Pain Management Cases

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Faculty/Presenter Disclosure

Faculty: Romayne Gallagher

Relationships with commercial interests:

- **Speakers Bureau/Honoraria:** Purdue Pharma

Mitigating potential bias

- **Generic names only**

Big Data Studies

PRO

Large sample size

Actual practice as opposed to “sterile” research setting

Easily available data/ much cheaper than RCT

Decision-makers love data

Compare across settings and societies

Good accuracy of the Null hypothesis – no diff between groups

Big Data Studies

CON

Observational studies are not causal

Quality of data input: 4.3 – 86% incompleteness of records (Balas et al. MedInfo 2015)

Selection bias of data bases: may not include everyone (Docherty et al. Curr Opin Crit Care 2015)

Medical billing/Hospital data not collected for research reasons (compliance, reimbursement etc..) (Patel et al. J Am Acad Ortho Surg 2016)

Lack of Patient Related Outcome Measures – functional status, pain, patient satisfaction, test results, imaging, cognitive impairment (EHrenstein et al. Clin Epid 2017)

Pharmacy data: What is dispensed is not always taken as directed

Assumptions are made: On Opioids = No Pain

Effect of Opioid vs Non-opioid Medications on Pain-Related Function in Patients With Chronic Back Pain or Hip or Knee Osteoarthritis Pain JAMA 2018

Interpretation: Results do not support initiation of opioid therapy for moderate to severe chronic back pain or hip or knee osteoarthritis pain.

The median pain score was 5. Not severe Pain.

Non-Opioid group was able to be treated with Tramadol. 10% used it.

Does not distinguish between mechanical back pain and neuropathic pain

Populations were different: 42% of opioid group 26% non-opioid employed

What appears in the media…….

Medscape:	More data confirm that opioids no better than opioids….
WebMD:	Opioids Not Best Option for Back Pain, Arthritis………
CBC:	Prescription opioids no better than over-the-counter drugs for chronic pain, study shows
Vox Media:	Finally, proof: opioids are no better than other medications for some chronic pain

Case 1

90 year old man who has remained physically active by dancing since his retirement at age 75

Has comorbidities of CHF secondary to congenital ASD, atrial fibrillation, chronic renal failure (eGFR 33), hypothyroidism, and mild cognitive impairment

Married with two daughters who live nearby

Kept active despite known compression fractures in lower thoracic spine.

Lifting a heavy object when he fell backwards onto the floor. He immediately felt pain in his back.

Continued to struggle at home with the back pain. Family physician gave him Tyenol#3 for pain but caused constipation so he did not use it regularly

After months of ongoing back pain he presented to the local hospital with back pain

Case 1

He was admitted to the hospital with the chief complaint of back pain

In ER he was found to have a troponin elevation so he was referred to Internal Medicine and admitted under their service

The Internal Medicine service adjusted his CHF medications and then transferred him to the Hospitalists to finally address his back pain.

An x-ray showed multiple compression fractures in his lower thoracic spine and upper lumbar spine. A CT scan was not done.

His back pain was treated with acetaminophen and oxycodone prn. He only used two oxycodone per day.

He had a pre-discharge occupational therapy visit to his home and refused to return to hospital.

Case 1

Back pain continued to be severe enough to restrict his mobility and he did not go out of his home for months

Cardiologist referred him to the regional pain clinic where he was seen by the anesthetist

Due to his multiple comorbidities anesthetist did not feel that he could tolerate any procedures and gave him tramacet as recommended by the NOUG

The patient found the tramacet somewhat helpful for his pain and used it in combination with the Tylenol #3 and acetaminophen to manage his pain.

Because of his ongoing back pain his family physician gave him a prescription for celecoxib. Within 10 days his eGFR dropped to 21 and the celecoxib was discontinued. It had made no difference to his pain.

Case 1

The pain was ongoing and he was not going out of his house. The family physician gave him a prescription for hydromorphone 1mg tabs and told him he could use it “only when the pain was really bad”

The patient returned to see the anesthetist. He was using a combination of tramacet, Tylenol #3, acetaminophen and hydromorphone.

