# Index

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>INTRODUCTION</td>
</tr>
<tr>
<td>2.0</td>
<td>REASONS FOR HYPODERMOCLYSIS</td>
</tr>
<tr>
<td>2.1</td>
<td>BENEFITS</td>
</tr>
<tr>
<td>2.2</td>
<td>CIRCUMSTANCES TO CONSIDER HYPODERMOCLYSIS</td>
</tr>
<tr>
<td>2.3</td>
<td>CONTRAINDICATIONS FOR HYPODERMOCLYSIS (6)</td>
</tr>
<tr>
<td>3.0</td>
<td>FLUIDS THAT MAY BE ADMINISTERED (7,8,9)</td>
</tr>
<tr>
<td>3.1</td>
<td>USE OF ADDITIVES</td>
</tr>
<tr>
<td>4.0</td>
<td>PREPARATION AND ADMINISTRATION OF HYPODERMOCLYSIS. WHO CAN ADMINISTER</td>
</tr>
<tr>
<td>4.1</td>
<td>PRESCRIPTION</td>
</tr>
<tr>
<td>4.2</td>
<td>EQUIPMENT</td>
</tr>
<tr>
<td>4.3</td>
<td>THE SITE</td>
</tr>
<tr>
<td>4.4</td>
<td>SET- UPS</td>
</tr>
<tr>
<td>4.5</td>
<td>AMOUNT AND RATE OF INFUSION (12,13)</td>
</tr>
<tr>
<td>5.0</td>
<td>MONITORING THE SITE</td>
</tr>
<tr>
<td>6.0</td>
<td>TROUBLE-SHOOTING</td>
</tr>
<tr>
<td>7.0</td>
<td>REFERENCES</td>
</tr>
</tbody>
</table>
1.0 INTRODUCTION

Subcutaneous Fluid Administration (SFA), also known as hypodermoclysis can be defined as the infusion of a solution into the subcutaneous tissues to supply the patient with a continuous and sufficient amount of fluid (1).

Hypodermoclysis was first described in 1913 as a way of providing fluid to people who had an inadequate oral intake. This method of hydration was used widely in clinical practice in the 1940’s and 1950’s to treat dehydration in adults and children (2). However, its use fell into disrepute due to reports of shock caused by administering hypertonic solutions and consequently fell from favour in the acute care setting (3). Over the last 20 years it has regained popularity, with improved methodology, and has become routine treatment in the elderly and terminally ill. But many physicians and nurses are unfamiliar with the technique.

2.0 REASONS FOR HYPODERMOCLYSIS

• Particular benefit in the non-emergency situation, especially the elderly, and for terminal and palliative care (4).

• If there is poor venous access or thrombosed veins (5).

• Poor oral access, for example patients with dysphagia or tumours of head and neck.

• Hypodermoclysis is relatively easy to perform and can be delivered in most settings.

• Infusions can be easily stopped and started to meet patient need.

2.1 BENEFITS

• Symptom Management

• Rehydration/prevent dehydration

• Manage thirst

2.2 CIRCUMSTANCES TO CONSIDER HYPODERMOCLYSIS

In general hypodermoclysis is appropriate for patients who are mildly dehydrated or at risk of dehydration. It is appropriate for symptom management of dehydration and thirst in terminal and palliative care.
2.3 CONTRAINDICATIONS OF HYPODERMOCLYSIS (6)

- Severe dehydration.
- Fluid requirement more than 3 litres in a 24 hour period.
- Poor skin integrity.
- Lymphoedema/oedema

3.0 FLUIDS WHICH MAY BE ADMINISTERED (7,8,9)

- Sodium chloride 0.9%
- Sodium Chloride 0.18% and Dextrose 4%
- Dextrose 5% - even though used with no adverse effects, it is not generally recommended as it may draw fluid into the interstitial space.

3.1 USE OF ADDITIVES

Potassium –

27mmol/litre (2g) may be added to the infusion fluid (8, 10).

Please contact Medicines Information on Ext. 2501 if higher concentrations are required.

Hyaluronidase-

Hyaluronidase is an enzyme obtained from bull testes that temporarily lyses the normal interstitial barriers. It consists mainly of hyaluronic acid. It is used to aid absorption of the infusing fluid.

Evidence on use is conflicting. Bruera (11) suggests that hyaluronidase has potential antigenic capacities and repeated administration may result in the formation of neutralising antibodies. He recommends the use of hyaluronidase only if problems are experienced during infusion. Other authors have never encountered problems with absorption. As a general rule it should not be used routinely.

Please contact Medicines Information on Ext. 2501 if considering use.

No other medications or electrolytes should be added to the infusion
4.0 PREPARATION AND ADMINISTRATION OF HYPODERMOCLYSIS
WHO CAN ADMINISTER

Any qualified staff member trained in subcutaneous fluid administration.

4.1 PRESCRIPTION

Any fluid to be administered by the sub-cutaneous route must be prescribed by a doctor.

4.2 EQUIPMENT

- Saf-t-Intima non-needle infusion device.
- Infusion fluid
- Drip stand
- Standard giving set
- Clear occlusive dressing

4.3 THE SITE

Choose a healthy, clean oedema-free site. The sites may be:

- Abdomen
- Scapular region
- Thighs
- Pectoral area

4.4 SET-UPS

- Prior to priming the giving set and inserting the cannula wash hands and ensure universal precautions are adhered to. Gloves should be worn for the protection of the clinician on insertion.
- Prime the cannula by connecting to the giving set and fluids.
- Introduce the needle to an angle of 45 degrees. (Too shallow an angle may compromise site duration and absorption.)
- A sharps box should be available and sharps disposed of as per Trust policy
- Cover with occlusive dressing
• Following removal of gloves hands should be washed to ensure decontamination.

• Adjust the regulator to infuse fluids over given time. Allow absorption through gravity (do not use pumps).

• Fluid balance chart should be used as directed.

4.5 AMOUNT AND RATE OF INFUSION (12,13)

Recommended that no more that 2 litres /24 hours. However 3 litres /24 hours has been used, with no more than 2 litres a day using a single site. Rates ranging from 20-125 ml/hour are well tolerated and adequate for most patients. Solutions are infused by gravity rather than by pump. N.B. Individual patients will absorb fluids at a different rate. It is good practice to change the infusion site once every 24 hours to reduce the risk of abscess formation and pain at site. The name of the nurse changing the infusion site and inserting the cannula must be clearly written in the nursing documentation.

5.0 MONITORING THE SITE

• Observe skin for redness, infection or pus. If observed, stop infusion, remove needle and send swab for microscopy and culture. Abscesses have formed as a result of hypodermoclysis.

• Local swelling will initially be evident. If the patient finds the site painful, renew the site.

6.0 TROUBLE-SHOOTING

• If infusion running slow consider raising height of drip stand. If it persists re-site needle.

• Leaking back from site after removing cannula should not cause worry.

• Pain at site: observe area for infection, if infection evident the infusion must be resited.

• Local oedema: adjust rate if uncomfortable. However, oedema will be absorbed.

• Bruising: may require re-siting.

• Blood back-flow in giving set – Replace.
7.0 REFERENCES


Further information
WWW.Nursing-standard.co.uk/resources/dripcalc; Medicine Information EXT. 2501