CASE SIX

Short case number: 3_11_6
Category: Endocrine and Reproductive
Discipline: Surgery
Setting: Hospital
Topic: Breast - Recurrent breast cancer and palliative care [SDL]

Case

Lyn Masters, aged 69 years, presents with metastatic breast cancer and severe pain in her back. Lyn has been treated with Chemotherapy and is using 3rd line therapy without response having previously had a poor response to 1st and 2nd line therapies. Lyn's main concern is her back pain caused by bony metastases and crush fractures in her spine.

Questions

1. How would you manage Lyn in terms of history, examination, and investigation?
2. How can metastatic bone pain be managed?
3. Lyn is referred for palliative care. What are the key steps in the initial assessment of a patient referred for palliative care?
4. Lyn develops severe constipation secondary to the medications. How could this be managed?
5. You feel that Lyn would benefit from referral to a palliative care team. Summarise the approach to breaking this news to Lyn in terms of communication strategy.

Suggested reading:

- Henry MM, Thompson JN, editors. Clinical Surgery. 3rd edition. Edinburgh: Saunders; 2012.
- Garden OJ, Bradbury AW, Forsythe JLR, Parks RW, editors. Davidson's Principles and Practice of Surgery. 6th edition. Philadelphia: Churchill Livingstone Elsevier; 2012.

ANSWERS

1. How would you manage Lyn in terms of history, examination, and investigation?

The most important diagnosis to consider in this situation is a spinal cord compression. Back pain is the most common presenting problem and is expected in more than 95% of people at the time of diagnosis. The assessment requires a complete and thorough pain history and a history of the breast cancer. The pain associated with a cord compression may take several forms.

Localised pain is confined to the region of the spine affected by the metastases as the first problem. This pain will increase in intensity, reflecting the periosteal stretch and invasion of soft tissue.

People may also present with radicular pain due to compression or invasion of nerve roots. This pain may be unilateral especially associated with cervical or lumbosacral lesions. Thoracic lesions are more likely to be associated with thoracic spine lesion. This pain is often worse at night or when the patient is lying flat. This is because of the engorgement of the epidural spinal venous plexus.

The third pattern of pain to be sought is mechanical back pain that may be associated with vertebral body collapse or fracture. This pain is worse with movement but may settle with rest. Other problems to be sought include weakness, heaviness, sensory changes, bladder and bowel dysfunction and gait disturbances.

Physical examination requires the site of pain to be localised along with any other sites of pain. A full neurological examination is required.

Investigations should be tailored to exclude a spinal cord compression. The investigation of choice is a magnetic resonance scan (MRI). This will allow not only the bony spine to be imaged but also the nervous spine and the paravertebral structures.

2. How can metastatic bone pain be managed?

Metastatic bone pain requires a multimodal approach.

- Analgesia

Appropriate analgesia must be considered. “Around-the-clock” analgesia with an opioid titration schedule that achieves the best balance between analgesia and adverse effects. It is usually necessary to supplement opioids with adjuvant agents. The peripheral action of nonsteroidal anti-inflammatory drugs may be useful in this context because they attenuate the sensitization of peripheral nociceptors. Blockade of the mechanism responsible for prostaglandin synthesis also limits the hyperalgesic effect of bradykinin. The other agent to add is paracetamol. The action of paracetamol is not clear but in some people, this may be very useful adjuvant in bone pain.
Advice form a radiotherapist must be sought. Radiotherapy to bone metastases is useful for pain, to prevent pathological fracture and neurological complications arising from spinal cord compression, nerve root pain, or cranial nerve involvement.

- Radiotherapy

Approximately 1/5 of all radiotherapy treatments are performed for painful bone metastases. From meta-analysis data more than 40% of patients can expect at least 50% pain relief and fewer than 30% can expect complete pain relief at 1 month.
Bisphosphonates
Bisphosphonates are pyrophosphate analogues in which the oxygen is replaced by a carbon atom with various side chains. Bisphosphonates bind preferentially to bone at sites of active bone metabolism, are released from the bone matrix during bone resorption, and potently inhibit osteoclast activity and survival, thereby reducing osteoclast-mediated bone resorption. They are widely used in medical

oncology to treat malignant hypercalcaemia and to prevent complications in metastatic bone disease. Their mechanism of action is quite complex. Apart from their well-known anti-osteoclastic activity, these compounds may also suppress progression of bone metastases. It is believed that these effects on bone turnover may also improve analgesia. First-generation bisphosphonates include etidronate and clodronate, and pamidronate represents the second generation. The third-generation compounds are ibandronate and zoledronic acid.

- Radioisotopes

The use of radioisotopes is often indicated when multifocal painful bone metastases occur and pain is not controlled with conventional analgesic regimens. This is confined to breast and prostate cancer at the present. These should be considered a possible option for the palliation of multiple sites of bone pain from metastatic cancer where pain control with conventional analgesic regimens is unsatisfactory and where activity on a bone scan of the painful lesions is demonstrated. Thrombocytopenia and neutropenia are the most common toxic effects, but they are generally mild and reversible. The selection of patients for radiopharmaceutical therapy should consider the patient's marrow function, performance status, recent use of other marrow suppression agents (chemotherapy or radiotherapy), and suitability for alternate palliative interventions and anticipated life expectancy.
Chemotherapy or hormone therapy
Systemic chemotherapy or radiotherapy may be useful if the tumour is sensitive.

