

Atypical Opioids

Practice Guide to Initiation, Dosing and Titrating

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Pain

Types of pain

- Nociceptive
- Neuropathic
- Inflammatory
- Cancer

Nature of pain

- Sharp
- Stabbing
- Aching
- Burning
- Cramping

Duration of Pain

- Acute
- Chronic (persistent)



Opioids

Full μ -opioids

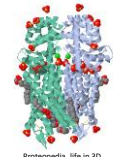
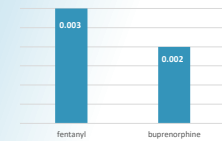
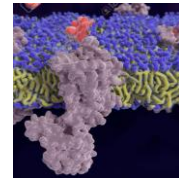
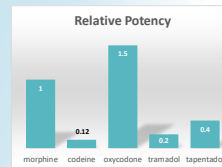
- Codeine 0.13
- Morphine 1
- Oxycodone 1.5
- Hydromorphone 5
- Fentanyl 0.003
- Methadone complex

Atypical Opioids

- Tapentadol 0.4
- Tramadol 0.2
- Buprenorphine 0.002

Drug	Rel. potency
Morphine	1
Oxycodone	1.5
Codeine	0.13
Tramadol	0.2
Tapentadol	0.4
Buprenorphine	2000
Fentanyl	3000

Opioids have different potencies



Opioids

Adverse effects

- Respiratory depression
- Constipation → nausea
- Drowsiness
- Nausea (vomiting)
- Dry mouth (dental decay)
- Cognitive (focus, concentration)
- Dizziness (falls)
- Low libido (low testosterone)
- Depression
- Immunodeficiency
- Opioid hyperalgesia
- Endocrine (menstruation, HP axis)
- Tolerance
- Dependence
- Substance use disorder
- Coma, death

Drug Interactions

- Benzodiazepines, Antidepressants

Pharmacology

- Metabolism, Excretion, Accumulation

Psychosocial & Environmental

- Work
- Income
- Social networks (peer groups, family)
- Street 'currency'

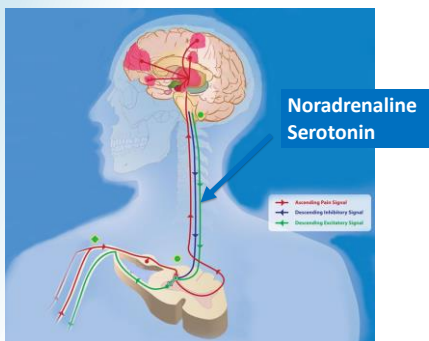
Atypical Opioids

Tapentadol & Tramadol

- Relatively new drugs
- Dual action: opioid with noradrenaline / serotonin
- Low opioid potency
- Action
 - μ -opioid receptor
 - descending inhibitory pathway (central neuropathic pain modulation)

- Buprenorphine

Neural Pain Pathways



Atypical Opioids

Buprenorphine

- Relatively new drug
- Patch and sublingual tablets
 - (inactivated if swallowed)
- Pharmacology
 - Full μ -opioid
 - High potency
 - High binding affinity

Indication

Codeine (S4) v Tramadol (S4)

Potency	0.13	0.2
Preparations	IR	IR and SR
Duration Action	4-6 hours	4-6 hr & 12 hr
Max dose	Limited by paracetamol	400mg / day *
Indication for pain	Mild to moderate	Mild to moderate
Adverse Rns	Opioid s/e Paracetamol toxicity	Opioid s/e Serotonin toxicity
Dependence	High	Moderate

Indication

Tapentadol (S8) v Tramadol (S4)

Potency	0.4	0.2
Preparations	IR and SR	IR and SR
Duration Action	4-6 hr & 12 hr	4-6 hr & 12 hr
Max dose	500mg per day*	400mg / day*
Indication for pain	Moderate to severe	Mild to moderate
Adverse Rns	Opioid s/e less than other opioids	Opioid s/e Serotonin toxicity
Dependence	Low	Moderate

Indication

Fentanyl (S8) v Buprenorphine (S8)

Potency	0.003	0.002
Preparations	Transdermal	Transdermal
Duration Action	While applied	While applied
Onset analgesia	6-12 hours	24-36 hours
Indication for pain	Cancer	Mild to severe
Adverse Rns	Opioid s/e	Opioid s/e
Dependence risk	high	Moderate to high

Advantages of atypical opioids

- Can be as effective as full μ -opioids
- Overall less potent than their equivalent drug
- less opioid side effects
- Next option after simple analgesics
- Ceiling doses
- Less dependence
- Less risk of diversion
- Codeine and fentanyl are no longer advised

Disadvantages of atypical opioids

- May be serotonin or noradrenaline side effects
- Risk of drug interaction
- Ceiling dose
- Tapentadol and buprenorphine are S8's
- Prescriptions are monitored

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Dose

	Initiating dose	Maximum dose per day
Tramadol S4	50mg	400 (300) mg/day* OMEDD 160mg
Tapentadol S8	50mg	500 (150mg) mg/day* OMEDD 200mg
Buprenorphine S8	5mcg/hr	40mcg (30mcg)/hr* OMEDD 80mg

- Recommended maximum oral morphine per day (OMEDD) = 60mg
- Based on FPM Opioid calculator



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Summary

- The atypicals are an option after simple analgesics and before full μ -opioid agonists.
- They are a lower potency option, usually tolerated and often provide good analgesia.
- Tramadol is the only one with significant interaction risk.
- Reported less side effects
- Less reported dependence and misuse.
- If they are not effective
 - Ask yourself is an opioid is correct treatment
 - Discuss with someone if thinking of trial of a full μ -opioid agonist.
- Always plan to wean and stop an opioid if it doesn't work
- Pain management is multidisciplinary and providing MDT pain management is always best care.

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