The patient was drowsy and professed that he did not care if he died as his back pain was not controlled and he had been unable to go out of the house in many months except in a wheelchair to doctors appointments.

Case 1

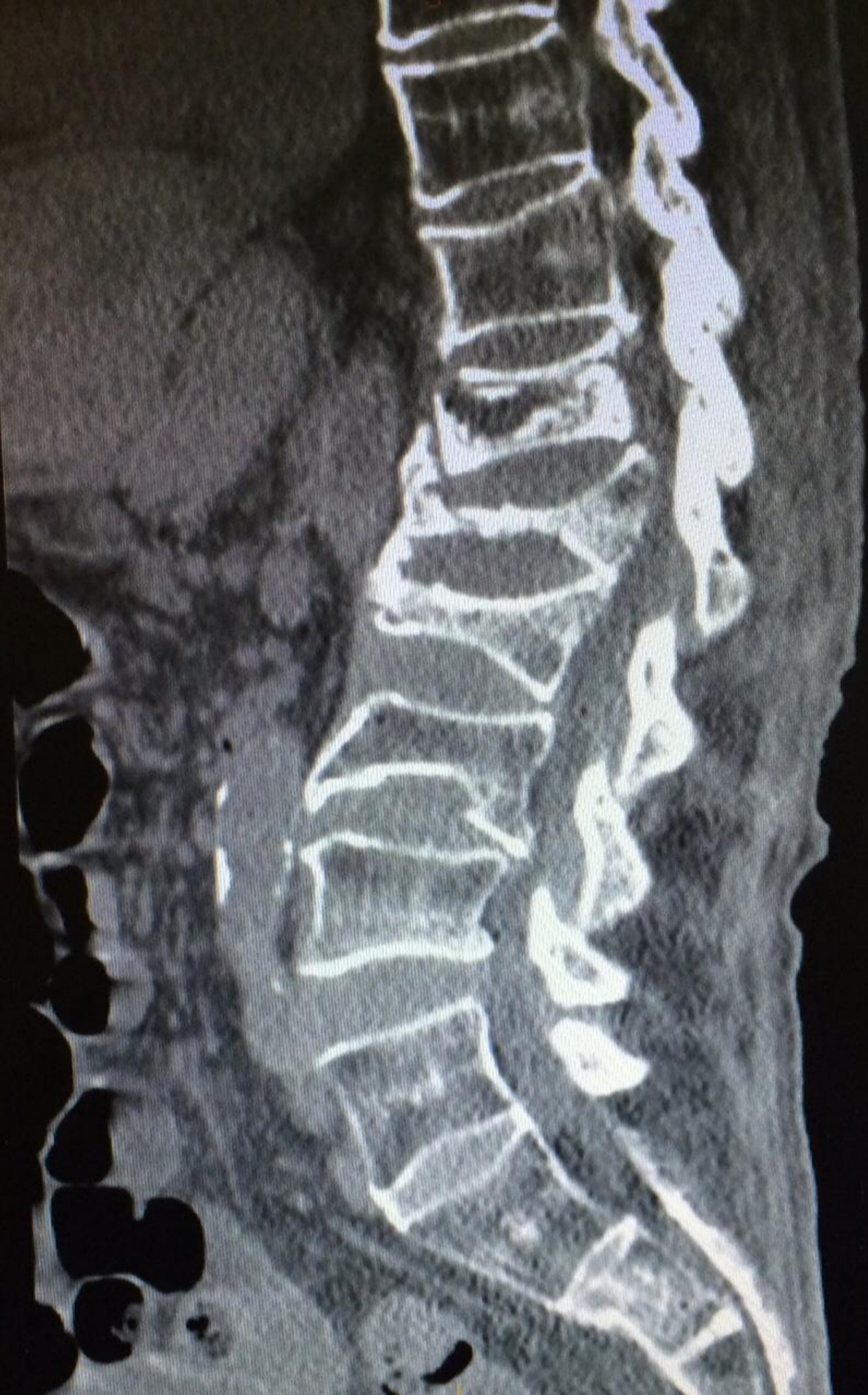
The patient was admitted to the hospital and started on a low dose s.c. infusion of fentanyl. All other opioids were stopped.

