to move around. It's been happening for the last few weeks. He hasn't had a fall but he is unsteady on his feet – especially soon after he get up.
>
> Joshi: I tried some acetaminophen from the drug store a few days ago but it really didn't work.
>
> Kelli: Danny, you have to do something. He's so uncomfortable.
>
> Danny: OK let's talk about this a bit more. Joshi, were you sleepy after we increased the morphine 2 weeks ago? You were at 80 mg for each dose and now you are at 100 mg.
>
> Joshi: I was a bit sleepy for a few days and I had a bit of a weak stomach but that is gone now. I am a bit constipated though.
>
> Danny: when did you have your last bowel movement?
>
> Joshi: 4 days ago.
>
> Danny: OK we will have to address that today. I'd like to use the scale that I used at our last visit, it's called the PPS, to assess your level of activity. (Edmonton symptom assessment scale (http://www.palliative.org/NewPC/_pdfs/tools/ESAS-r.pdf) and Palliative Performance Score). Your PPS is 40% – last time I visited you were at 60%.
>
> June: yes, he is definitely having more trouble. I think the pain is preventing him from moving and that's just making everything worse.

What further assessments should Danny perform?

- Complete pain assessment (link to tools incl. BPI-SF)
- Focused physical assessment to rule out new findings
- Nutritional and fluid status
- Mood and cognition (link to tools) PHQ9 etc

> Danny: Joshi, your pain interference score tells me that the pain is severely interfering with your activity and I see that you are rating your current pain at rest at 6/10 and at 10/10 when you move. When I examined you, I did not note any changes from my last visit except for some new swelling over your left hip.
>
> June: Yes that's where it is most sore – and before you ask, I am not going to the hospital for an xray.
>
> Kelli: Why can't you just double his dose?

How would you change his analgesic regimen to address Joshi's pain?

1. Add breakthrough medication, educate patient and family on its use and how to record doses. Reassess effectiveness in 48-72 hours. [if this option chosen, also ask what medication would be used and what dose/frequency]
2. Increase baseline dose of Morphine SR to 150 mg q12h
3. Rotate morphine to a fentanyl patch as the morphine is clearly not working
4. Add a regular dose of hydromorphone q4h in addition to the morphine SR

The user cannot advance until they have selected the correct scenario.

Answers provided by Danny

1. This is the **optimum option** for this scenario: If the patient is to achieve pain control by using breakthrough doses, the NP can add up the total 24hour dose of routine and breakthrough doses and increase the morphine SR to incorporate the additional requirements. A dose of morphine 10-15 mg every 2 hours as needed could be added. For example, if Joshi used an additional 40 mg of breakthrough morphine and his pain assessment supported effectiveness of this dose with no adverse effects, the NP could increase the morphine SR to 120 mg BID. It would be important to continue breakthrough dosing in the face of this progressing palliative pain problem. [also link to other therapeutic options for pain)
2. This is **not the optimum option** for this scenario. It is generally preferable to increase a baseline dose on the basis of PRN dose usage. A 50% increase without understanding the patient's requirements may lead to an increase in adverse effects like drowsiness. Select another option.
3. This is **not the optimum option** for this scenario. There is no evidence the morphine is not working, rather the dose may be inadequate. Given that opioids have no ceiling dose, the morphine dose may need to be increased. Opioid rotation is usually required when someone is having toxicity from their current medication or when dose escalations and breakthrough use continue and pain is not managed. Select another option.
4. This is **not the optimum option** for this scenario. There is no evidence to support the use of two similar opioids (like morphine and hydromorphone) simultaneously as regular doses. Select another option.

Danny [THINKS]: I will also add a bowel regime to address Joshi's constipation and provide an order for a PRN anti-nauseant like metoclopramide or ondansetron. Joshi and his family will need to have education about the timeline of the peak benefit of the change in the regular dose, keeping track of PRN use, proper use of breakthrough medications (before care or any activity that causes pain), any other interventions we can include to help with his pain including adding other medications.

June: Danny, can I speak to you in private for a moment?

June and Danny move to a private area of the house. Kelli and Joshi remain on the sofa.

June: Danny, I have some concerns about having extra medication in the house and I need some advice on how to deal with this. My daughter had a real problem with drugs when she was in high school. She had to have treatment and as far as I know, she has been clean for the past 2 years. I have talked to her about having medication in the house and she tells me she's not tempted but I really want to be sure we don't have any incidents. I trust my daughter but I do worry that some things are beyond her control.

Danny: Well June, it is always a good practice to have a plan for safe storage of medications. Here is some information about where you can purchase a locked box. I recommend you keep a key and have the hospice nurse take the other and have it numbered and controlled at the hospice office for the use of the nurses that care for Joshi. In the meantime, keep the medications in a place that you and Joshi can monitor and please keep a count of the medication in the containers and continue to write down when medication is given.

June: Thanks Danny – I don't want my daughter to think I don't trust her. This should help.

Scene 3

Two weeks later – Danny is back in his office reviewing Joshi's file with a Nurse Practitioner student…

Follow-up case question by Danny.

Student: Next up is Joshi Kamakani for review…

Danny: Well, I've just been to see Joshi and his family. It has been two weeks since we increased his dose of morphine SR. We also added a neuropathic pain agent to help with his pain which has made him a bit more drowsy. He continues to take 20-30 mg breakthrough morphine/day and I noticed today that he has some myoclonus. Joshi's pain is still in the moderate range with activity and now nausea is a problem.

Opioid rotation and opioid equianalgesia from NOUGG (McMaster Guidelines). (http://nationalpaincentre.mcmaster.ca/opioid/)

Danny: I think a rotation of opioid is the next step.

Student: What medication should Danny consider and at what dose?

How many milligrams of morphine is Joshi currently taking daily?

Answers:

- 150mg
- 170mg
- **270mg – CORRECT**
- 300mg

> Danny: Joshi is using 270 mg oral morphine equivalents per day. To convert this dose to hydromorphone, the medication I have chosen to rotate to, we multiply by 0.2. Morphine 270 mg x 0.2 = 54 mg hydromorphone/day. We will want to convert 60% of the total daily dose so 54mg x .6 = 32mg. I want to give Joshi the new dose in a slow release form. It is most practical to provide Joshi with hydromorphone SR 15mg q12h and also provide him an additional 2-3 mg of hydromorphone immediate release for breakthrough pain. Providing him with the breakthrough dosing will be sure Joshi can have additional medication to help him until we are sure we have a stable, effective dose in 48-72 hours.

Write a prescription (http://nperesource.casn.ca/wp-content/uploads/2017/03/Rx_Example3.pdf)to be faxed to Joshi's pharmacy for the following:

- Hydromorphone SR 15 mg PO q12h 2 week supply; and
- Hydromorphone 2-3 mg PO q2h PRN for breakthrough pain – 1 month supply

A copy of Danny's finished prescription is displayed once the viewer has had an opportunity to try writing one themselves.

Learning Outcome

This interactive case study covered the following information:

- Opiate Titration
- Opiate Rotation
- Pain Assessment
- Assessment of adverse effects
- Safety Assessment
- Collaboration
- Family centred care

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