

An Analysis Of Opioid Supply On Hospital Discharge Post Orthopaedic Surgery

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BACKGROUND:

Opioids are an important treatment option in acute post operative pain [1], and are commonly used in this setting [2]. However, it is known that opioid prescribing has been increasing, and concerns have been raised regarding dependence, diversion and fatal accidental overdoses [2-4]. It has also been suggested in literature that overprescribing of opioids frequently occurs in the post-surgical setting, placing these patients at risk of chronic use [5-7].

AIM:

To gain an understanding of opioids prescribed and quantities required at discharge for postoperative pain relief after orthopaedic surgeries in a private surgical hospital.

METHODS:

This prospective study was conducted on orthopaedic wards at Epworth Hospital in Richmond, the largest private hospital in Victoria.

The audit was conducted over a consecutive three-week period. Patients were eligible for the study if they underwent a total knee arthroplasty, total hip arthroplasty or anterior cruciate ligament surgery. Only patients who were discharging directly home during the ward pharmacist hours of 8am-4.30pm on weekdays (excluding public holidays) were included. The following de-identified patient information was extrapolated into an excel spreadsheet:

- Surgical procedure performed
- Age
- Opioid naïve status
- Taking >5 regular medications pre-admission
- Hospital length of stay
- Patient reported pain score at time of discharge medication counselling (numeric: 0-10)
- Type of analgesia prescribed for discharge (opioids and non-opioids)
- Quantity and type of opioids prescribed for discharge (expressed as number of tablets)

Patients who consented to receiving a phone call were contacted 10 to 14 days post their discharge date. At phone interview, a set list of questions were asked and recorded.

RESULTS:

Forty-two patients fit the inclusion criteria during the three-week data collection period.