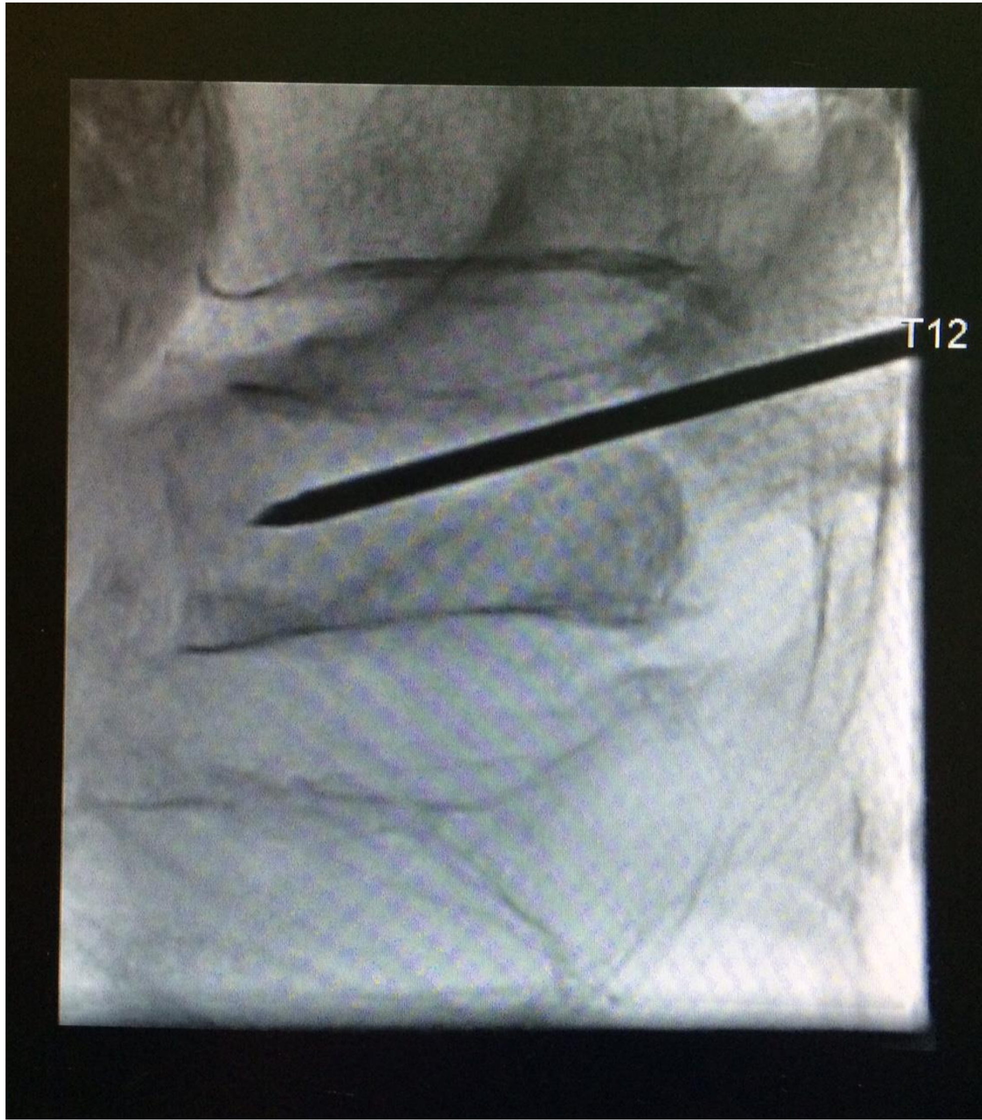
Within 24 hours his pain at rest was controlled on 25mcg/hr of fentanyl

After getting his pain under better control and stopping the other medications he was more alert and in a better mood.

However, his back pain became intense whenever he tried to get up even with a bolus of fentanyl prior to movement. This was clearly incident pain from a collapsed vertebrae.

