Acute Pain Management

Difficult Cases

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Case 1.

Patient admitted with blocked ileostomy, vomiting, abdominal sepsis and worsening of chronic abdominal pain

Complex past history of ruptured appendix, bowel damage following childhood abuse and 31 laparotomies (10 in past 10 yr) with extensive scar tissue and adhesions

Chronic abdominal pain managed by GP

- **Oral oxycodone/naloxone (Targinact™) 30/15 mg BD**
- **Fentanyl patch increased from 25 to 50 mcg (ineffective)**

Multiple drug allergies/intolerances

- **Tramadol, codeine, oramorph (vomit), Transtec™ patch (skin reaction), sublingual buprenorphine (ineffective)**

Initial management

- **NBM**
- **Nasogastric tube**
- **Stop Targinact™ and replace with im morphine PRN**
- **Continue fentanyl patch (not keen on fentanyl patch)**
- **For long term TPN**

Referred to Acute Pain Service 2 weeks post admission with continuing, unrelieved severe pain

NB patch had fallen off!

Recommendation

- **Increase fentanyl patch to 62 mcg**
- **Convert im morphine to sc morphine**

2 days later peri arrest event: ?sepsis related increased absorption of fentanyl from patch

Kept NBM and fentanyl patch subsequently reapplied but did not like fentanyl patch and asked for its removal Consequently fentanyl patch replaced with Butrans™ patch 50 mcg (NB Transtec™ causes rash) and convert sc morphine to sl buprenorphine 200 mcg 4 hourly PRN

Happy with Butrans initially, but then stopped because of skin rash.

Commenced sc morphine infusion 30 mg/24 hours via syringe driver (palliative care protocol) increasing to 50 mg/day with sl buprenorphine 400 mcg for breakthrough.

Haloperidol added to syringe driver then removed again due to side effects

Issue

Continuous subcutaneous infusion of drugs

Continuous sc infusion of drugs is particularly useful in the management of malignant intestinal obstruction

Breakthrough analgesia should still be prescribed

Cost of delivering subcutaneous morphine by syringer driver is twice the cost of a comparable dose of sustained release tablets.

NPSA safety alert (2010) identified 8 deaths and 167 non fatal incidents between 2005 and 2010 involving older ambulatory syringe drivers with rate settings based on length of liquid rather than volume

Guidelines for the Use of Subcutaneous Medications in Palliative Care for Adults – Primary Care and Hospices. http://www.palliativecareggc.org.uk

http://www.hospiceworld.org/book/subcutaneous-infusions.htm

Discharged home with sc morphine infusion 60 mg/24 hours and sl buprenorphine 400 mcg but readmitted 2 months later with bacterial endocarditis. Underwent aortic valve replacement

Readmitted 3 months post AVR with discharging faecal fistula, remained in hospital for 4 months with persistent fistulae and sepsis.

Issues

Advisability of long term continuous sc infusion of drugs

Alternatives to continuous sc infusion of morphine

Need for case conference

Use of continuous sc opioid infusions in terminal care
obviously time limited

No information on use of continuous sc opioid infusions in non terminal care. However, continuous sc insulin infusion has been accepted practice for ~35 years
Main problem is scar tissue buildup around cannula insertion sites, so years of changing the infusion site may result in the user running out of viable sites.

"The lack of clinical literature regarding subcutaneous insulin infusion management may present a barrier to broad application of best practices in infusion device selection and site management"

American Association of Diabetes Educators, 2011

Alternatives to long term sc infusions of drugs

- **Oral administration of sustained release formulations**
- **Transdermal administration**
- **Intermittent parenteral administration of depot formulations**
- **Intrathecal pump administration**

Intermittent parenteral administration of depot formulations of buprenorphine (and naltrexone) have been used in treatment of opioid dependence but not for long term pain management

In a volunteer study a single depot injection containing 58 mg of buprenorphine lasted for several weeks but there was a 200-fold variability in the magnitude of peak buprenorphine concentrations

Sigmon et al. Addiction 2006; 101: 420-32

Implantable intrathecal pumps for chronic non cancer pain

Indications

- Failure of conservative therapies
- Surgery inappropriate
- No active or untreated addiction
- Appropriate psychological profile

Contra-indications

- Infection
- Coagulopathy

A review of intrathecal opioid infusion for chronic non cancer pain, mainly back and neuropathic pain, concluded that the technique is cost effective and can significantly improve the quality of life in selected patients. Furthermore there is evidence of sustained benefit in a mixed group of patients some with chronic abdominal pain

Intrathecal opioid infusion has been used for intractable pain of chronic pancreatitis with overall success rate of 76.9%

Koulousakis A et al. Acta Neurochir Suppl. 2007; 97(Pt 1): 43-8
Hamza M et al. Pain Medicine. 2012;13:1304–13
Kongkam P et al. Am J Gastroenterol 2009; 104: 1249-55

Multi-disciplinary case review recommended referral for bowel transplant.

