1.8 Hydration

Key Points

1. Appetite and oral intake usually decline in the final days of life to a few sips or bites. Goals of hydration are to maintain function, improve Quality of Life, improve delirium, help satisfy sense of thirst and hunger, and engage family and friends in care.

2. Signs and symptoms of dehydration are more important than lab tests.

3. Benefits of oral hydration include low technology, minimal risk, ease of home use, fostering of human contact and pleasure, and low risk of causing fluid overload.

   Foster hydration with pleasant liquids, drinking aids and companionship/assistance at meals. Replete electrolytes naturally with sports drinks and tomato-based juices; hydrate naturally with sips of fluid. Two tablespoons of fluid four times in an hour equals 120ml of fluid. An IV at the rate of 75cc/hr takes 5 hours to infuse fluids equivalent to a canned drink (355 ml).

4. The burdens of enteral feeding (NG/PEG) usually outweigh the benefits.

   NG/PEG tube feeding at Life's End causes the discomfort of invasive procedures and restraints and the risk of aspiration, infections, nausea, diarrhea, distention, edema, and pulmonary congestion.

5. Hypodermoclysis offers a simple technique of administration of subcutaneous fluids, but policies and staff training in most clinical settings do not support its use.

   Burdens include possibility of dislodging needle, necessity of restraints, pain and swelling at site, risk of fluid overload, and cost of treatment.

6. Parenteral intravenous administration of fluids can be difficult and painful. Its use risks infections, restraints and fluid overload and creates a barrier to home care.

7. Key considerations in palliative hydration include evaluating burdens and benefits in the context of Goals of Care, seeking reversible cause, trying oral route, and observing for safety if an invasive route is indicated as a bridge to oral hydration.

Hydration

The Palliative Response

Goals of Hydration

- Help maintain function
- Improve Quality of Life
- May improve delirium
- Help satisfy subjective sensation of thirst and hunger
- Engage family and friends in care

Appetite and Oral Intake
at Life's End

- Status

  Declines in most patients

  People may take only few sips or bites in last days of life

- Typical Clinical Response

  Most hospital and nursing home patients have feeding tubes and/or IV's at time of death

Indications for Hydration

- Reversible Process
  (e.g., constipation)
- Treatable Infection
  (e.g., thrush)
- Temporary Insult

Burdens
Enteral and Perenteral Fluids

- Invasive procedures
- Pain and distress
- Edema and pulmonary congestion
- Provide little comfort
- Burden adds to suffering
- Burden often outweighs benefit

Diagnostic and Treatment
Considerations

Diagnosis

- Signs and symptoms more important than lab tests

  Skin tenting

  Concentrated urine with decline in output

  Postural symptoms

  Dry mouth

Treatment

- Look for reversible causes of decline
- Easier to manage early than late
- Consider appetite stimulant

Complication
Enteral and Parenteral Fluids

- Edema (third-spacing of fluids)
  Indicates intravascular fluid depletion rather than pure dehydration
  Often worsened by E/P fluids
- Often worsen pulmonary congestion
- Often lead to dyspnea without other benefits

Typical Concerns
Patients and Caregivers

- Dependence on others to be fed
- Loss of appetite
- Weight loss
- Loss of food as symbol of love

Fostering Patient Control

Some persons refuse food or fluid as way of having control.

- Foster control and good decisions by providing accurate information
- Provide patient-directed diet
- Feature foods easily swallowed/ digested

Dehydration

- Items for dry mouth and sense of thirst
  Ice chips
  Ice cream, puddings
  Frozen popsicles
- Drinking aids
  Sipper cups, wide grips
  "Thick-it" for fluids assists with swallowing
- Companionship and assistance at meals

Ideas for Oral Hydration

- Replete electrolytes
  Sports drinks
  Tomato-based juices for sodium
- Hydrate with sips
  Two tablespoons of fluid four times in an hour equals 120ml of fluid
  Encourage families to offer sips with each TV commercial
  An IV at rate of 75cc/hr takes 5 hours to infuse fluids equivalent to a canned drink (355ml)

Oral Hydration
Benefit Review

- Low technology
- Minimal risk
- Effectively administered at home
- Encourages human contact
- Can be pleasurable for patient
- Less risk of causing fluid overload

Enteral (NG/PEG)

Tube-Feeding at Life's End

- No evidence of benefit
  Causes patient discomfort
  Increases use of restraints
- Sometimes Goals of Care dictate a trial
  (e.g., patient with esophageal cancer and PEG tube undergoing palliative radiation to resolve esophageal obstruction)

  Ask: Is tube-feeding a bridge to resuming oral intake?

Enteral Feedings

Benefits

- Increase mental alertness
- Reduce family anxiety
- Potentially prolong life for special event

Burdens

- Risk of aspiration
- Potential for infections
- Diarrhea and distention
- Nausea
- Invasive procedures
- Restraints

Hypodermoclysis

Subcutaneous Fluids

(30–50cc/hr of D5 ½ normal saline)

Advantages

- Simple technology for home use

Disadvantages

- Hospitals/nursing homes often not prepared
- Needle may still come dislodged
- Pain and swelling at site
- Some risk of fluid overload
- May still need restraints
- Cost of treatment

Ask: Is this a bridge to resuming oral intake?

Parenteral Feeding

Intravenous Fluids

Disadvantages

- Invasive
- Can be difficult and painful to insert IV
- Risk of infections
- Use of restraints
- Risk of fluid overload
- Sometimes seen as barrier to home care

Parenteral Intravenous Fluids

Considerations

- Goals of Care
  Is this a bridge to resuming oral intake?
- Consider time trial (2 liters over 8 hours)
  Stop IV fluids if not helpful
  Parenteral fluids may blunt thirst and hunger
  Some patients resume oral intake when fluids discontinued
- Avoid KVO fluids

Hydration

The Palliative Response

- Try the oral route
- Seek reversible cause of decreased oral intake
- Balance burden against benefit of perenteral and enteral hydration
- Consider Goals of Care
- If using a more invasive route
  Consider a time trial
  Observe carefully to maintain safety and prevent iatrogenic harm

Selected Readings

Nutrition and Hydration: Appropriate Use

McCann, R. M., W. J. Hall, and A. Groth-Juncker. "Comfort Care for Terminally Ill Patients: the Appropriate Use of Nutrition and Hydration." *Journal of the American Medical Association* 272 (1994): 1263–1266.

Onwuteaka-Phillipsen B. D., H. R. Pasman, A. Kruit, A. van der Heide, M. W. Ribbe, and G. van der Wal: "Withholding or Withdrawing Artificial Administration of Food and Fluids in Nursing-Home Patients." *Age and Ageing* 30 (2001): 459–465.

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Nutrition and Hydration: A Sociological Analysis

McInerney, F. "Provision of Food and Fluids in Terminal Care: A Sociological Analysis." *Social Science and Medicine* 34: 1271–1276.

Treatment of Common Oral Conditions

Bottomley, W. K. and S. W. Rosenberg eds. *Clinician's Guide to Treatment of Common Oral Conditions.* The American Academy of Oral Medicine, 1973; Fall.