A CT scan was done to assess the feasibility of vertebroplasty

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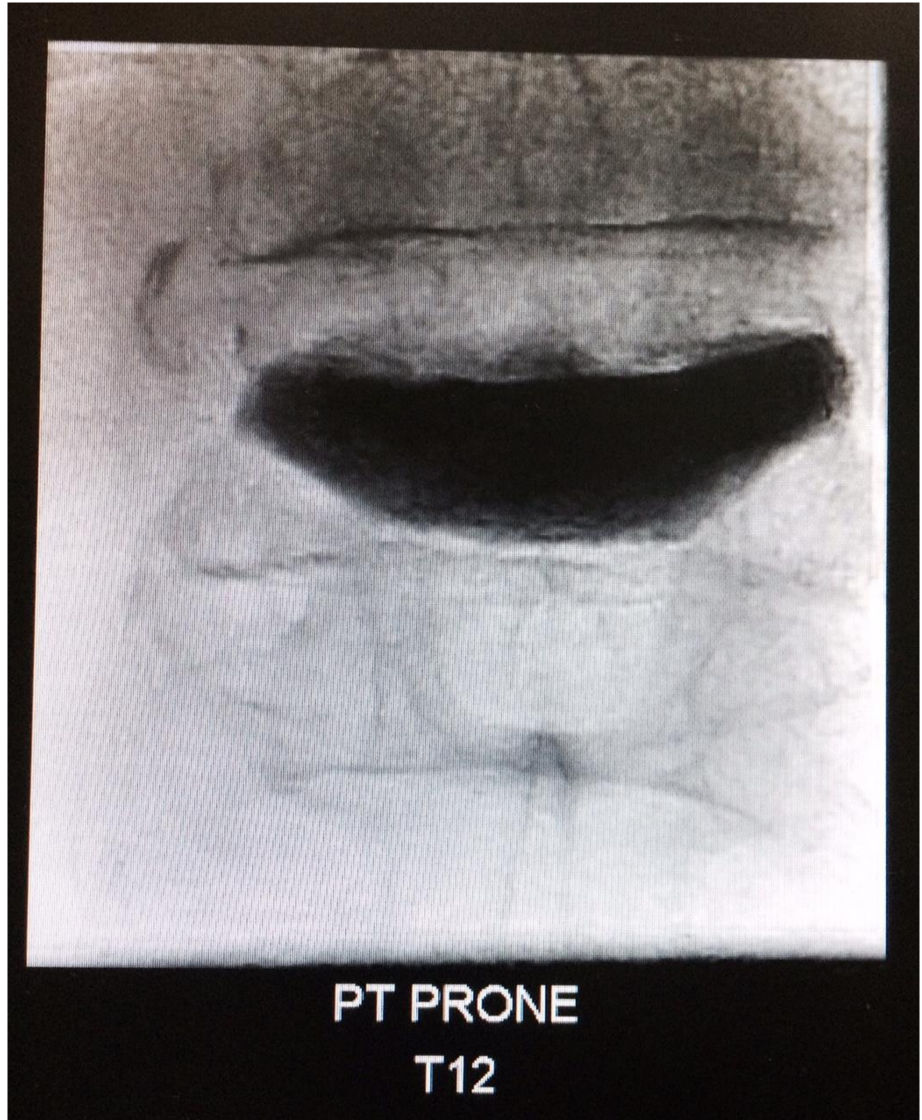
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Case 1

The vertebroplasty allowed the patient to get up and walk the next day.

There was still a need for the regular opioid to control the background pain from the compression fractures but the incident pain was much better controlled. The patient was discharged to home with a fentanyl patch.

On subsequent visits the patient noted that he was able to go out to movies and that he hoped to resume dancing again.

S.I. died 5 months after discharge after a short acute stay for CHF secondary to his ASD

Key Learnings

Old adults with disabling pain secondary to vertebral fractures can benefit from vertebroplasty months after the initial fracture under certain circumstances

Speak with radiologist first to see whether MRI (to see Marrow Edema) or CT is best

Rapid pain control with fentanyl in hospital is possible using the SC/IV infusion route and then switching to patch

NSAIDS can be deadly in frail older adults especially when they already have CRF

Case 2

79 year old woman

Right CVA with left hemiplegia

Recurrent TIAs, HT, AF, blindness L eye

Osteoporosis, recurrent falls

Distant breast cancer

Dementia – moderate

English was second language

Case 2

Staff report noisy and agitated with care

Sun downing but loxapine 2.5mg at hs not effective

Seen by psychiatrist, screening tests for delirium

Increase dose of antipsychotic in late afternoon and pm

What could account for the agitation?