Transferred to Addenbrooks for consideration for bowel transplant

- **Assessment for psychological suitability**
- **Assessment for surgical suitability**
- **1st stage: pelvic clearance to resolve chronic infection**

Up to September 2009, a total of 21 adult bowel transplants had been performed in the UK in 2 transplant centres

For a personal account of bowel transplantation go to

http://www.theguardian.com/lifeandstyle/2012/jul/01/bowel-transplant-let-me-live-again

Case 2.

Patient admitted with bilateral malleolar fractures following fall (?jump) from first floor window.

No significant past medical history

Russian rings fitted pending definitive surgery, oral morphine as required for analgesia

Soon complaining about ward staff

Reported bilateral burning pain. Morphine 160 mg/day changed to oxycodone IR 80 mg/day and commenced gabapentin

Post weekend ward staff reported patient had been physically violent and verbally aggressive over weekend. Hospital security attended but refused to intervene. Staff frightened of patient

During pain team visit patient fixated on weekend's events, difficult to engage in any pain assessment. Finds oxynorm more effective than oromorph. Admitted to long history of alcohol, cannabis and other recreational drug misuse and previous overdose attempt with amitripyline.
Previously attended anger management training

Patient referred to DALT whilst awaiting surgery. Reports pain slightly improved but remained fixated on events over weekend

DALT - no current drug dependency/abuse issues

Undergoes surgery on right ankle with PCA morphine postoperatively

PCA discontinued at patient request next day. Resumes oxycodone (MR plus IR) 120 mg/day and pain much improved by afternoon but continued intimidating behaviour towards ward staff

Issues

Patient behaviour

Codes of conduct

Management of unacceptable behaviour

Unacceptable behaviour includes:

- **Abusing or 'dealing' in drugs and alcohol**
- **Brandishing weapons, stalking, spitting, biting**
- **Creating excessive noise**
- **Derogatory or offensive remarks, gestures or behaviour**
- **Malicious allegations or rumours**
- **Smoking on Trust premises**
- **Threatening or abusive language including letters, texts, etc**
- **Using mobile phones, i-pods, etc to cause nuisance**
- **Wilful damage or theft**

- **Enticing or inciting others to commit any of the above**

Intimidating, violent or aggressive behaviour often caused by frustration which may be result of:

- **Anger/confusion as a result of their illness**
- **Complications of chronic diseases eg epilepsy, diabetes**
- **Drugs**
- **Family tensions**
- **Fear of hospitals**
- **Head injuries or diminished levels of responsibility**
- **Pain**

Code of Conduct: Patients

Patients should:

- **provide accurate and complete information about their medical history, past illnesses, allergies, hospitalisations, and medications**
- **report changes in their medical condition**
- **follow their treatment plan**
- **follow hospital rules and regulations**
- **have realistic expectations**
- **treat all staff with respect**

Code of Conduct: Hospital

Patients can expect:

- **To be treated with dignity**
- **To be given complete information concerning their diagnosis, treatment, and prognosis in a language they can understand**
- **To receive necessary information before giving any prior consent to a medical procedure and/or treatment**
- **To receive prompt and courteous care**
- **To be informed of the medical consequences if they refuse the suggested treatment**

Management of intimidation, violence and aggression

- **Risk Assessment & Risk Control for the prevention and management of violence and aggression**
- **Take positive steps to prevent/defuse incidents**
- **Post incident debrief and report.**

  Options:

  1. **initial informal (verbal) warning**
  2. **formal (written) warning**
  3. **exclusion (if condition not life threatening) may need to continue treatment until discharged/transferred to another hospital**
- **Legal and police considerations**