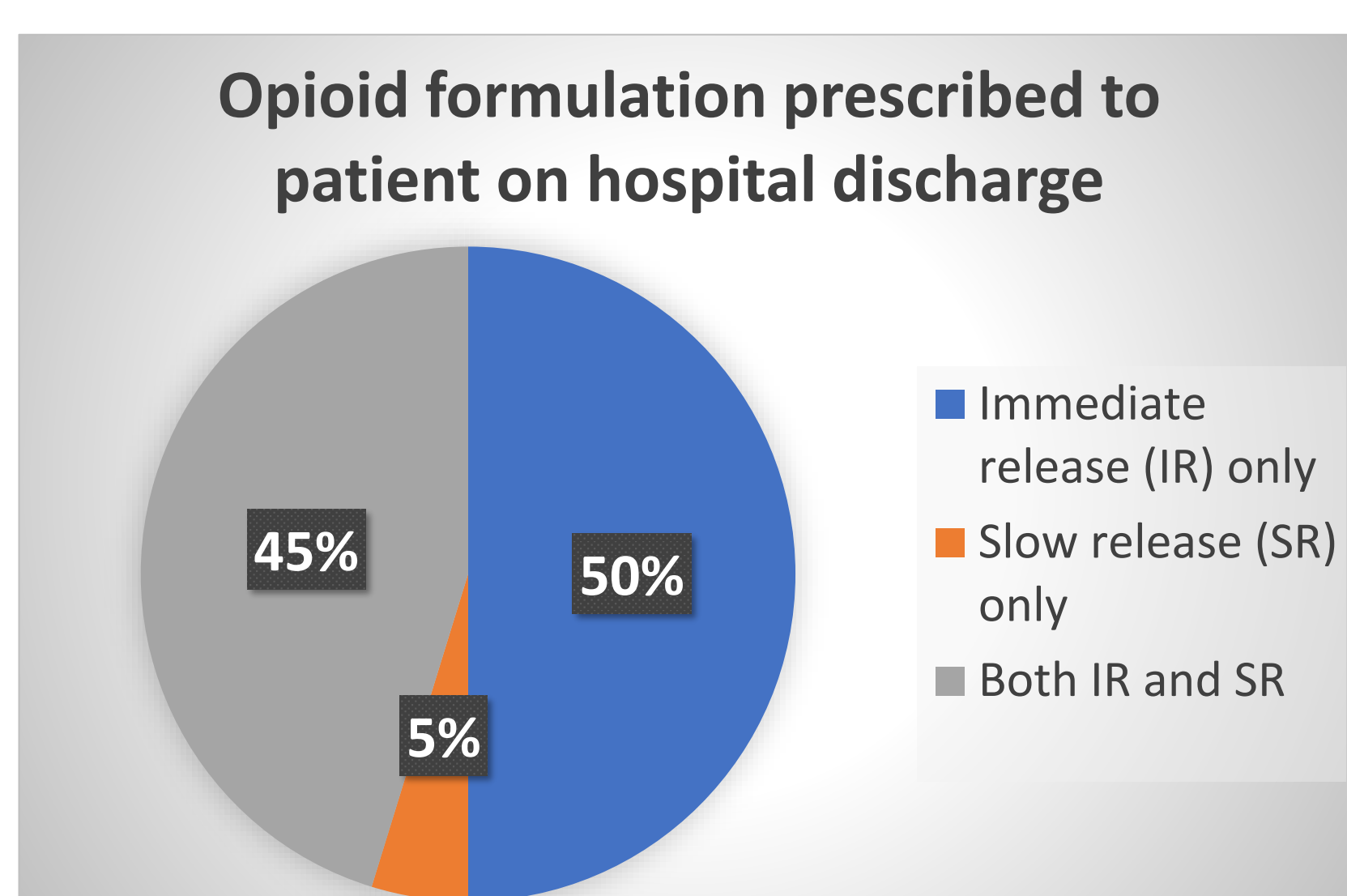


Figure 1: Opioid formulation prescribed to patients on hospital discharge

	THR (n=13)	TKR (n=11)	ACL (n=18)
Age (yrs), median	73	64	22
Length of hospital stay (d), median	5	5	1
>5 regular medications preadmission, n	2	3	0
Pain score (0-10) on discharge, median	2	4	4
Type of analgesics prescribed, n (%)			
Paracetamol	13 (100)	11 (100)	18 (100)
Non-steroidal anti-inflammatory	3 (23)	5 (45)	13 (72)
Oxycodone IR	9 (69)	5 (45)	14 (78)
Oxycodone SR	3 (23)	1 (9)	0 (0)
Tapentadol IR	6 (46)	7 (64)	4 (22)
Tapentadol SR	8 (62)	8 (73)	2 (11)
Tramadol IR	0	1 (9)	0 (0)
Total no. of opioid tablets supplied on discharge	471	389	384
Total number of opioid tablets supplied per patient, median	36	40	20
Total OME of opioid discharge supply, average	482.31	522.73	235.83

Table 1: Characteristics of eligible patients (n=42)

Type of orthopaedic surgery	Number of opioid tablets prescribed to patients	Number of opioid tablets not required by patients	% of opioid tablets not used by patients
THR	372	238	64%
TKR	289	29	10%
ACL	344	118	34%

Table 2: Usage of opioid tablets post 10-14 days of [hospital discharge

DISCUSSION:

Forty-two patients were included in the study with 98% being opioid naïve on admission. All patients were prescribed paracetamol for discharge, 21 were prescribed an anti-inflammatory and all were prescribed an opioid. Immediate-release oxycodone was the most commonly prescribed opioid with 28 patients (67%) receiving this with a median quantity of 20 tablets supplied (range 10 to 20 tablets). 50% of patients (45% both an SR and IR + 5% SR alone) received a slow release opioid on discharge. Although guidelines do not recommend SR opioid formulations for acute pain in opioid naïve patients, a large percentage of these patients still received this at hospital discharge. This is despite known concerns of postoperative complications including opioid-induced ventilatory impairment.

Of the 35 patients consenting to phone call follow up, the majority of patients (63%) had leftover opioid medications which they no longer required, with the average pain score being a two. 1005 opioid tablets were supplied on discharge to these patients, with 385 tablets not being required (38%).

11 patients (31%) said they contacted their surgeon or had a GP consult to obtain more opioids. Some mentioned they definitely needed more, and some responses were vague mentioning they wanted to have extra 'just in case'.

Patients who sought follow-up with their doctor for additional opioid supply, were discharged home with an average opioid morphine equivalence (OME) of 497mg, compared to an average OME of 320mg for patients who did not. This indicates that not only does prescribing more tablets not reduce the probability of the patient going back to the doctor, it actually increases it.

Correct opioid disposal processes were only known by 17% of patients. The majority of patients said they would put any leftover opioids into general waste and/or keep in their own cupboards. Other methods of opioid disposal mentioned by patients included flushing down the toilet, burning the tablets and putting the tablets in their compost. As a number of patients were unaware of what to do with this unused portion, there is a significant quantity of medication in the community which carries a risk of accidental or intentional future misuse.

LIMITATIONS:

The data collection was conducted during the Easter holiday period, accounting for time just before and just after the public holidays. Therefore, data collected is not an accurate representation of all prescribing practices as a number of specialists were on holiday during this period.

Further to this, Targin® was out of stock and in low supply in Australia when the data was collected. This potentially changed the prescribed opioid and therapy of choice. A memo was released on alternatives to consider from the Director Of Pharmacy to all medical staff. This memo aimed to outline which medications could be used as suitable alternatives to Targin® but may have inadvertently influenced other prescribing practises.

The use of the opioid, tablets remaining, follow up with their surgeon and GP and disposal of any remaining tablet was self-reported via the post discharge phone call questionnaire, therefore accuracy cannot be guaranteed.

CONCLUSION:

Excess quantities of opioids are being prescribed for patients post their orthopaedic surgeries. Additionally, some patients who had similarly low pain scores had finished their initial medication supply and sought doctor consult. This indicates that large quantities/ supplied post-acute surgical procedures does contribute to ongoing and possible chronic opioid use.

It was also found that patient understanding of how to discard unused opioid tablets was suboptimal. This presents an opportunity for an intervention and improving the education and care for our patients following their surgery, as well as the wider community. This could be done via pharmacist counselling or and/or the provision of written information.

References:

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