Case 2

Another fall resulting in unstable intertrochanteric hip #

Admitted to acute care and had hip screw

Admitted to rehab ward

Seemed to be unable to follow directions and was resisting care and pinching staff.

Diagnosis: advanced dementia, return to residential care

Case 2

In acute care pain medication orders were

- Hydromorphone 1-2mg q4hr while awake
- Tylenol 650mg qid while awake

What is wrong with these orders?

Case 2

Returned to residential care and started on oxycodone SR 15mg q12hr

Titrated up to 50mg in am, 40mg in pm

Comfortable: smiling, no resistance to care, able to converse with interpreter

Case 2

Opioid equivalent dose for acute care orders:

- 2mg X 4 doses = 8mg = **40mg morphine/day**

Opioid equivalent dose for residential care orders:

- 50mg + 40mg = 90mg/day = **135mg morphine** /day

Key Points

While awake and prn orders are not acceptable in dementia patients with known pain

Older people generally require lower opioid doses that younger people but…

The dose that gives pain relief varies from person to person

Case 3

68 year old man with known advanced liver failure and dementia

Both conditions thought to be secondary to alcohol

Calling out, sleeps poorly, vulgar language with swearing

Resistent to care, kicks out

Would say little even with interpreter

Case 3

Past medical history

- Liver cirrhosis
- Diabetes – not currently taking meds
- Hypertension

Case 3

Patient in acute care but refuses to take medications to try to clear hepatic encephalopathy

Behavior managed with sc antipsychotics but family note he is drowsy and do not wish him to be so drowsy

Stabilizes in acute care an prognosis thought to be greater than 3 months so referred to residential care

Case 3

Residential care expresses concerns re behavior

Patient still refusing treatment and irritable

Staff must approach with care

What to do?

Case 3

Closed head injury after hit by car crossing street 10 years ago

After patient often complained of headaches, neck and back pain

Had to quit work at that time

Wife noted that he no longer complains of headaches or pain

What is happening?

Case 3

Fentanyl patch: ½ of a 12mcg patch q72 hours started = about 25mg morphine per day = aprox. 4 Tylenol #3 per day

Titrated up to 18mcg/hr as tolerated

Much less calling out – yet he was not drowsy

Resistance to care stopped

Key Learnings

As cognitive impairment progresses Reports of pain diminish

If the pain was chronic, it is likely still there

If things are not making sense can always take a more in depth history!

Case 4

84 year old Cantonese speaking lady who was admitted to acute care from assisted living with back pain

Past medical history

- Osteoporosis with previous compression fractures
- Severe bronchiectasis and chronic hypoxemia
- Hypothyroidism
- Chronic renal failure

Case 4

CT scan shows T6 compression fracture that was not present on 2011 scan

Age of fracture on CT unknown

On examination no point tenderness over T6

Patient refuses to take pain medications even Tylenol

Discharged back to facility with no change in medications

Case 4

Readmitted several days later with nausea and vomiting

Tramadol for back pain had been added by family physician

Patient drowsy with little response

Presumed to be dying by resident so palliative care asked to see

Case 4

Hydromorphone 0.25mg q4hrs regularly with breakthrough q1hr ordered

Regular metoclopramide 10mg sc qid

Rehydration

Patient smiling and eating next morning

Key learnings

Dig deeper when patient’s refuse pain medications

Use interpreters

Chronic pain can occur secondary to old compression fractures

Tramadol known for nausea, hypoglycemia

Case 5

81 yr old Chinese woman, speaks little English

Right-sided CVA causing hemiparesis 2010

In facility care since 2011

On admission to facility noted to resist care, be agitated

Treated with olanzepine, nortriptyline, paroxetine, Tylenol #3 prn

Behaviour settled

Case 5

Dementia progresses over the years and becomes less mobile and less communicative

Annual care conference notes drowsiness

- Olanzepine stopped, paroxetine switched to citalopram, nortriptyline stopped

6 weeks later palliative care asked to see because agitated, eats almost nothing, anxious, often taking off clothes

Son wants full investigations and transfer to acute care

Case 5

Restarted olanzepine to reduce agitation and increase appetite

Switch citalopram to mirtazepine

Long insightful discussion with son about mother's preferences for care

What to do about disrobing?

