

Patient beliefs about analgesia, pain tolerance and self-efficacy for PCA in the post operative period.

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Background

Patient Controlled Analgesia (PCA) is regularly used for the management of post-operative pain (Doyle and Vicente, 2001) and has demonstrated to provide analgesia superior to conventional alternatives (Oral and Intramuscular injections) with greater patient satisfaction reported (Hudcova et al, 2006). However, elevated pain intensity has been reported to contribute to Morbidity and Mortality rates. Beliefs and attitudes held by patients have been suggested as contributors to PCA use and the resultant elevated pain intensity (Pajares 2002) and beliefs surrounding opioid use, and willingness to tolerate pain (Taylor, Hall & Salmon, 1996).

Aim

To explore the beliefs, attitudes and self-efficacy held by older patients regarding pain and self-administration of analgesia (PCA), the post-operative patterns of PCA use and pain intensity experienced.

Methods

A prospective, observational, ethics approved study of older adult patients undergoing elective colorectal surgery prescribed PCA for post-operative pain management. Patient informed written consent was obtained. Patient's beliefs and attitudes towards pain and their perceived self-efficacy to use PCA was reported preoperatively and repeatedly in the first 48 hours post operatively, and, pain intensity and patterns of PCA use were reported also.

Data collection.

Data was collected by an experienced Acute Pain Clinician through direct interaction with the participants. Data was collected preoperatively, and at three set points over the first 48 hours of the post operative period : Day 1 AM, Day 1 PM, Day 2 AM. Data was collected using validated instruments to record patients reported pain intensity, their self efficacy beliefs for using PCA, and, their willingness to tolerate pain. Data was analyzed using parametric and non parametric methods to observe for differences, correlations and changes over time.

Sample

Data were collected from 27 patients.

Demographics of the sample included 57% Male, 72.8 years old English speaking (87%) retired (93%) Married (61%), lived with another (64%), educated to year 10 (65%). Nature of surgery included Lapartotomy (93%), excision of colon (70%).

Results

At the final data collection point (Day 2 AM) only 12% reported minimal pain (pain score ≤ 3) however, 31% of participants reported severe pain (pain score ≥ 8). There was no significant change in pain score (Friedman's ANOVA $p=0.08$) or patterns of PCA use (Friedman's ANOVA $p=0.06$) over time during the period of observation. There was no correlation identified between Pain Intensity and patterns of PCA use (Kendall's tau-b $p=0.81$).

Table 1.

		Pre op	Day 1 AM	Day 1 PM	Day 2 AM	
Willingness to tolerate pain	Mean (SD)	30.6 (6.04)	32.7 (5.59)	33.1 (5.95)	33.6 (5.29)	Repeated measures ANOVA P = 0.01
Self efficacy for PCA	Mean (SD)	42.7 (8.13)	43.15 (8.79)	42.35 (8.99)	46.0 (6.24)	Repeated measures ANOVA P = 0.12

