Successful Mixture of Levetiracetam Continuous Subcutaneous Infusion with Glycopyrronium in End of Life Care.

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Background:

Fig. 2

Fig. 3

Seizures (Fig. 1) can be a challenging symptom management issue in specialist palliative care. In recent years **Levetiracetam** (Fig. 2) as a continuous subcutaneous infusion (CSCI) has become a well-established treatment option when patients become unable to take oral anticonvulsive medications.

Fig. 4

In end of life care **Glycopyrronium** (Fig. 3) as a **muscarinic anticholinergic** agent is frequently needed to reduce **upper airway secretions** and is administered as a CSCI requiring a syringe driver (Fig. 4).

Aims and Objectives:

The aim of this study was to assess whether Levetiracetam could be mixed as a solution with Glycopyrronium in end of life care symptom management to minimize the number of syringe drivers needed.

Methods:

14 Patients referred to a Specialist Palliative Care Service showing seizure activity were analysed. Noted: Demographic data; Diagnosis; Symptoms; Medications; Indications for anticonvulsive and muscarinic anticholinergic treatments; Results; Outcome

Findings / Results:

The patients showed seizure activity originating from malignant (4) and non-malignant (10) underlying diseases (Fig. 5). The CSCI daily Levetiracetam 10% dose ranged from 500 to 2000 mg. Levetiracetam could successfully be mixed with Glycopyrronium (range 1-31 days, median 3 days). The most frequent daily dose for Glycopyrronium was 1.2 mg (Fig. 6). In all 126 treatment days were documented (range 1 – 31 days, median 3 days). The subcutaneous infusion site remained functional from 1 up to 12 days (median 3 days).

Fig. 5 **AGE PROFILE + UNDERLYING DISEASES**

Fig. 6 **Doses: Levetiracetam (mg/day) Glycopyrronium (µg/day)**

Conclusions:

Levetiracetam 10% solution can safely be mixed and administered with **glycopyrronium** for continuous subcutaneous infusion. The administered combination allowed effective symptom management in a practical manner. The mixture did not show any visible alterations of the solution and was well subcutaneously tolerated.

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