Expanding the traditional role of the hospital in the home pharmacist

Objective: Improve the quality of life in a Hospital in the Home (HITH) patient, by managing their complex pain

Clinical features

Patient profile

Male	69	39⁶	7+
	Years old	Febrile	Pain score

A 69 year old male patient presented febrile to the emergency department. He had increased lumbar pain after suffering a fall.

Diagnosis:
Epidural *Streptococcus dysgalactiae* abscess at L4 confirmed in the blood culture and MRI.

After 3 days in the medical ward LG was transferred to HITH for ongoing treatment of IV antibiotics.

Treatment:
Cephazolin IV 6g infusion over 24 hours for a total of 6 weeks.

Past medical history:

- Stage 4 prostate cancer with multiple bony metastases in pelvis, sacrum and lumbar spine
- Disc prolapse
- Laminectomy L4
- Peripheral vascular disease
- Hypertension

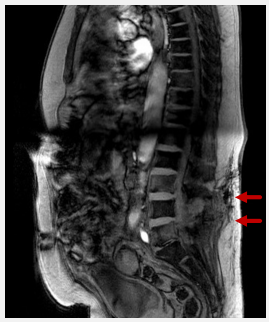

Figure 1: LG's epidural abscess shown on MRI

Table 1: Analgesia pre-hospital admission

Medication	Route	Dose	Frequency
Paracetamol	PO	1g	mane
Ketoprofen SR	PO	200mg	mane
Pregabalin	PO	300mg	bd
Buprenorphine	TOP	40mcg/hr	weekly
Oxycodone	PO	5-10mg	qid PRN

Table 2: Medication for metastatic prostate cancer

Medication	Route	Dose	Frequency
Enzalutamide	PO	160mg	mane
Degarelix	SUBCUT	80mg	q28d
Dexamethasone	PO	0.5mg	mane

Interventions, progress and outcomes:

LG's pain had persisted so the HITH staff commenced hydromorphone SR 12mg once a day. A medication review was then conducted by the HITH pharmacist. This resulted in the following medication management:

Day 1: HITH pharmacist recommended ceasing oxycodone and changing to one opioid. Hydromorphone IR PO 2 – 4mg q4h PRN was commenced.

Day 4: HITH pharmacist confirmed effectiveness of hydromorphone with the patient. A new plan was created to simplify the opioid regimen to hydromorphone only.

Total daily opioid conversion: PO hydromorphone 40mg

Day 9: Baseline opioid hydromorphone SR PO was increased to 20mg once a day.

Day 12: HITH pharmacist recommended removing the buprenorphine patch and increasing hydromorphone SR PO to 28mg once a day. Breakthrough hydromorphone IR PO was increased to 4mg – 8mg q3h PRN.

Day 24: HITH pharmacist recommended increasing hydromorphone SR PO to 32mg once a day.

During the opioid up-titration, the patient and their family experienced confusion with the modifications to SR and IR tablet strengths. The HITH pharmacist regularly counselled the patient to ensure they understood their medications.

Literature review

Opioids improve both acute and cancer pain.[1,2] A systematic review found the prevalence of pain in advanced, metastatic and terminal cancer to be 64%.[1] Pain contributed to poorer physical and emotional well-being.[2]

Conclusion

After the opioid rationalisation, the patient experienced reduced pain at rest and during mobilisation. Fewer breakthroughs were required and their mobility improved. Their average pain scale reduced from 7 to 4.

HITH patients are excellent candidates for titrating medications due to daily visits by nursing staff and regular clinic appointments.

References:
1. Australian Institute of Health and Welfare 2018. Opioid harm in Australia and comparisons between Australia and Canada. Cat. no. HSE 210. Canberra: AIHW
2. M. Fallon, R. Giusti, F. Aielli, P. Hoskin, R. Rolke, M. Sharma & C. I. Ripamonti. Management of cancer pain in adult patients: ESMO Clinical Practice Guidelines. Annals of Oncology 29 2018; doi:10.1093/annonc/mdy152

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