SECTION 12.3

SUBCUTANEOUS FLUID ADMINISTRATION

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Introduction
Subcutaneous fluid administration can be defined as the infusion of a solution into the subcutaneous tissue to supply the patient with a continuous and sufficient amount of fluid, electrolytes or nutrients (Urdang 1983, cited by Noble-Adams, 1995).

Indications
It is claimed as a safe and reliable method of fluid replacement in non-emergency situations for treating mild to moderate dehydration and symptoms of thirst in the elderly and palliative care residents/clients (Walsh, 2005).

Risk of Infection
Research indicates that subcutaneous fluid administration is safe once administered consistently with accepted indications and an agreed local policy to ensure a standardised approach (Schen and Singer-Edelstein 1981, cited by Sasson and Shvartzman, 2001; Jain et al, 1999).

Measures to Reduce the Risk of Infection
The following measures are necessary to reduce the risk of infection and need to be adapted and incorporated into local practice guidelines:

Preparation
- Equipment required includes:
  - sterile standard intravenous administration set,
  - sterile non-ported, needle-free safety cannula*
  - sterile transparent, semi-permeable dressing,
  - single use disposable non-sterile gloves,
  - sterile fluids as prescribed and clean infusion stand,
  - 70% isopropyl alcohol or Chlorhexidine 2% and alcohol 70% swabs
  - a clean surface to create an aseptic field where procedure is to be carried out e.g. procedure tray
  - clean sharps tray with integral sharps container

* A needle free cannula should be considered as the risk of needle stick injury to resident/client and staff is reduced if the cannula accidentally becomes dislodged. (HSE, 2009; European Council Directive, 2010).

Check the integrity of the sterile equipment packaging and do not use if torn, damaged, wet or out of date.

Insertion Procedure
- Carry out antiseptic hand hygiene using either
  - an antiseptic agent or
  - an alcohol handrub for a minimum of 30 seconds if hands are physically clean and then don gloves.

- Clean skin with swab saturated with 70% isopropyl alcohol or Chlorhexidine 2% and alcohol 70% and allow to dry. Do not touch the prepared site again.
Once device inserted, apply a sterile, transparent semi-permeable dressing to secure the cannula, to allow visualisation of the insertion site and prevent the introduction of infection.

Remove gloves and carry out hand hygiene.

Documentation in resident/client notes:
- Record date and time of commencing therapy including site location, needle gauge and signature.
- Label dressing infusion site with date inserted.

Management

Once started, the site should be checked within 30 minutes to 1 hour to assess skin integrity and resident/client comfort. Thereafter, the site should be checked for signs of leakage, oedema, signs of inflammation (erythema/redness), poor absorption (hard subcutaneous swelling) or fluid overload every 4 hours.

No clinical evidence exists to recommend how often the site should be changed. However, anecdotal and case study evidence suggests that routine changing of the infusion site every 72-96 hrs is safe practice (Jain et al, 1999; HSE, 2009). Note: ensure not to exceed the maximum life-span recommended by the manufacturer of the particular device in use.

If subcutaneous fluids are administered intermittently, the infusion administration set should be changed for every infusion.

Administration set should be changed every 72 hours.

Discard the administration set immediately if contaminated or if damaged in any way.

Care should be taken when delivering care as cannula may easily become dislodged.

The infusion site must be changed immediately regardless of its duration if pain, redness, oedema, blood or leakage is observed. Educate the resident/client to also report any of these signs of discomfort.

Removal of Cannula

A cannula that is no longer required for subcutaneous fluid administration should be removed promptly.

On removal of the cannula, immediately dispose into a sharps container at the point of use.
References:


HSE Community Hospitals and Residential Care Units Cork Kerry Region (2009) Hypodermoclysis (Sub-Cutaneous Fluid Administration) Practice Guidelines Version 2


