Audit of Use of Fentanyl in Continuous Subcutaneous Infusion by Hospital Specialist Palliative Care Team

Jennifer Brennock, Grainne Tipping, Aisling O' Gorman, Our Lady of Lourdes Hospital Drogheda

Introduction

Fentanyl is a strong, lipid soluble, mu opioid receptor agonist which is used by Specialist Palliative Care Team (SPCT) for the treatment of pain and dyspnoea in a particular cohort of patients. Its use in CSCI is limited to a certain number of patients within this cohort, and guidelines for its use have been developed locally to ensure safe and effective prescribing in practice.

Aims

- To measure current use of fentanyl in CSCI against set guidelines as below
- To provide education around current guidelines on use of fentanyl in CSCI
- To improve practice that is not in line with current guideline as part of good medication governance and medication safety

Standards

A Guideline for the Use of Fentanyl by Continuous Subcutaneous Infusion in a Syringe Pump by Specialist Palliative Care (SPC) Practitioners - Fentanyl Working Group Specialist Palliative Care Services HSE Dublin North East, Service areas of Louth/Meath and Cavan/ Monaghan

These standards are informed by EAPC (2012): Use of opioid analgesics in the treatment of cancer pain: evidence based recommendations from the EAPC. Lancet Oncology 2012 and National Clinical Programme for Palliative Care (2015). Pharmacological Management of Cancer Pain in Adults.

These standards state that Fentanyl via syringe pump may be considered for use in patients who have:

- An estimated glomerular filtration rate (eGFR) below 30mls / min / 1.73m² (severely reduced kidney function)
- Developed opioid toxicity or have a previous history of opioid toxicity
- A previous history of opioid sensitivity.

Methodology

Review of in-patients receiving input from Specialist Palliative Care Team (SPCT) on a single day who were on Continuous Subcutaneous Infusions (CSCI) Fentanyl and assessed each case with regards to fitting criteria for receiving Fentanyl CSCI as per Guidelines above, namely eGFR <30ml/min or previous opioid toxicity.

Review carried out by solo SpR.

Confidentiality was maintained throughout and data was anonymised.

Data was collated and analysed using simple Excel spreadsheet functions.

Initial Results

Of 25 in-patients who were receiving SPCT input, 10 were on CSCI, with 8 of them (80%) on Fentanyl. 2 (25%) had eGFR <30, and 3 (37.5%) had previously been opioid toxic, leaving 3 patients (37.5%) who were on Fentanyl in CSCI which did not fit the criteria as set out in guidelines. It was concluded that use of Fentanyl in CSCI by SPCT was not in accordance of guidelines and education was needed to try to improve upon this.

Recommendations and Action Plan

Education of SPCT including NCHDs, Consultants, CNS, in conjunction with SPCT Pharmacist - this consisted of PowerPoint presentation at SPCT Journal Club

Re-audit to close the audit loop and assess for improvement following education session

Addition of latest eGFR to SPCT Patient List to ensure most up to date information to hand even in absence of IT systems - this is acceptable as incurs no cost, takes very little time and required no formal education; access to patient list and laboratory results are all that is required.

Results Following Implementation of Action Plan and Re-Audit

Of 25 in-patients who were receiving SPCT input, 9 were on CSCI, with 2 of them (22.22%) on Fentanyl. 2 (100%) had eGFR <30, which fulfilled criteria for use of Fentanyl in CSCI.

Conclusions:

Interval objective improvement in use of Fentanyl in CSCI as per Guidelines following education session

Recommendations and Action Plan

- Acknowledge importance of ongoing audit to ensure continued adherence to guidelines
- Quality improvement project with addition of eGFR to patient list - improving safety and ensuring better, more informed practice and prescribing.
- Re-audit regularly

Limitations and Barriers to Change

- Relatively small sample size as single day only audited - scope to audit for full week/month at a time to give more complete information
- Possibility of error given individual undertook review
- Results of audit showed excellent response to education, but prescribing is often particular to the prescriber, and so may differ from practitioner to practitioner depending on their own preferences

References

- ¹ Use of opioid analgesics in the treatment of cancer pain: evidence based recommendations from the EAPC. Lancet Oncology 2012; 13:e58-68:Caraceni A, Hanks G, Kaasa S et al
- ² National Clinical Programme for Palliative Care (2015) Pharmacological Management of Cancer Pain in Adults