Artificial Hydration in End of Life Care

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Artificial nutrition and hydration is the delivery of fluids and nutrition via an intravenous cannula (parenteral nutrition) or an enteral tube (Arenella 2005). Fluids may also be administered using the subcutaneous route.

(Stiles 2013)
Other Terms used

Clinically assisted nutrition and hydration (CANH) (General Medical Council UK 2010)

Medically assisted hydration (Cochrane 2011)
Types of dehydration

- *Isotonic* dehydration results from a balanced loss of water and sodium. *Complete fast.* *Episodes of vomiting and diarrhoea.*

- *Hypertonic* dehydration occurs if water losses is greater than sodium losses. *Fever*

- *Hypotonic* dehydration occurs when sodium loss exceeds water loss. Water is consumed but food is not. *Overuse of diuretics, ascites.*
Objectives

To determine the effect of medically assisted hydration in palliative care patients on their quality and length of life.

5 relevant studies identified.
Main findings

Results suggest that medically assisted hydration in palliative care patients may have some benefits in terms of improving sedation and myoclonus and a perception of overall benefit.

Hydration may also cause some adverse effects in terms of fluid retention (in particular pleural effusion, peripheral oedema and ascites.)
Implications for practice

Currently insufficient good quality studies to make any recommendations for practice

Clinicians will need to make a decision based on the perceived benefits and harms of medically assisted hydration in individual patient circumstances, without the benefit of high quality evidence to guide them
Raijmakers et al 2011

Objective
To give a comprehensive overview of currently available evidence on practices and effects concerning artificial nutrition and artificial hydration in the last week of life of cancer patients

15 papers included
Raijmakers et al 2011

Main findings
- Artificial nutrition and hydration appear to be a substantial part of medical care in the last week of life of cancer patients, especially in hospital, with frequencies of between 50% – 88%.
- Only one study assessed the combined effects of artificial nutrition and hydration and found no change in comfort, as perceived by patients.
Artificial hydration was found to have a limited impact on patients’ symptoms

No significant relationships between artificial hydration and general comfort or quality of life measures were found
Conclusions

Current literature suggests that the benefits of providing artificial hydration are limited and do not clearly outweigh the burdens, although some effects on specific symptoms may be present in some patients. Evidence concerning the effects of continuing or withdrawing artificial nutrition in the last days of life is lacking and little is known concerning the life shortening or prolonging effect of either artificial nutrition or hydration.
Irish Association for Palliative Care
ARTIFICIAL HYDRATION IN TERMINALLY ILL PATIENTS
Position Paper
March 2011
Purpose
To examine the ethical issues relating to the role of artificial hydration in terminally ill patients
Principles

- A competent adult has the right to refuse artificial hydration, or to request its withdrawal even if such a decision is likely to result in harm to that person or in his/her own death.

- Clinical and ethical decision making becomes more difficult when a patient is incompetent and consequently unable to contribute to the decision making process. If the patient has written an advance healthcare plan which covers the current circumstances then the plan should be followed in accordance with the Irish Medical Council guidelines.
Doctors are ethically justified in withholding or withdrawing treatments that are not beneficial to their patients.

It is recognised that dehydration has the potential to be an important cause of morbidity in seriously ill patients. Therefore the onus rests with healthcare professionals to regularly assess the degree of hydration and the extent to which it might be contributing to a patient’s deteriorating condition.
It is important to have an awareness of the situations where it may be possible to treat and reverse a clinical deterioration by the judicious use of artificial hydration.

It seems reasonable to conclude that artificial hydration in terminally ill patients who do not have a reversible cause for their clinical deterioration, is unlikely to confer significant benefit.
Decision making process

Policies of always or never using artificial hydration are ethically indefensible. All decisions affecting a patient’s care must be made on the basis of a set of circumstances unique to that patient.

If a patient is incompetent and unable to express a wish the clinical decisions will only be made following consultation with other members of the caring team, the patient’s family and significant others.
Families may understandably be concerned about the use or omission of artificial hydration when their loved one is dying. Such views must be taken seriously and relatives need an opportunity to voice their concerns and receive appropriate explanations and reassurances. However, healthcare professionals must not subordinate the best interests of the patient to relieve the concerns of the relatives.
Reversible causes of acute deterioration

- Hypercalcaemia
- Nausea/vomiting – bowel obstruction
- Diarrhoea
- Opioid toxicity
- Medications such as diuretics
Terminal Dehydration

- Terminal dehydration occurs gradually, takes weeks to months with accompanying symptoms such as weakness, fatigue, weight loss and drowsiness. A body produces ketones and other metabolic substances. They have a natural anaesthetic effect on the central nervous system and cause a substantial decrease of patient suffering.
Terminal Dehydration

- There is also a concentration of opioids and increased production of natural endorphines in a human body at end of life. This also reduces pain and therefore a need for analgesia is decreased.

  (Nowarska, 2011)
In Summary

- Advance care planning
- Communication with patient, family, Multidisciplinary team
- Treat reversible causes
- Diagnose dying
- Review review review review