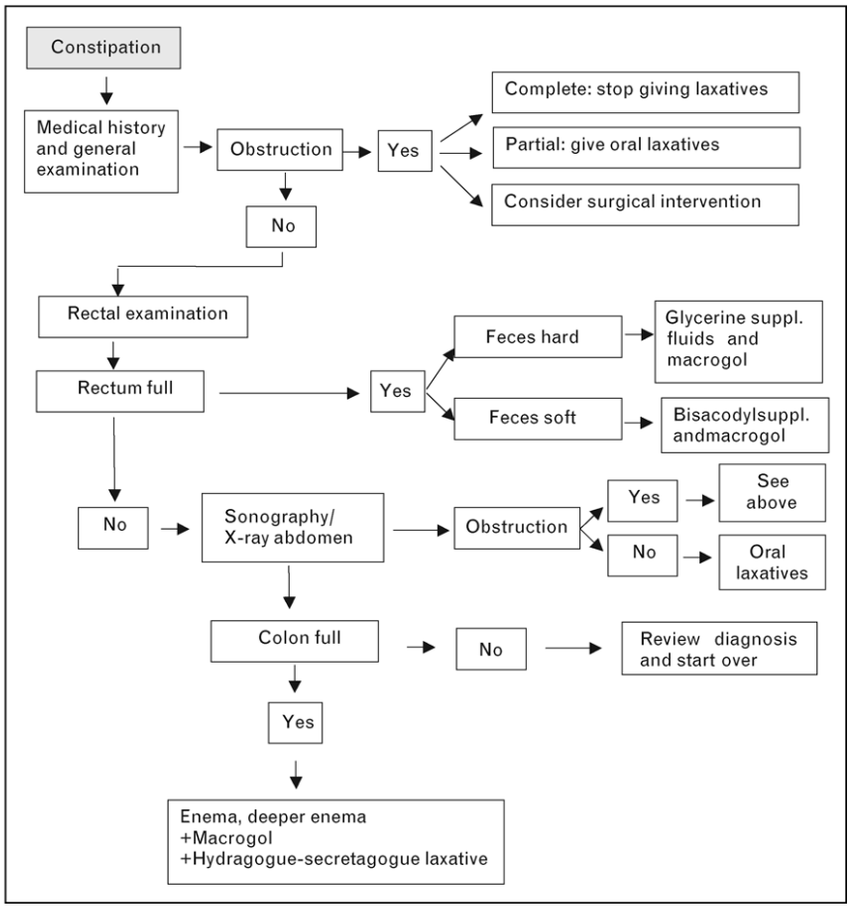
3. Lyn is referred for palliative care. What are the key steps in the initial assessment of a patient referred for palliative care?

The WHO identifies palliative care as an approach to care that acknowledges that people with life-limiting illness may have complex care needs. A referral may be appropriate with the consent of the consultant or doctor with clinical responsibility and with the consent of the patient. Referral should be considered for the following:

- Patients (within an inpatient/outpatient setting) who have active or advanced and progressive disease for whom the prognosis is limited (although it can be several years) and the focus of care is quality of life
- One or more of the following needs are unmet:
    - Symptom Management Advice on the management of pain and other symptoms which have not begun to respond to treatment after two days on the inpatient unit or are causing overwhelming distress at any time.
    - Psychological/Spiritual Support: Support for patient and carers who appear to be struggling psychologically or emotionally with the illness.
    - Social Support: For patients with young children or who have had a recent bereavement or for families where there is a conflict of interests effecting on their coping strategies.
    - Hospice Assessment: Assessment for hospice care for specialist symptom control, active rehabilitation, day care or terminal care.
    - Assessment for future care: especially when management is unclear.
    - Staff Support: in dealing with difficult situations or debriefing following a death.

4. Lyn develops severe constipation secondary to the medications. How could this be managed?

Constipation therapy in palliative care patients.



5. You feel that Lyn would benefit from referral to a palliative care team. Summarise the approach to breaking this news to Lyn in terms of communication strategy.

It is still commonly held that palliative care and terminal care are synonymous. Therefore raising the topic of referral to palliative care services should be undertaken in a sensitive manner.

It is important to allow adequate time for this discussion. If possible, a quiet room should be located. All the participants in the discussion should sit down and identify themselves. Lyn must be given an opportunity before the consultation to identify important people for her to be involved.

As far as possible, the consultation should be patient driven, but the delivery of information regarding the meaning of palliative care and the reasons this is considered appropriate for Lyn should be covered. Lyn and her family must be given the opportunity throughout the consultation to ask questions or have the discussion clarified.

It is not unreasonable to consider that this consultation may raise questions about treatment, prognosis and ongoing care including place of death. It is important to have as much background information as possible to begin to answer these questions. If not known, ensure that appropriate follow-up is organised to answer these questions.