Legal services department advice sought

- **Reinforce NHS zero tolerance approach**
- **Staff to be supported**
- **Document all behavioural issues**
- **Call security if aggressive or police if physical violence**
- **As last resort can discharge patient**

Discussion with patient. Incidentally pain better controlled so continue with oxycodone MR plus IR regimen

After weekend patient reports pain well controlled; oxycodone IR now 4 hourly. Awaiting surgery on left leg

Undergoes ORIF left leg with plan to avoid PCA

Postoperatively complains that staff continually bumping into bed causes severe pain. Oxycodone IR "only takes the edge off it". Also volunteered that he had had suicidal thoughts so referred to psychiatric liaison nurse (PLN)

Otherwise plan to increase gabapentin and commence NSAID if surgeon approve

Issue

NSAIDs and risk of bony non union

NSAIDs and risk of bony non-union

A structured review (2005) found no trials that looked directly at stress fracture healing with NSAID. Overall the evidence in humans is inconclusive and option of least risk is to avoid the use of NSAIDs

Wheeler et al. Br J Sports Med 2005; 39: 65–69

A meta-analysis (2010) identified 158 articles of which 11 were suitable for inclusion (no RCTs) representing ~12,000 patients. Overall no demonstrated risk of non-union when only the highest quality studies were included

But one reviewer noted that the non-union rate in long bone fractures (1-6%) does appear to be increased as opposed to unchanged in spinal fusions (10-15%)

Dodwell et al. Calcified Tissue International 2010; 87: 193-202

Riordan M. Scientific Literature Reviews February 2011

Currently there is no clear contraindication to NSAID and the following have a greater potential for impairing healing

- **High risk fracture**
- **Osteoporosis,**
- **Smoking**
- **Diabetes**

Riordan M. Scientific Literature Reviews February 2011

"Avoid aggravating colleagues by factoring in which orthopaedic team is on-call when prescribing NSAIDs"

http://shortcoatsinem.blogspot.co.uk/2013/08/a-disunion-of-literature-nsaids-and.html

Psychiatry review concludes patient not a suicide risk

Patient continuously revisiting prior altercations with consultants and members of staff and general standard of ward care - advised to contact PALS

Oxycodone MR increased to 50 mg/day with view to reducing IR requirements

On discussing discharge plan to replace oxynorm PRN with tramadol PRN and continue oxycontin 50 mg/day patient became aggressive and intimidating

"tramadol a placebo drug…can buy it on the street" and "I want oxynorm…."

Issue

Ethics of acute pain management

The four basic moral principles of medical ethics:

1. **Autonomy; the patient's right to choose or refuse their treatment**
1. **Beneficence; always act in the best interest of the patient**
2. **Nonmaleficence; "first, do no harm"**
3. **Justice; fairness and equality**

NB Autonomy can conflict with beneficence

Traditionally medical ethics has focused on end-of -life pain management, with less attention being given to chronic pain, post-surgical pain, or suffering not related to dying

Autonomy

Patients' rights to choose how they want their pain to be treated. Often associated with better satisfaction eg PCA

Bernhofer E. The Online Journal of Issues in Nursing 2011 Vol 17

Beneficence

Timely administration of medication

Pain relief in patient with a history of substance abuse

Nonmaleficence

Often invoked when having difficulty deciding on pain treatments eg withhold medication citing 'safety', but untreated pain can have detrimental effects

Justice

Violated when treatments are withheld solely based on patient's sex, age, race, religion or behaviour

A recent systematic review of Health Technology assessments found no studies concerning ethical, social or judicial implications of acute pain treatment.

Korczak et al. GMS Health Technology Assessment 2013, http://www.egms.de/en/journals/hta/2013-9/hta000111.shtml

Even with therapeutic intervention, 40% of postoperative patients report inadequate pain relief, or pain of moderate or greater intensity

How are the ethical principles of autonomy and beneficence implicated in the pain experience?

Brennan F et al. Anesth Analg 2007; 105: 205-21
AAPM Ethics Charter 20003
Farber Post L et al. Journal of Law Medicine & Ethics 1996; 24: 348–59

After latest outburst legal services department advice again sought. Suggest:

Contact psychiatry: *"no role for psychiatry"*

Contact DALT: *"drug seeking behaviour"*

Team discussion: all agreed TTO oxynorm not appropriate

Following which patient revisited and discharge plan reiterated.

Thank you!