Case 5

Allodynia: a non-painful sensation is painful

Sign of central neuropathic pain

Tylenol #3 discontinued

Methadone 1mg q12 hr titrated up to 2mg in am and 1mg in pm

Resident eating all meals, keeping her clothes on, not anxious

Key Learnings

If an older adult gets a new symptom always think of drug changes first!

Keep an up to date list of diagnoses and their management so will not stop drugs that are controlling symptoms

Taking off clothes can be due to allodynia

Case 6

77 year old man immigrated from Hong Kong 10 years ago

Admitted to residential care after ongoing severe pain and depression for many years. Also some decline in cognition

Complained of pain in mouth and down throat on both sides

No response to analgesics, all teeth removed in attempt to treat pain

Admitted to psychiatry and treated with ECT – still no response

Admitted to residential care as family could not cope

Case 6

Curtains drawn around bed, sitting in wheelchair banging head on bedside table

Not able to speak English but able to report severe pain with interpreter

No visible abnormalities in pharynx or mouth, imaging from previous investigations are negative

Had all teeth removed due to pain

What could this be?

Case 6

Started small dose of methadone 1mg/ml q12hrs and titrated to 3mg q12hrs

Added duloxetine 30mg then 60mg daily

Small response but no major change

Increased dose of duloxetine to 90mg and then to 120mg

Still complained of pain but now out with others playing dominos and smiling

Key Learnings

If patient's pain description doesn't fit a known pain syndrome – think of depression

If the pain is atypical and widespread - think of depression

Keep on trying to treat – even if ECT has failed

Push the dose of antidepressant if no response

Focus on function especially when there is cognitive impairment

Case 7

84 year old with renal failure secondary to NIDDM

Also has CHF, mild COPD

Painful peripheral neuropathy secondary to NIDDM, ischemic vascular disease

On dialysis for a months with decreasing function ability so admitted to residential care

Case 7

On multiple meds for various chronic conditions

Hydromorphone 12mg q12hr for pain was started and titrated in acute care

Pain is not well controlled and he feels drowsy on all these medications

Experiences nausea, dizziness and severe pain following dialysis

What causes the symptoms after the dialysis?

Case 7

Nausea and dizziness can occur following fluid shifts that occur in dialysis

Reducing the amount of fluid removed can help

Pain occurs as hydromorphone serum level dramatically reduced by dialysis

Case 7

Methadone excreted primarily through bowel

Hydromorphone CR 18mg/day switched to methadone 4mg q12hr and gradually titrated to dose of 6mg q12hr

Patient feels pain is better controlled with less sedation

Methadone

A long-acting μ opioid agonist with NMDA blocking properties

- a good option in neuropathic pain
- good option in ESRD

No active metabolites

Excreted mostly by bowel

Requires more careful initial titration

Methadone

Variable equianalgesic dose to other opioids

When converting from other opioids use half of equianalgesic dose and hold dose for 5 days before any titrating starts

In frail elders never use more than 30mg/day to start

Allows drug to reach steady serum level

Many drug interactions with CYP450 3A4

Methadone

In elders usually use q12 hours

Start with very low dose

Often can treat neuropathic pain without other adjuvants if methadone gives good analgesia

