# RIGHT PATIENT, WRONG DRUG?

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## INTRODUCTION

Opioids vary in effectiveness and tolerability. It is often necessary to rotate through a number of opioids before finding a medication that provides the patient with an acceptable benefit versus side effect ratio. Controlled release preparations allow for more constant plasma levels, less peak to trough fluctuation, lower abuse potential risk and more effective long term analgesia.
Some patients have trouble settling into a dose or describe a dose as effective, but of too short duration. Some clearly state one drug does not work where another in the same class does. Such patients are often denied further treatment due to the perception of drug seeking behaviour.

## AIM

We describe 4 patients with chronic post spine surgery back and leg pain who raised concerns regarding their description of perceived drug effects, despite what seemed like adequate dosing and short term benefit from each dose.

## INTERPRETATION

The is no defined therapeutic range for blood morphine or hydromorphone levels due to tolerance.
SA Pathology advise that 75% of patients reporting a satisfactory response have blood morphine concentrations in the 10-120 ug/L range.
7/17 patients with bone/soft tissue pain and hydromorphone levels above 4ug/L reported pain relief. Patients with nerve infiltration or compression pain or blood hydromorphone levels below 4ug/L did not report pain relief, (http://www.ncbi.nlm.nih.gov/pubmed/2458878)

## CONCLUSION

Drug studies are expensive, take time to organize and considerable time for the patient to go through them. They can however be a useful guide to future care when there are genuine concerns about the need for ongoing analgesia and reported poor effects from specific oral opioids. The patients presented had issues with processing of oral opiates, both immediate and slow release preparations. Effective analgesia may require more frequent dosing of a controlled release product, the use of a short release product, or the use of an alternative drugs or routes of administration. It is important to establish whether the drug is inappropriate for the patient, before concluding the patient was inappropriate for the medication.

## ACKNOWLEDGEMENTS

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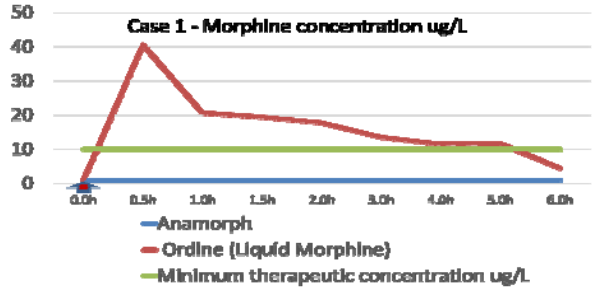
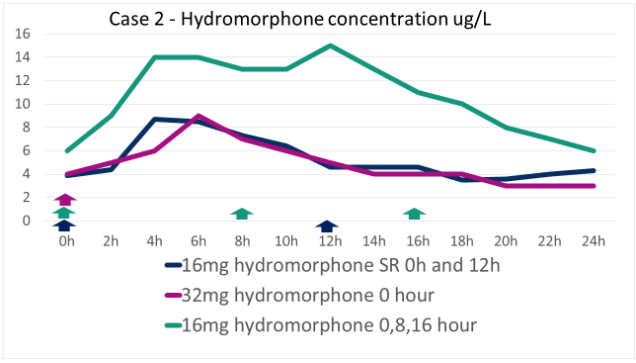
## CASE 1

Patient claimed 10mg intramuscular morphine gave better pain relief than 30mg morphine tablet (®Anamorph). History of gastric bypass for weight loss and rapid bowel transit. A medication absorption test demonstrated poor absorption and very low blood levels following a single dose of Anamorph 30mg. Pain scores were not improved. A subsequent study with 20mg liquid morphine (Ordine) demonstrated serum levels at potentially therapeutic levels, but little change in pain.
**Outcome:** Injections discontinued, rescue Ordine prescribed but rarely used.




## CASE 2

Patient reported 6 hours effective pain relief from controlled release hydromorphone. A pharmacokinetic study demonstrated peak serum levels about 3 hours after first 16mg dose. No rise in serum level seen from 2nd dose 12 hours later.
A subsequent study after a single 32mg dose showed peak level at 4 hours that was no higher than with the 16mg twice daily dose and gave no better pain relief.
Finally, 16mg three times per day was trialed, which showed higher and more stable peak levels that lasted longer and resulted lower pain scores.
**Outcome:** Patient prescribed 16mg CR hydromorphone tds




## CASE 3

Patient claimed IM morphine was the only effective analgesic! Patient claimed reduced gut motility, absorption and nausea to all oral agents. Transdermal patches were not helpful due to heavy sweating and/or rashes. Medication absorption tests with CR Hydromorphone 32 mg showed a short duration peak level with minimal pain reduction that didn't track serum concentration. Subsequent tests with IR Hydromorphone 8mg showed similar peak concentration without any pain reduction.
**Outcome:** Diagnostic analgesic infusions recommended but not done. Patient continues to use/seek opioids with little relief.

## CASE 4

Patient reported no pain relief from any opioid except q4h IM morphine!
350ug fentanyl infused over 30minutes during blinded diagnostic analgesic infusions while using on 125ug/h transdermal fentanyl gave no pain relief. TTL fentanyl ceased. Subsequent medication absorption testing with 8mg CR hydromorphone while taking no opioid showed low blood levels and no pain relief. Repeat medication absorption testing with 8mg IR hydromorphone showed potentially therapeutic blood levels but no pain relief.
**Outcome:** Studies have shown opioids are unlikely to help. Testing allowed opioid cessation. Trial of neurostimulation recommended.