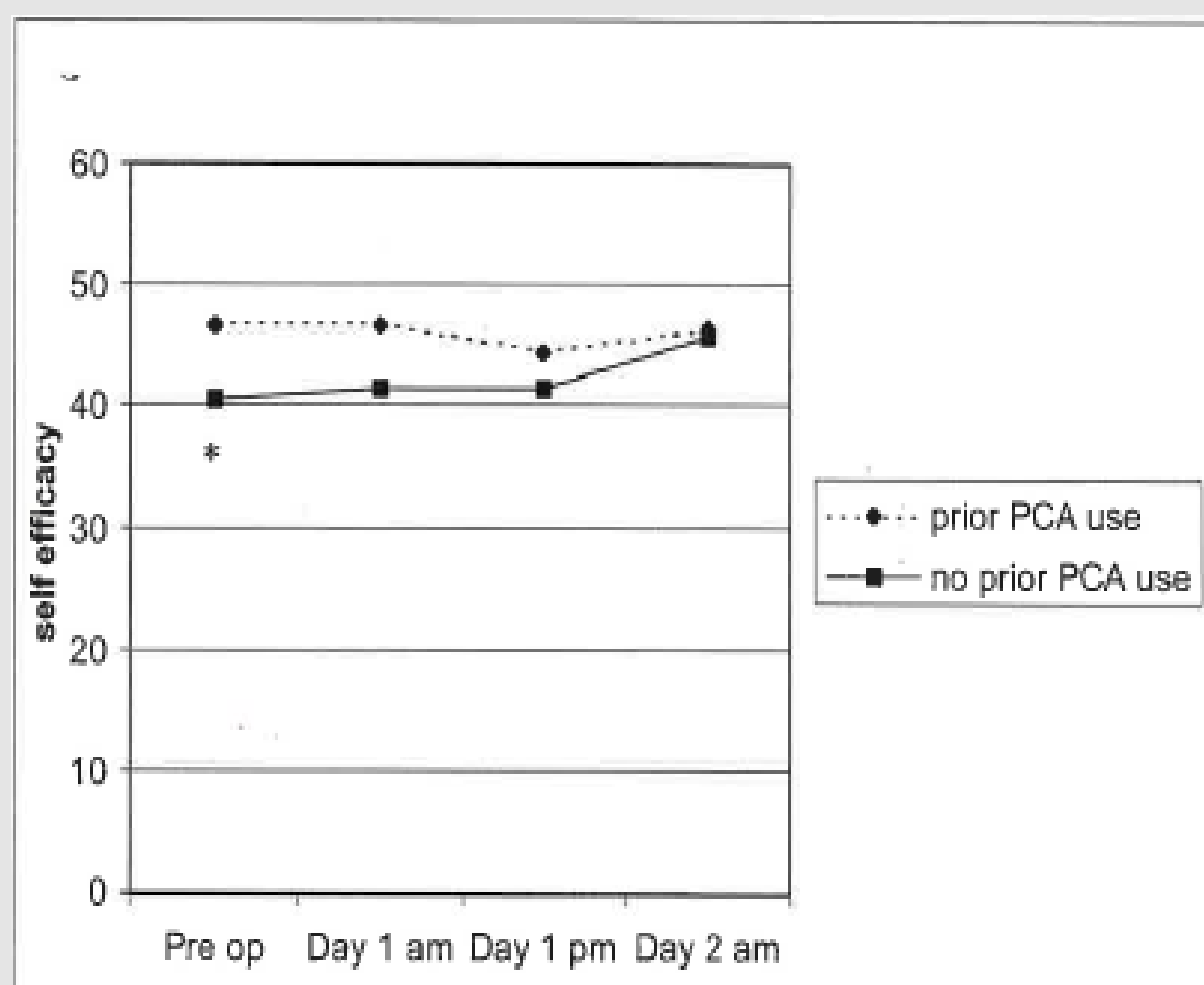
Participants willingness to tolerate pain scores increased significantly over time, indicating the willingness to tolerate pain had reduced. There was no significant increase in Self Efficacy for PCA in the group as a whole over time (Table 1).

Prior use of PCA was investigated as a contributing factor to patients Self - Efficacy for PCA. Preoperative Self efficacy for PCA was lower in participants with no prior PCA experience (46.9 v 40.6, One way ANOVA $p = 0.043$), which increased over time (40.6 Pre op v 45.83 Day 2 AM, Repeated measures ANOVA P = 0.039) (Figure 1).

Conclusion

This investigation demonstrated that patients continue to experience elevated pain intensity up to 48 hours post operatively. The results also suggest that attitudes and beliefs of patients established during their initial PCA experience are evident in future PCA experiences. Additionally, patient attitudes and beliefs towards self-management of postoperative pain using PCA are amenable to change during the post-operative period. This may provide an opportunity to alter patients initial PCA experience to improve any additional exposure to PCA, and the pain experience.

Figure 1.



References

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