



Case Study – Pain management in the terminal cancer patient

Mrs G was diagnosed with breast cancer 6 years previously and had undergone a short course of radiotherapy and chemotherapy before presenting to me but declined surgery.

She was a Registered nurse with an interest in complementary medicine and had also tried alternative treatments in Mexico. She presented to me complaining of a sore right hip which had been painful for a week. There had been no history of trauma to the hip. X-ray of the hip was normal.

Bony metastases was considered to be the likely cause of hip pain. A NSAID Ibuprofen 400 mg tds was considered the best initial treatment for this. Prn doses of paracetamol were given for the pain.

A bone scan confirmed an isolated metastasis in the right hip. While initially reluctant to take morphine Mrs G eventually agreed to commence oral morphine. She had been 'opioid naïve' up until this point. She was given

Morphine mixture 5 - 10 mg 4 hourly. She also continued to take Naproxen tablets, 500 mg bd.

On experiencing 'breakthrough pain' she was given Morphine mixture 5 mg orally prn for the extra pain. This breakthrough dose was prescribed prn and was an important strategy in managing her pain.

A dose of sustained release morphine was given as the standard starting dose of sustained release morphine for opioid naïve patients is generally considered to be 20 mg bd or 40 mg daily.

In the past, Mrs G had experienced nausea from both pethidine (given during labour) and panadeine forte, prescribed for the pain of impacted wisdom teeth many years ago.

Given her past history of nausea from two different opioids, it was considered to be appropriate to prescribe a regular prophylactic anti - emetic when morphine was initiated.

A prophylactic laxative was prescribed for Mrs G to prevent the universal predictable side effect of constipation.

Mrs G was commenced on 10mg morphine mixture 4 hourly (at 0630, 1030, 1430 and 1830). She was also given a double dose at 2230 with the aim of keeping her pain free overnight. She also took four top-up doses of 5mg morphine mixture over 24 hours.

Given that Mrs G's total daily dose of oral morphine was 80 mg and the oral bio-availability of morphine is effectively 30%, we divided 80 by 3, equalling 27 mg per 24 hours in a syringe driver. This dose was then rounded up to 30 mg per 24 hours.

Mrs G wanted to finish writing her book before she died so it was decided to put her on a two week radiotherapy course. On the last day of her two-week radiotherapy course, Mrs G became progressively drowsy, and mildly nauseated on Kapanol 80mg daily. She was no longer on an anti-emetic.

Physical examination revealed the following:

Right hip pain virtually gone.
Small pupils.
Decreased respiratory rate.

Mrs G had symptoms of a morphine overdose, as her daily morphine requirement had reduced, because of the palliative radiotherapy's analgesic effect. The radiation response usually takes 2 - 3 weeks to occur.

Mrs G's daily dose of morphine was therefore reduced, and her daily dose of morphine stabilised on Kapanol 20mg bd.

However she subsequently developed intractable nausea, confusion and drowsiness. Her symptoms were assessed as being opioid related, after excluding other causes. (i.e. brain metastases, hypercalcaemia and renal failure).

There were three different management options:

- Reduce the dose of morphine
- Change the route of morphine (eg. from oral to continuous subcutaneous infusion)
- Change morphine to a different opioid (opioid substitution)

She was not keen to have a syringe driver at this stage, and it was therefore elected to do an opioid substitution, to improve any adverse side effect(s) while maintaining an equivalent dose of analgesia.

Oxycodone was felt to be an appropriate alternative to morphine. Oxycodone is available in a sustained release formulation called oxycontin in the form of 10 mg, 20 mg, 40 mg, 80 mg tablets, given bd. The conversion ratio of morphine to oxycodone is 1 : 1. Therefore Kapanol 40 mg bd could be changed to oxycontin 40 mg bd.

Mrs G's other problem was a disfiguring, malodorous, weeping, infected fungating tumour of her right breast. She was very self-conscious of the odour.



It was arranged for a district nurse to change her dressings daily and this relieved the pain and odour.

Several months later, Mrs G's husband called and requested an unscheduled home visit.

Mrs G had had a four day history of increasing confusion, anorexia, nausea, vomiting and generalised aches and pains. Mr G was finding it extremely difficult to manage his wife at home.

PHYSICAL EXAMINATION REVEALED THE FOLLOWING

Confusion and agitation
Mini mental state examination 18/30
(normal range 24-30/30)

The mini mental state examination is a widely used method to assess the cognitive mental status of patients.

Orientation, attention, immediate and short-term recall, language and the ability to follow simple verbal and written commands are assessed.

A total score which places the individual on a scale of cognitive function is obtained.

Clinically 5% dehydrated
No abdominal tenderness

Mild hyporeflexia and hypotonia but no lateralising neurological deficit.

Mrs G was admitted to a palliative care unit for symptom control and respite.

The diagnosis was:

Hypercalcaemia
Mild renal impairment
Liver metastases

Mrs G responded to treatment and was discharged home two weeks later.

Mrs G finally agreed to be referred to a home based palliative care team. She completed her book with the assistance of a volunteer typist, planned her funeral and made peace with her husband and son.

Several weeks later she developed a significant left hemiparesis and left hemianopia secondary to cerebral metastases. She was admitted to hospital where her symptoms were treated with radiotherapy and dexamethasone. She was discharged to a local nursing home and died several months later.

Her death occurred ten years after her original diagnosis of breast cancer.

Acknowledgements and thanks to : Dr Bambi Ward

The results of Mrs G's investigations were as follows:

		Units	Normal Range
Sodium	131	mmol/L	135-145
Potassium	4.8	mmol/L	3.5-5.5
Urea	11.5	mmol/L	3.0-8.0
Creatinine	0.145	mmol/L	0.040-0.110
Chloride	104	mmol/L	95-110
Albumin	25	g/L	35-50
Gamma GT	386	U/L	5-45
ALT	107	U/L	5-40
AST	24	U/L	5-40
Bilirubin	53	umol/L	2-20
Calcium	2.95	mmol/L	2.20-2.60
Haemoglobin	132	g/L	110-160
White cell count	91	X 10 ⁹ /L	4.0-11.0
Platelets	7.8	X 10 ⁹ /L	150-450
Mean corpuscular volume	264	fL	80-100
Midstream urine test	no growth		
Chest X-ray	no abnormalities detected		