Subcutaneous Administration of Famotidine Evaluation (SAFE)
A retrospective study in palliative patients

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Background

- The ongoing problem of nation-wide drug shortages has put strains on pharmacies' abilities to supply necessary medications to patients
- In palliative care, subcutaneous (SC) ranitidine is commonly prescribed for indications such as gastro-intestinal protection and reduction of gastric secretions[1,2]
- Substitution of famotidine for ranitidine was widely implemented at Vancouver General Hospital (VGH) when a shortage of injectable ranitidine occurred in March 2012
- Information exists for the intravenous administration of famotidine; however, data on subcutaneous use is limited to animals[3-5]
- Published data on the safety of SC famotidine in humans is still lacking
- Our study was designed to evaluate the safety of SC administration of famotidine in the palliative care unit (PCU) of VGH in hopes of contributing more data to this area of practice

Methods

Study Design

- Retrospective chart review from Mar 2012-Sept 2012

Inclusion Criteria

- All VGH PCU patients who received at least one dose of famotidine administered SC

Exclusion Criteria

- Patients who did not receive famotidine doses SC
- Palliative care patients on other units in VGH
- Insufficient information in charts

Outcomes

- Injection site redness, swelling, pain, discomfort, or irritation
- Duration of SC site
- Number of early SC site changes or removals (<9 days)
- Other site related adverse effects

Data collection

- Initial review of intravenous assessment forms filled out by nurses
- Review of interdisciplinary notes within each chart

Age range (years)	45-96
Average age (years)	67.4
Female (%)	66
Cachectic (%)	29
Edematous (%)	6
Average number doses received per person	13.9

Table 1: Baseline characteristics (n=35 patients)

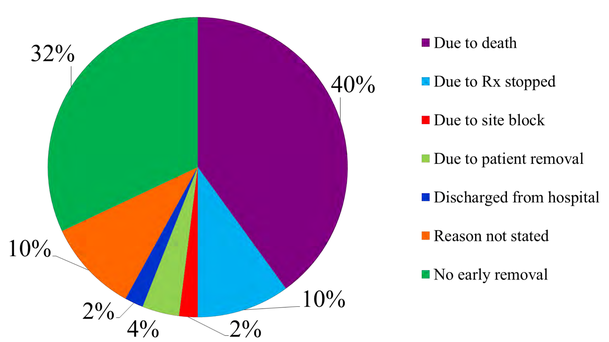

Figure 1: Reasons for early site change or removal (n=50 sites)

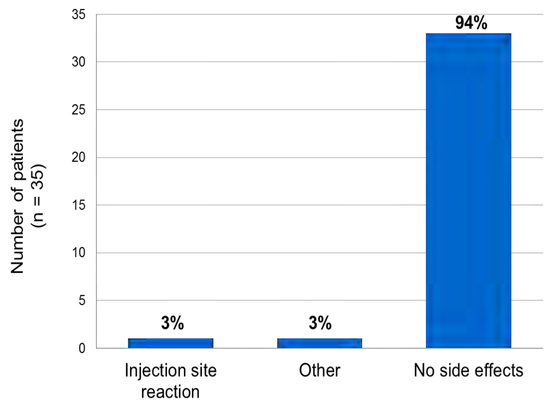

Figure 2: Site related adverse effects
Injection site reaction = redness, swelling, pain/discomfort, irritation
Other = blockage of SC site

Results

Number of charts included

- Total of 40 charts identified
- Five patients excluded (two patients in which no dose was given and three patients in which there was insufficient documentation)
- Thirty-five patients received at least one dose of famotidine subcutaneously and were included in this review (Table 1)

Outcomes

- Twelve patients had multiple site changes (n=50 sites)
- Thirty-four sites were changed or removed early (< 9 days) (Figure 1)
- One patient had SC site related adverse effects documented on IV flow sheet
- One patient had SC site blockage
- Thirty-three patients did not experience SC site related adverse effects (Figure 2)

Limitations

- Retrospective observational design
- Single reviewer of charts and data
- Lack of comparator
- No evaluation of efficacy
- Variability in documentation on intravenous flow sheets

Conclusions

- Majority of patients did not experience site related adverse effects
- Famotidine administered subcutaneously appears to be safe
- Famotidine may be a viable alternative to ranitidine for subcutaneous administration

References

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