Subcutaneous Fluids

Introduction
Within palliative care, medically assisted hydration, either via intravenous or subcutaneous (SC) infusion, is provided with the intent of improving quality of life or prolonging life, or both. There have to date only been a small number of high-quality studies performed examining its use, with conflicting results. No studies have demonstrated any survival benefit during end-of-life care, but some show some symptomatic benefit, especially in relation to myoclonus and sedation. Within the literature, there is also reference to the potential burdens of such treatment, including oedema, site inflammation, and effusions, ascites or both.

SC fluids involve less discomfort, are cheaper to provide, and have fewer potential adverse effects than the intravenous (IV) route and have the advantage of being possible to administer in multiple care settings. They should not be used in situations of severe dehydration, in emergency situations, or in patients with fluid overload.

Due to the lack of any clear evidence, decisions to initiate SC hydration rests with the individual clinician, and will vary from patient to patient depending on the estimated burden to benefit balance. Treatment should always be in conjunction with other quality care, including good mouth care.

Assessment

Potential indications
- Symptomatic dehydration
- Thirst (may be unrelated to fluid status)
- Reversible renal impairment
- Opioid toxicity
- Excess sedation
- Family/patient distress.

Potential complications
- Line discomfort/infection
- Oedema/ascites/effusions
- Worsening secretions
- Increased symptom burden as a result of above
- Family/patient distress
- Systemic fluid overload.
Management

- The patient should be assessed for the potential benefits and burdens on an individual basis (see flowchart) and this should be discussed with the patient and family as below (see Practice points).
- If appropriate, a SC infusion line should be sited with aseptic technique.
- Isotonic or hypotonic solutions only should be used (eg 0.9% NaCl).
- Rate of infusion will vary by patient, but generally gravity fed over 6 to 12 hours/500ml.
- Infusion site should be under regular review for signs of infection, fluid accumulation or discomfort (at least every 48 hours).
- Patient should be under regular review for fluid accumulation or overload.
- Patient should be under regular review for any benefit and review of future prescribing.
Practice Points

- Nutrition and hydration are often emotional topics for families and patients when approaching end of life. There is a necessity for ongoing sensitive discussions about goals of care and realistic expectations of treatment. The views of the patient and any advanced care planning should be considered throughout, and support for the carers when these decisions are being made is essential.
- There may be practical difficulties when considering SC fluids in the community setting. Equipment and training may be required.

References


