We performed a randomised control trial comparing the effects of pain, sedation, amnesia and overall patient satisfaction between PCS and RCS, by enrolling forty patients undergoing insertion of a tunnelled central line” Clements et al (2018).

Abstract:

INTRODUCTION: Interventional Radiology procedures can provoke anxiety and may be painful. Current practice, Radiologist Controlled Sedation (RCS), involves titrating aliquots of midazolam and fentanyl to patient response but underdosing and overdosing may occur. This study tests a new method of titrating sedation/analgesia during the procedure, Patient Controlled Sedation (PCS), in which a combination of fentanyl and midazolam are administered using a patient-controlled analgesia pump. This allows the patient to self-control their sedation/analgesia during the procedure.

METHODS: We performed a randomised control trial comparing the effects of pain, sedation, amnesia and overall patient satisfaction between PCS and RCS, by enrolling forty patients undergoing insertion of a tunnelled central line.

RESULTS: Our results showed that PCS was safe, with no adverse events. PCS was effective in providing sedation, amnesia and overall pain relief comparable to RCS. There was no significant difference in dose given to patients using PCS or RCS. There was a tendency for patients in the PCS group to begin sedation later than those in the RCS group, but both were equally sedated during the procedure. We show that patients in the PCS group were very satisfied with the procedure.

CONCLUSIONS: We show that PCS is non-inferior to RCS in terms of dosage given and degree of sedation. To the authors’ knowledge, this is the first study to show intra-procedural PCS in an Interventional Radiology setting using midazolam and fentanyl as a randomised comparative trial. It has wide applicability in a procedural setting for very low cost and with minimal additional training required.

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