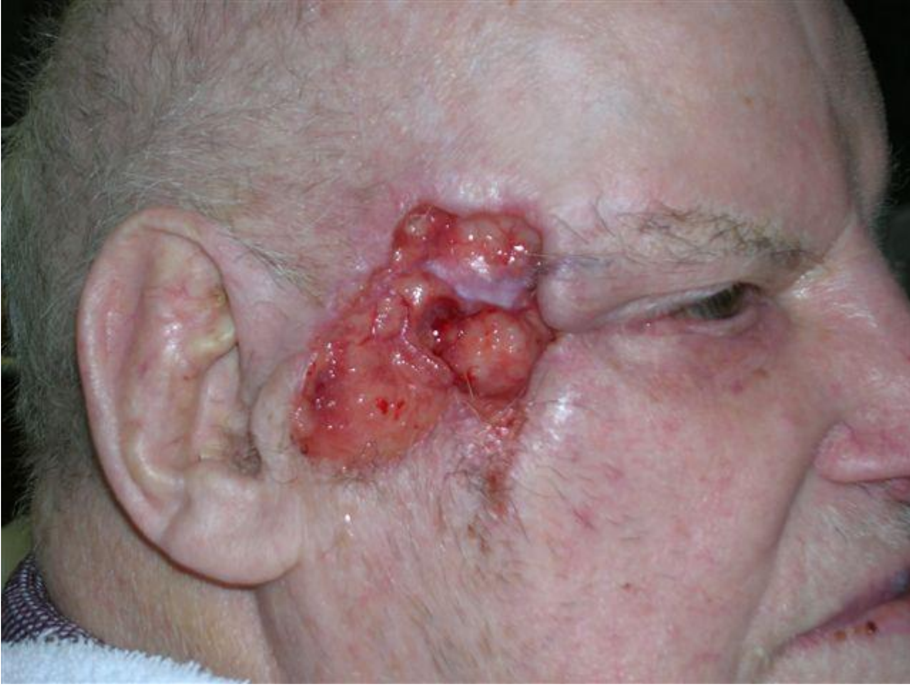
Good combination for neuropathic pain is methadone and mirtazepine

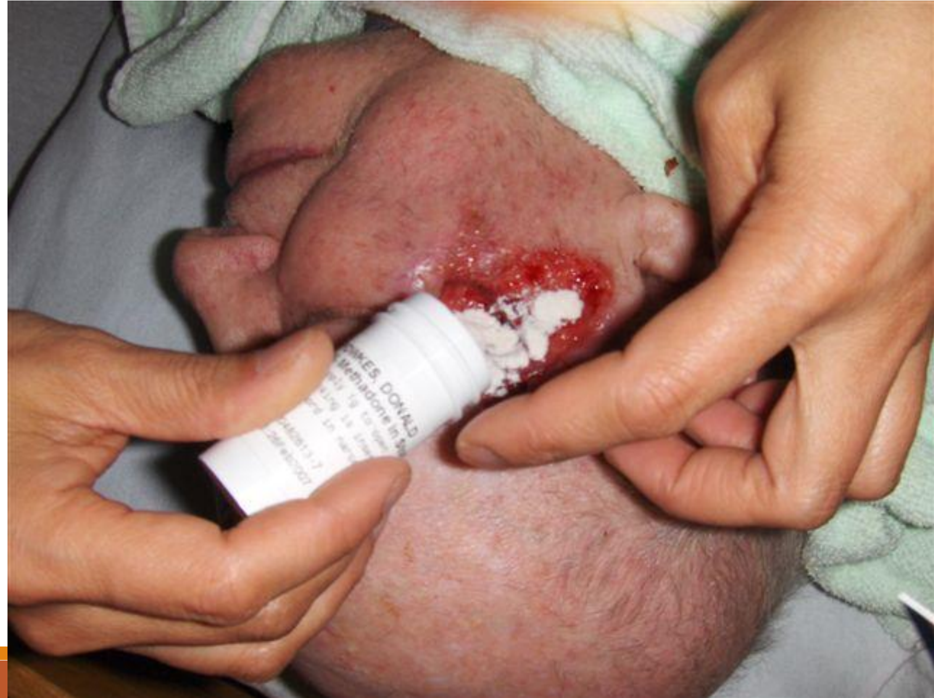
Topical Opioids

Ischemic ulcers, pressure ulcers, fungating tumors

Morphine 1% concentration in intra-site gel

Methadone 1% concentration in inert wound powder




Methadone